TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK



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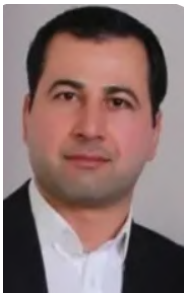
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Preface

S*ustainable development* –One of the most important topics for the twenty-first century. Sustainable development is a comprehensive concept involving many disciplines, giving it both a philosophical base and a pragmatic approach. It appeals to a wide range of interests from nations to corporations to stakeholders because, it combines economic development and environmental protection into a single system.

As the global community enters into the next phase of the evolution of sustainable development, making the transition from theory to action will be the next great challenge. World population is expected to double within the next 50 years, placing enormous demands on resources for food, shelter, and energy. Innovative solutions, incorporating the concepts of sustainable development, must be developed and implemented to mitigate these impending economic and environmental uncertainties and to guide society through the resulting period of transition.

The Summit was organized by the Tradepreneur Global Academic Platform, Southampton, UK in the partnership with the Sakarya University of Applied Sciences, Turkey and CT University, Ludhiana, India .

Er. Yousef Khiarak
CEO
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CHAPTER 1

GOAL-1: NO POVERTY

IMPACT OF POVERTY ON ECONOMIC GROWTH OF INDIA

Priya SHARMA[1]

The primary concern for the Indian economy is poverty. To eradicate the same various central and state level policies have been implemented. However, the goal to achieve zero poverty till 2030 still appears to be far. This paper focuses on study of impact of poverty on economic growth with special reference to Indian economy. The main objectives of the research include the areas impacted due to poverty and to suggest possible ways to do the same. Research methodology used for data collection is through secondary data.

Introduction

To carry on daily existence liberated from neediness and craving is a basic liberty of human being. United Nations has proclaimed of common liberty for personal satisfaction on earth, everybody has the option to a way of life satisfactory for wellbeing and prosperity, including food, garments, lodging and clinical consideration furthermore, essential social administrations.

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"Neediness is articulated hardship in prosperity and described by serious hardship of fundamental human requirements, including food, safe drinking water, disinfection offices, wellbeing etc. Poverty is measured by pay level. Global neediness line has removed place of US$ 1.25 each day while the world Health Association characterized individuals living beneath destitution US$ 2 in a day. Universally, level of the populace living below poverty line $ 1.08 each day in 2004 was most elevated in SSA (41.10% of the all-out populace), India (34% of the all-out populace), South Asia (30.84% of the total) . Pay level of country's destitution was month to month per capita utilization consumption was Rs. 972 in India though in metropolitan zones was Rs. 1407 (Planning Commission, 2014). Level of populace shared by destitution million out of 1993-94, 407.1 million in the time of 2004 ,269.3 million in the time of 2011 - 2013). The advancement of destitution level in India was expected to the mediation of government arrangements and program that metropolitan regions specifically - (I) Nehru Rozgar Yojana (NRY) in 1989; (ii) The Swama Jayanti Shahari Rozgar Yojana (SJSRY) in 1997; (iv) BSUP under JnNURM Mission 2005; (v) Rajiv Awas Yojana (RAY) in 2011; (vi) Pradhan Mantri Awas Yojana in 2015 though quantities of plans and program had been dispatched in rustic territories by administration of India in particular; (I) Pradhanmantri Gramodaya Yojana (PMGY) in 1997; (ii) Swamajanti Gram Swarozar Yojna in 1999; (iii) Jan Shree Bima Yojan in 2000; (iv) Sampoorna Gramin Rozgar Yoja (SGRY) in 2001; (v) Shiksha Sahyog Yojana in 2001 (MoUD, 2015).

In excess of 700 million individuals and 11% of the total populace, still live-in outrageous destitution and is attempting to satisfy the most essential necessities like wellbeing, instruction, and admittance to water and disinfection. The mind-boggling lion's share of individuals life is less than $1.90 a day who live in Southern Asia and sub-Saharan Africa and they represent around 70 percent of the worldwide aggregate of incredibly needy individuals. In 2017, monetary misfortunes ascribed to normal debacles were assessed at more than $300 billion, among the most noteworthy misfortunes. This issue moreover influences many created nations. At this moment there are 30 million kids growing up poor in the world's most extravagant nations. The scholarly and schooling local area have a significant part in expanding the mindfulness about the effect of neediness. Science gives the establishment to new and maintainable methodologies, arrangements and innovations to handle the difficulties of decreasing neediness and accomplishing economical turn of events. The commitment of science to end destitution has been huge. For instance, it has empowered admittance to safe drinking water, diminished passings brought about by water-borne illnesses, and improved cleanliness

to lessen wellbeing chances identified with dangerous drinking water and absence of disinfection. The private sector, as a motor of financial development, has a significant task to carry out in deciding if the development it makes is comprehensive and subsequently adds to neediness decrease. It can advance monetary freedoms for poor people, zeroing in on portions of the economy where the greater part of the poor is dynamic, specifically on miniature and little undertakings and those working in the casual area.

Objectives

To study the impact of poverty on different segments of economy

To suggest possible ways to eradicate poverty

Materials and Methods

This exploration article is completely founded on the auxiliary that accessible to the public space. At first began with writing investigation of destitution around the world and followed up by the Indian government. Subtleties investigation of polices/plans by administration of India to address the neediness both provincial and metropolitan zones across country.

The first objective of data analysis is to determine the impact of poverty on different sectors such as Education, Health, Mental Growth etc. The second objective of data analysis is to give suggestions to eradicate Poverty.

Result and Discussion

***Shared of Below Poverty Line Shared in India**:*

Roughly 37.20 level of Below Poverty Line (BPL) has shared to the complete populace in 2004-5 and 29.80% in 2009-10 and 21.92 in 2011-12. In correlation of state level in India, Odisha, Bihar, Chhattisgarh states had shared most elevated level of BPL in 2004-05 and least in the Andaman and Nicobar Island, Lakshadweep states and so on in 2009-10, BPL gathering of individuals has descended in all territories of India while in territories of Manipur, Assam, Mizoram, Daman and Diu and Lakshadweep had expanded in contrasted and of the year 2004-05. On account of 2011-12, Arunachal Pradesh and Chandigarh states/association region has expanded and remaining states/UTs have diminished.

Near Study of Per Capita in Indian Rural Poverty:

In correlation of Indian country destitution of per capita at states/Union Territories in the time of 2011-12 was most noteworthy in Delhi and followed by Andaman and Nicobar, Chandigarh,

and so forth furthermore, least per capita were in Orissa, Uttar Pradesh, Jharkhand, Chhattisgarh and so forth for the scope of per capita goes from Rs. 1200 to 1492.46 each month were Delhi, Andaman and Nicobar Island, Chandigarh Mizoram, Nagaland, Goa and Lakshadweep. For the scope of per capita from Rs. 1000 to Rs. 1200 every month were Manipur, Arunachal Pradesh, Pondicherry, Haryana, Punjab, Sikkim, Meghalaya, Gujarat, Tamil Nadu, Maharashtra, Himachal Pradesh, Kerala, Jammu also, Kashmir, Rajasthan, Andhra Pradesh, Uttarakhand, Dadra furthermore, Diu and Assam and remaining states/Union Territories were in the Least class.

Comparative Study of Urban Poverty at State Level in India:

Comparative picture of per capita of urban poverty at state level in India in the year of 2011-12 was highest in Andaman and Nicobar Island followed up by Mizoram, Nagaland, Manipur whereas in Orissa Bihar, Chhattisgarh etc. were in the least category of per capita. The per capita in went of Rs. 1500 to Rs. 1797.69 in metropolitan in India were Andaman and Nicobar, Mizoram, Nagaland, Manipur, Maharashtra, Sikkim, Dadra and Diu, Delhi, Haryana, Meghalaya and remaining states/UTs are in most reduced class.

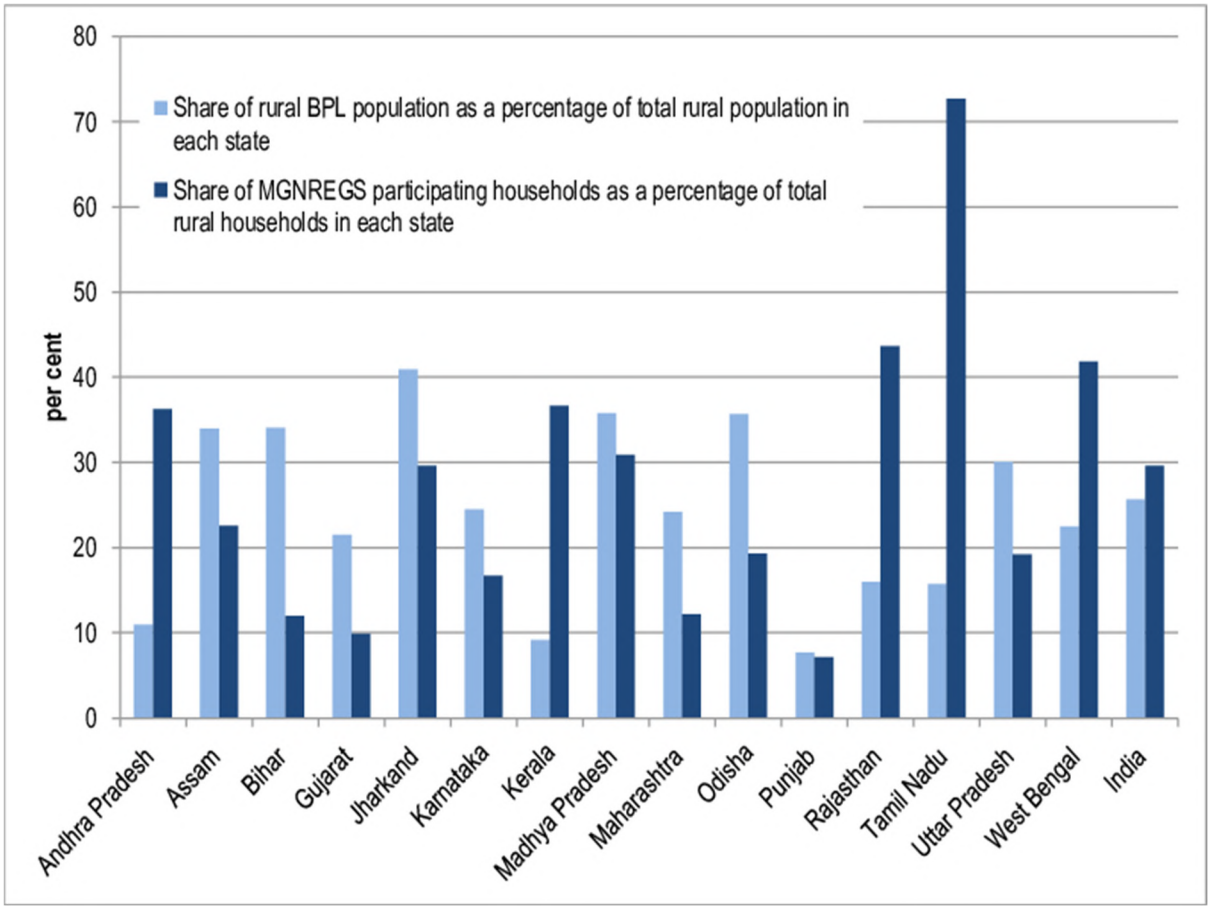


Fig-1 *population shared by below poverty line (BPL) at state level in India*

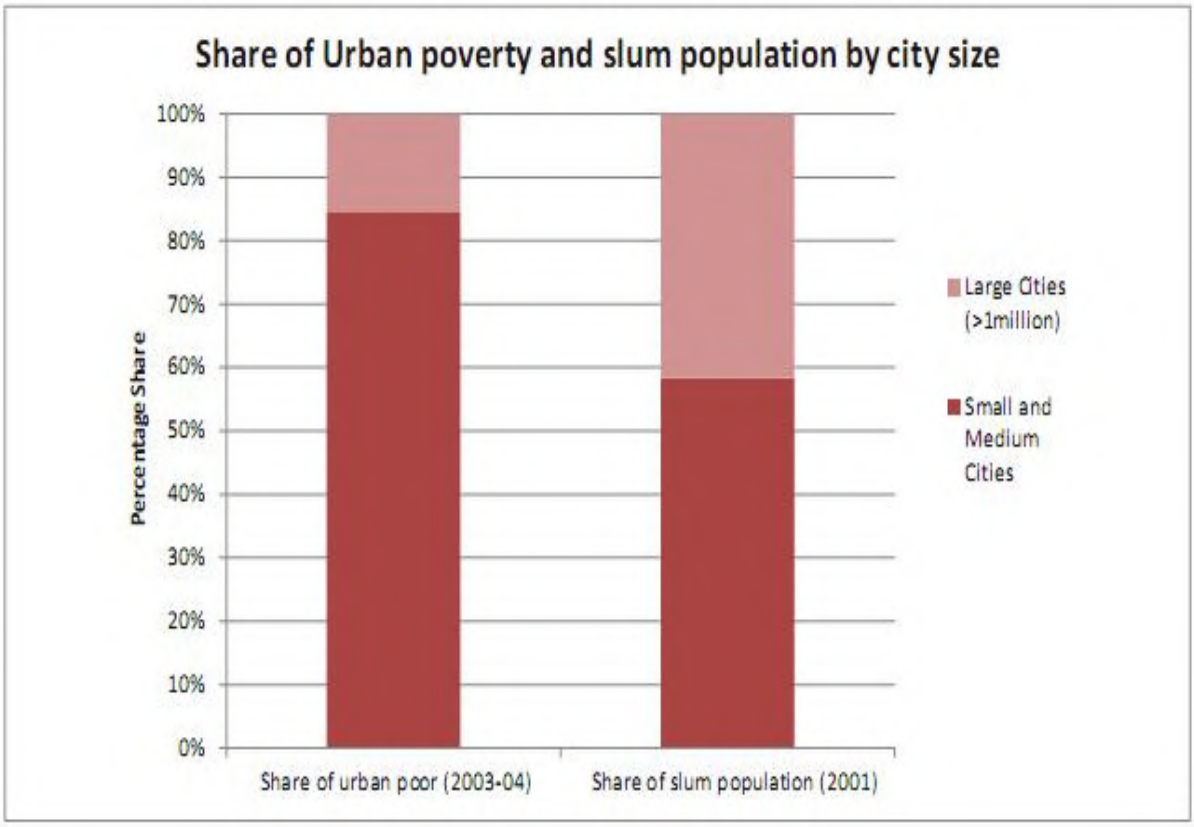


Fig.-2 *share of urban poverty at state level in India*

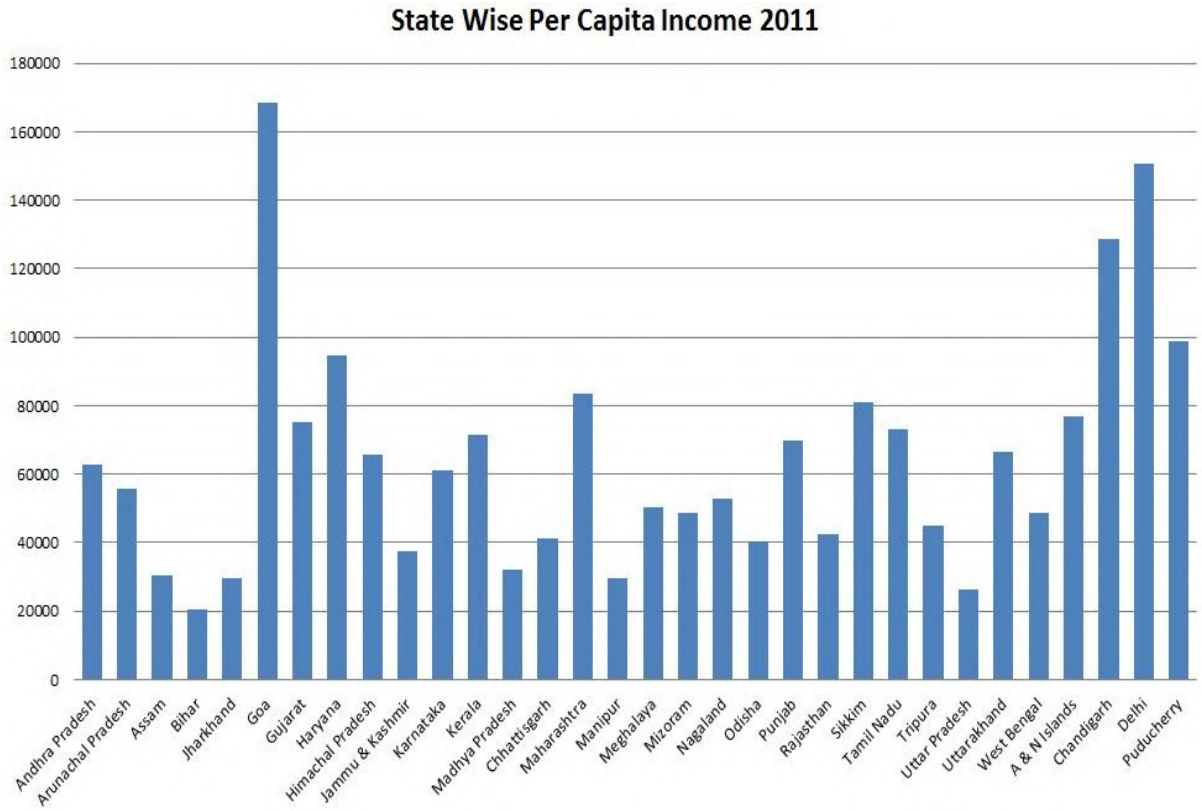


Fig -3 *Per Captia of Rural Poverty At State Level In India*

Conclusion

The public authority of India has been dispatched numerous plans/programs to improve the personal satisfaction for the individuals who falls under BPL class. Still a few states in particular- Chhattisgarh (39.93% of destitution shared of complete populace), Dadra and Nagar Haveli (39.31% of destitution shared of aggregate populace), Jharkhand (36.96% of destitution shared of aggregate populace) and Manipur (36.89% of destitution shared of the complete populace) are high level of destitution shared individually. In the event of rustic zones, Orissa, Uttar Pradesh, Jharkhand, Chhattisgarh West Bengal, Tripura, Madhya Pradesh, Bihar and Karnataka states is low (underneath Rs. 1000) of per capita each month though in metropolitan regions, least in Orissa, Bihar, Chhattisgarh and so on are in least class of per capita each month. With these words, Government of India requirements to act more consideration towards the helpless part of society across country to characterize the crucial of human right and better personal satisfaction.

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THE IMPACTS OF WOMEN'S EMPOWERMENT ON REDUCING RURAL POVERTY IN SHONGOM LOCAL GOVERNMENT AREA OF GOMBE STATE, NIGERIA

Barnabas Nuhu YAKUHU[1]

Nigeria despite its numerous efforts to end poverty, there is no positive results to show. Most programs toward poverty eradications were either hijacked or mis prioritised. The roles of women in sustaining families and communities were not given proper attention. This paper studied the impact of women in reducing poverty in Nigeria. The study used Shongom local government area of Gombe state as a case study. Both primary and secondary data were used for the study. The data were coded using SPSS. Descriptive analysis was conducted and results were presented using tables and figures. The study through the use of hypothesis was able to find out that there is a significant relationship between women's empowerment and poverty reduction and education has more impact on women empowerment and reducing poverty in the study area. Also, women perform so many roles like helping with school fees, medical bills, business investments and many financial supports in the family when they are empowered. The study finally recommended empowerment of women through education, skills training and financial supports in business and farming and also abolishing all forms cultural believes that bias women rights and ensure strict following of all national and international laws that protect women's right. This will effectively ensure sustainable women empowerment and reducing rural poverty in the study area and beyond.

Introduction

The role of women in the national development cannot be overestimated. Giving their active roles from home at the initial stage and their respective places of work. However, despite all efforts and roles perform by the Nigerian women, especially in the rural areas there are lots of

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inequality given to them. The rural women in Nigeria engage in all forms of hard labour in Nigeria to cater for their households. The responsibilities of clothing, feeding and providing of some house necessities are being shift to women increasingly in the rural areas. Despite all these roles the Nigerian women suffer high rates of poverty which is not far from most developing nation. Kemi and Jenyo (2016) pointed out that over 70% of the rural poor are women which is resulted from the unequal access of economic opportunities. With all the roles of women being denied to equal access to empowerment or employment opportunities only increases the rate of poor people in the world. However, African Development Bank (2012) reinstated that the important of increasing women participation in the work force and human capital development goes beyond household reduction of poverty but will improve national security also. The women have proved in several ways that despite all hardships posed on them by the men counterparts, they still attend to their family needs at the best they can offer. This really signifies how important a woman can be in training and building her family with the little available resources she has. The United Nations Conference on Environment and Development National Report (2004) figured out that women perform not less than 40% of the activities in agricultural production and 85% of agricultural produce processing and marketing. This made (Egbugara, 1990) described women as a homogeneous group distinguished only by their gender owing to the predicaments of most of the women who their roles are regarded as part of their domestic responsibilities, they also made up the highest number of the illiterate and the poor in both rural areas and urban centres in Nigeria. Despite the women roles and contribution of up to 60 to 80% of the agricultural workforce and production of the two-third of the food crops, the men occupy the vital management decisions in the family (Ogunlela and Muktar, 2009). (Ogunlela and Muktar, 2009) further stressed that women are often underestimated, ignored and considered voiceless in management and production decisions even at their households' levels. Also, adding to the discrimination of women International center for research on women (2013), pointed out that women are mostly restricted from accessing credits, access to land, being members of farmers' organisations and also opportunity to enjoy extension services and these hinders women performances.

It is good to note that the possibility of reducing poverty will only be achieved if gender inequality is dealt with. As long as the women are discriminated in the workforce and capacity development programmes, the level of poverty will only keep growing in Nigeria. Despite all efforts by international organisation such as, International Monetary Fund, World Bank, USAID etc in empowering women, the level of poverty in women still increases. The

empowerment of women should grow beyond financial supports but should include giving women equal access to education and employment opportunities as these will develop them into strong women that can emerge the roles of leaders and economic back bone of their family, community and the nation at large. Therefore, women empowerment should go beyond having access to source of income but rather should inculcate but physical and mental capacity in enhancing women skills and roles in their environment. Akomolofe (2006) elaborated on the definition of women empowerment as "*the development of mental and physical capacity, power and skills in women for them to operate meaningfully in their social milieu, thereby experiencing a more favourable level of social recognition and subsequently enhance their economic status"*. Therefore, empowering women is a great way of developing every community especially the rural areas where their roles are not given priority and this will significantly reduce and enhance economic growth of the nation.

Like the International Organisations, Nigeria has several laws and policies aimed at gender inequality but however failed to provide any significant action to meet the needs of the women. Emansion (2012) revealed that the hindrance to national development is as a result of the exclusion of the skills, perspectives and dynamism of half of the population that contributes to the productivity of the nation. For rural development programs to be relevant and sustainable both men and women should participate in the institution and should be allowed to express their prioritised needs in the decision-making processes (IFAD's Framework 2012). This should be considered both from rural, regional, national and international level. For any international organisation to fully addressed poverty issue, it must come down to rural level and women should be inclusive otherwise it will just be repeated programs where their impacts would less be felt.

There are several studies on women empowerment, gender equality and increased in women participation which addressed mostly issues at the national level. However, this paper focussed on the impact of empowering women taking it study from the rural area of Shongom Local Government Area of Gombe state. This definitely provided areas of direct intervention that ensures inclusiveness of rural women who suffer more discrimination amongst other women. The paper provides better understanding of the needs and empowerment of rural women with related relevant information for policy making at both regional, state, national and international level. The recommendation drawn directly from studying the poor rural women will contribute significantly to improving the living conditions of rural women, building their capacities and capabilities above local rural peasant farming and this definitely will achieve the goal of

reducing or eradicating poverty of the Sustainable Development Goals of the United Nation.

Poverty and Poverty Measurement

Poverty is referred to inability or deprivation from meeting ones' basic needs. This encompasses the basic identified needs of a human being; shelter, food and clothing. Odeh & Okoye (2014) opined that poverty is the inability to attain basic capabilities as health life, proper nourishment, lack of economics, social and political skills and being denied the opportunity to be involved in community activities. In it viewed in 1990, World Bank considered in ability to attain a minimum standard of living is poverty. This shows that the definition of poverty is dynamics and not limited on the amount of money one has but also the ability of the money to cater for individual basic needs.

Nigeria uses consumption expenditure in measuring poverty rather than the used of income. This measure is similar to many countries of the world. This is because it considers level of utility by a household as it contrasts the income measurement that represents the chance of achieving a particular level of well-being (National Bureau of Statistics, 2020). Poverty can either be absolute or relative. The World Bank considered as extreme poverty living on less than $1.25 in a day while a moderate poverty on less than $2 a day. The national poverty line in Nigeria is set at 137,430 Naira per person in a year. This means a household that per capita annual consumption expenditures fall below the stated amount are referred to as poor according to national standards. The level of poverty in Nigeria like many other developing countries is associated to corruption and mismanagement of public funds by authorities and social unrest.

Concept of Empowerment/Women Empowerment

As defined in its report (1975:3) the World Bank termed empowerment as a strategy planned to improve the economic and social well-being of a giving group of people that are disempowered. This group of people includes the poor both in the rural and urban areas. However, in (2001) World Bank considered increase in freedom of choice, one's authority, control over resources and decision that affect his life as empowerment. This implies not only ability to have access to financial resources but also freedom in taking decisions that relates to one's life. This entails making the powerless, powerful and voiceless to have freedom to speak and air their views on issues affecting their life. The ability of individuals to involve in, add to and benefit from any growth and development processes that appreciate their values, respect their dignities and giving them the fairer benefits of their contributions is termed economic empowerment (Eyben, *et al*. 2008). Therefore, women empowerment refers to the process of

giving women the freedom to take decision that affect their life and the society. Kabeer (2001) viewed women's empowerment as ability of the women to gain control over ownership and control of their lives. This, therefore, has no limitation to financial supports but also includes education, capacity building and training that will rise women participation in the processes and decision-making that affect their lives and children. This requires given women access to economics opportunities and capacity development through skills training and education to meet up with their challenges. The increase in women power over economic decisions that affect their lives in the society is economic empowerment Schmitz (2009). Their what qualifies a woman to be considered empowered economically entails independent in making economic decisions. Once a woman is empowered it gives her more opportunities in the society like the men counterparts. These opportunities include jobs, properties, skills and business information without the interference of a man.

The role of women in the Nigerian economy is very vital to be ignored. This means that empowering a woman will go a long way in reducing poverty and ensuring economic growth in Nigeria. Despite their contribution, majority are found in agriculture with small holdings and other non-agricultural activities that has no significant to their growth (Dejene, 2014). The women are mostly subjected to so many responsibilities ranging from domestic chaos to productive activities on the farm and markets. Empowering women will not only reduce poverty but also bridge the gender inequality gap as a goal of the Sustainable Development Goals (SDGs). The popular saying that educating a woman is educating the world is not limited to knowledge benefits but also when a woman is economically empowered the benefits travel a long way. According to the United Nation (2010) investing in women and girls gives a multiples effects on productivity, efficiency and sustainable economic growth. This is derived from the women conscious efforts in investing in their families and communities than their men counterparts. When a mother controlled the household income it increases the livelihood of a child by 20% (Zoellick, 2010). The higher the woman income and bargaining power, the more investment into education, nutrition and health of children in the family and this in long run results to economic growth (DFID, 2010).

Statement of the Problem

Despite all various efforts through the Nigerian federal government to eradicate poverty in Nigeria, there is nothing much to show on the poverty rate in the country. The poverty rate per population in Nigeria as of 2019 is 40.1percent where 52.1 percent of the total poor are in the rural areas (National Bureau of Statistics 2020). The ineffectiveness of the policies is associated

with inadequate inclusion of the poor women in most of the decision-making, low level of education of the women and unequal opportunities between men and women that negate the smooth implementation of the poverty eradication programs in Nigeria. The inability of women to have access to loans without their husbands controls and attaching most core domestics roles to women hinders the possibility for many women to be empowered and have access to better education. The continues discrimination of women who are the pillars in rising and upbringing of children will continue in creating more numbers of poor people. However, if women are empowered, many opportunities will follow, that will significantly reduce or eradicate poverty in Nigeria and beyond.

Aim and Objectives

The aim of the study is to examine the impact of empowering women in reducing poverty in Nigeria with strong focus on the Nigerian rural women as to increase their participation and access to opportunities like their men counterparts. The study focused on rural women of Shongom Local Government Area of Gombe State, Nigeria. This will be achieved through the following specific objectives:

To examine the socio-economic characteristics of the rural women in Shongom local government Area.

To determine the effects of women empowerment on poverty reduction in the study area

To ascertain the relationship between women empowerment and poverty reduction in the study area.

Research Questions

What is the level of poverty amongst women in Shongom Local Governement Area?

Is there any relationship between women empowerment and poverty reduction in the study area?

Hypothesis

H_0: There is no relationship between women empowerment and poverty reduction in the study area.

H_1: There is a relationship between women empowerment and poverty reduction in the study area.

Scope of the Study

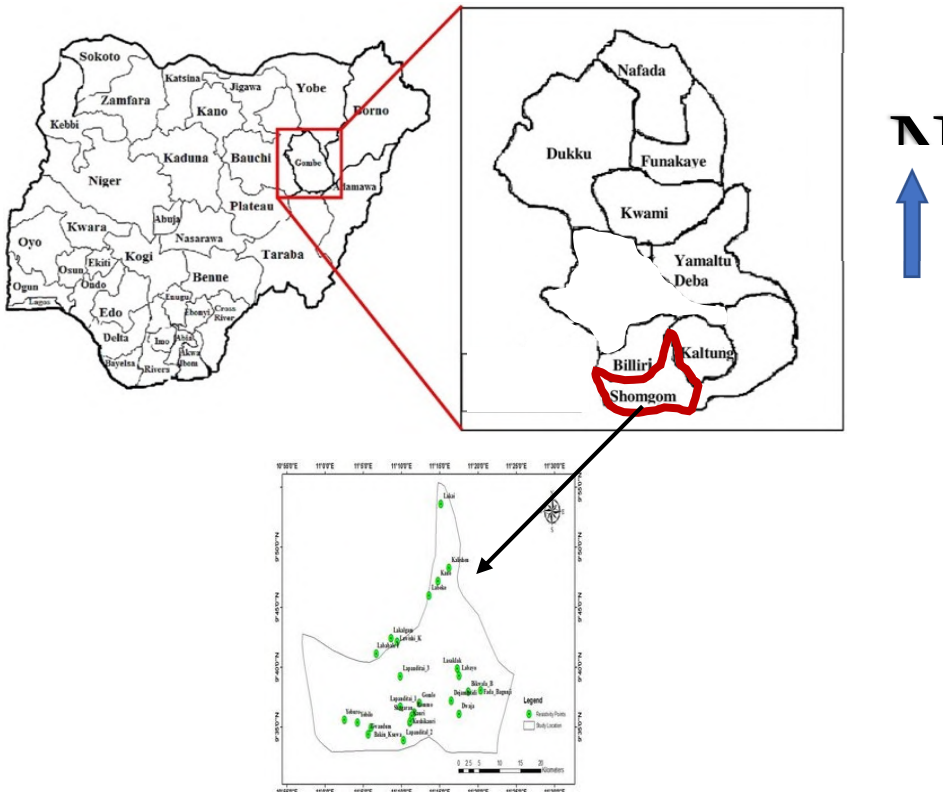
This researched was carried out using primary data on the impact of women empowerment on Shongom Local Government Area of Gombe State. Due to time frame and cost, large population was avoided. The researched only focused on the study area for obtaining data and analysis but however the result from the analysis can represent the state and Northern Nigeria due to common cultural identities and values.

Materials and Method

The Study Area

Shongom Local Government Area of Gombe State, Nigeria was created in 1996 out of the defunct Kaltungo Local Government Area with it headquarter in Boh.

Figure 1. Map of Nigeria Showing the Gombe State and Shongom Local Government Area



Source: Kolo et al. 2016 and Sani et al. (2019)

It shares boarders with Kaltungo and Balanga Local Government Areas in the east, Billiri Local Government Area in the North, Kirfi and Alkaleri Local Government Area of Bauchi State to the west and Karim-lamido Local Government Area of Taraba State to the south.

It has the projected total population of 243,033 inhabitants with 49.40% females (National

Population Commission, Boh Office 2021) and it covers a total land area of about 922 squares kilometres. It has 6 districts and 10 ward councils.

Research Methods

This study employed the used of both primary and secondary data such as focus group discussion, questionnaires, journals, textbooks, etc. The research adopted systematic sampling method in selecting the respondents from the ten wards, in the Shongom Local Government Area.

A total of 200 questionnaires were administered in all the ten wards which enable the wide coverage of the study area. 195 questionaries were retrieved and analysed.

The questionnaire obtained information on the socio-economic backgrounds of the respondents and related questions on women empowerment and poverty reduction from the respondents. Discussions were also conducted with some selected women.

Data gathered from the respondents were edited, coded and analysed using SPSS. Descriptive statistical methods were used in the analysis of the data, mainly frequencies were calculated. Besides, cross-tabulation was used.

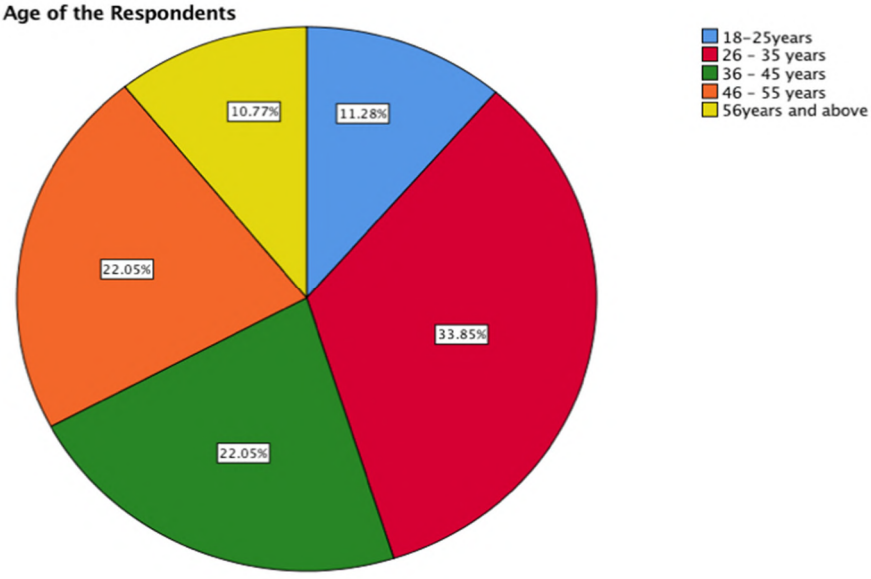
Hypothesis was set and used to test the relationship between women empowerment and poverty reduction in the study area. Pearson's Chi Square Test was used in testing the hypothesis. Where if P value is less than 0.05, the result is considered to be significant. This shows that there exists relationship between the variables under consideration (95% true that the relationship was not came across accidental).

Results and Discussions

Characteristics of the Respondents

The characteristics of the sampled respondents revealed that 33.85% of the respondents are within the age group of 26 – 35years, 44.10% are shared equally between the age group 36-45years and 46 – 55years, while 11.28% of the respondents are in the age category of 18 – 25years and 10.77% of the respondents are 56years and above.

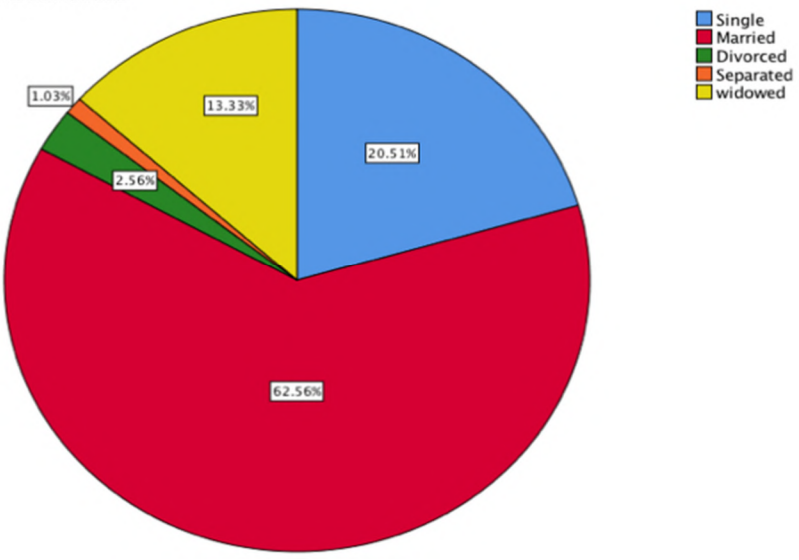
Figure 2: Age of the Respondents



Based on questionnaire survey, 2021

Figure 3 revealed the marital status of the respondents, where 62.56% of the respondents are married, 20.51% of the respondents are singles, 13.33% are widowed, 2.56% are divorced and 1.03% are separated according to the sampled analysed.

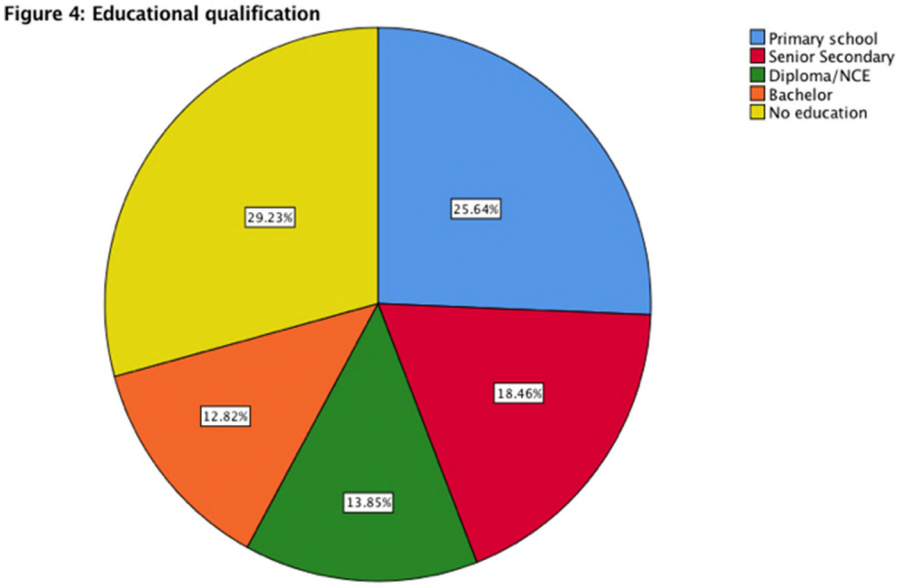
Figure 3: Marital Status



Looking at the analysis on figure 4, the educational background of most of the responded women are very low. This is just as a result of some cultural and local believe about supporting girls' education in the study area. The table shows that on 12.85% of the respondents have bachelor's degree education and 13.82% of the respondents attended only national diploma or certificate in education. However, 63.18% of the respondents are either stop at secondary school level, primary level or have never attended school at all. Those without education amounted the

highest percentage with 29.23%.

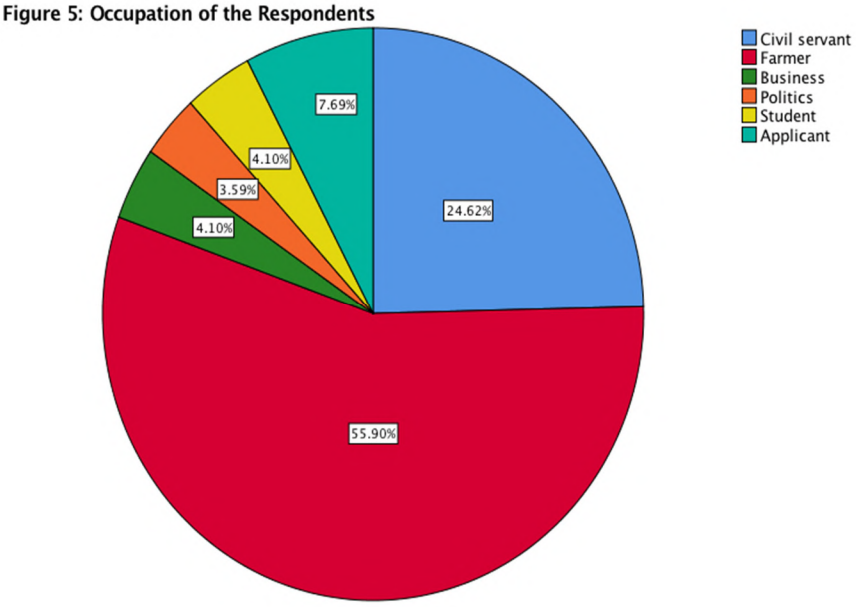
Figure 4: Educational qualification



Based on questionnaire survey, 2021

The level of education actually affects occupation of individuals in the study area. The women occupations also are affected by level of education attained. Figure 5 revealed that 55.90% of the respondents engage in farming as their profession this relates to the highest numbers of the respondents who only attended secondary school or less that hardly give opportunities to be hired. 24.62% of the respondents are civil servants 19.48% of the respondents are either graduate looking for jobs, students, businesswomen or politicians.

Figure 5: Occupation of the Respondents

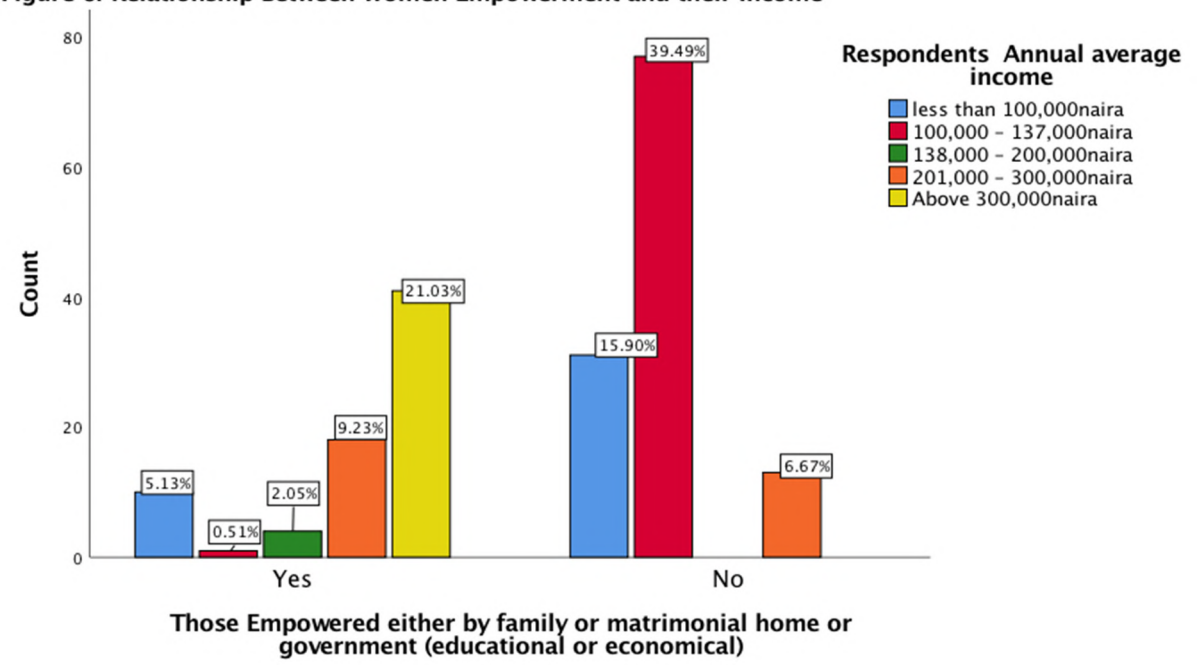


Based on questionnaire survey, 2021

Effects of Women Empowerment on Poverty Reduction in the Study Area

Setting up of an average annual group of income in naira it was revealed that empowerment of women either by their biological families, matrimonial home or government has a greater role in improving the annual income. Empowerment as earlier on defined is not limited to economic support only but training to have skills, education and freedom from domination of ones' decision.

Figure 6: Relationship Between Women Empowerment and their Income



Based on questionnaire survey, 2021

Figure 6 revealed that women that have enjoyed certain kinds of empowerment either from parents, spouses or government have better income compared to those without any empowerment supports. Majority of the respondents that do not have empowerment support live below the average annual income 100,000naira which is far below the national poverty line in Nigeria (137,430 Naira per person in a year). Whereas majority of the women that were empowered live above the national poverty line in Nigeria. In order to ascertain the relationship between women's empowerment and poverty reduction level, average annual incomes were used to check the relationship between women that were empowered and those that were not. The set hypothesis was tested to know the decision to be taking on the null hypothesis.

The Pearson's Chi-square was adopted in testing the hypothesis

H_0: There is no relationship between women empowerment and poverty reduction in the study area.

H_1: There is a relationship between women empowerment and poverty reduction in the study area.

Table 1 reveals the Pearson's chi-square test for the hypothesis; there is no relationship between women empowerment and poverty reduction in the study area. The test shows that there is a significant relationship between women empowerment and poverty reduction in the study area. The P value is less than 0.05, which means the confident level is above 95%. This signifies that the empowered women have better annual average income than the unempowered in the study area. The null hypothesis is rejected.

Table 1. Pearson's chi-square test

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	126.643a	4	.000
Likelihood Ratio	160.467	4	.000
Linear-by-Linear Association	93.072	1	.000
N of Valid Cases	195		

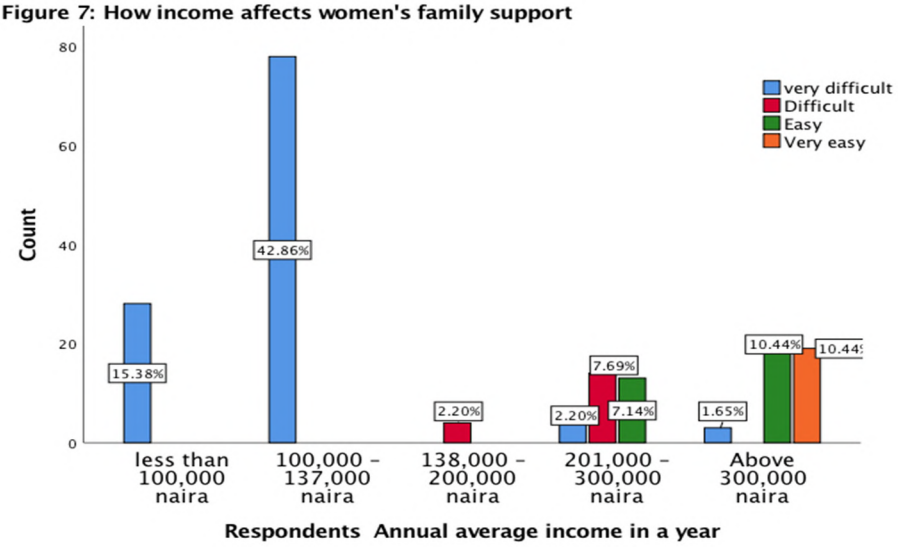
a 2 cells (20.0%) have expected count less than 5. The minimum expected count is 1.52.

This means that the higher the numbers of women empowered the better the women income in the study area and this will allow women to perform their roles easily and successfully.

Impact of Income on Women's Support to their Family.

The sampled respondents' income directly affects their ability to support their families. The respondents with average annual earning less than 138,000naira found it very difficult to support their families and relatives.

Figure 7: How income affects women's family support



Based on questionnaire's survey, 2021

This resulted from the high level of their poverty as live below the Nigerian national poverty line. However, those that earn between 138 – 200,000naira also find it difficult in rendering financial support in their family, whereas those with earning above 200,000naira considered either easily or very easily to financially support their family. This implies that the ability of a woman to render financial support either at her biological home or matrimonial home lies with her earnings which relates to the level of her empowerment.

This implies that, the more women are empowered the easily they contribute to their families and this will result to empowering their communities. The increase in woman income increases her ability to give or support her family or community.

Table 2 sought information about the respondents thought on some family roles identified in the study area. It revealed that the women roles increase with empowerment and this significantly benefits their family. Almost all 100% of the respondents rank the effectiveness of empowerment of the women with either agreeing or strongly agreed, with the exception of investment roles for the family where 4.6% of the respondents disagreed that women's empowerment will bring about increase in family investment. This therefore surfaced empowerment of the women in Shongom area aid their respective families in schools' fees payment, contribution to medical bills and rents, provision of food in the family, carrying successfully all the house provision responsibilities in the event of death and also will help in investment for the family growth. All these roles when performed, they will actually shape the qualities of different household thereby building the young people capacities from homes

through education and skills acquisition trainings.

Table 2. Ranking the impact of women's empowerment on their family roles

	Roles	Strongly agreed (%)	Agreed (%)	Disagreed (%)	Strongly disagreed (%)	Total (%)
1	Paying children school fees	67.2	32.8			100
2	Providing food in the family	56.5	43.5			100
3	Supporting parents	59.5	40.5			100
4	Paying medicals bills	50.8	49.2			100
5	Rent contributions	34.5	65.5%			100
6	Catering all house responsibilities in the event of dead	59.0	41.0			100
7	Investing in business for the growth of the family	49.7	45.6	4.6		100
TOTAL						100%

Based on questionnaire's survey, 2021

Respondents' Views on Men Support for Women Empowerment

Table 3 shows the views of the respondents in regard to willingness of men to support the empowerment of their families. Only 6.2% of the respondents agreed that almost all men are willing to support their wives' empowerment, 3.1% person responded they do not know. However, 56.9% and 33.8% considered that only few men and very few men are willing to support the empowerment of their wives.

For the girl's child 1.5% of the responded agreed that almost all men like to support their girl's child empowerment and 37.8% also accepted that many men are willing to support their girl's

child. This is in contrast to women support from their husbands, men prefer training their children to their wives. Whereas 56.4% stated that only few men are willing to support their girl's child empowerment and 4.6% considered very few men support their girls' child. This indicated that 61% which is more than half of the respondents considered girls' child support for empowerment comes from few men. For the male child 73.8% of the respondents agreed that almost all men are willing to support their male child, 18.5% also considered many men. This show that 92.3% of the respondents agreed that men are willing to support their male child than the girl child with 48.9%.

Table 3. Ranking *Respondents' views on men support for relatives' empowerment*

	Relationship	Almost all men (%)	Many men (%)	Don't know (%)	Few men (%)	Very few men (%)	None (%)	Total (%)
1	Wives	6.2		3.1	56.9	33.8		100
2	Daughters	1.5	37.4		56.4	4.6		100
3	Sons	73.8	18.5		6.2	1.5		100
TOTAL								100%

Based on questionnaire's survey, 2021

Respondents' Ranking of Why Men are Scared of Empowering Women

Table 4 ranks different possible reasons why men found it difficult to empower their women. 53.3% and 24.1% of the sample strongly agreed and agreed respectively that, men fear that empowered women may abandoned her home roles, whereas 22.6% disagreed with this claimed as a reason. 49.7% strongly agreed, 36.9% agreed and 13.3% disagreed that men are in secured as to why they are afraid to empower their women.

Above all, poor cultural understanding of gender role is considered the highest reason why men are scared of women's empowerment as 72.8% strongly agreed to that while the remaining 27.2% also agreed. 35.4% strongly agreed that men fear being dominated by the empowered women, 46.7% also agreed to that, however 17.9% disagreed. Illiteracy and lack of exposure also has the second highest ranking where 61.5% strongly agreed to that and 24.6 agreed. However, only 8.7% disagreed and 5.1% strongly disagreed that illiteracy and lack of exposure

affect men choices of empowering women.

Table 4. Ranking reasons why men are scared of empowering women

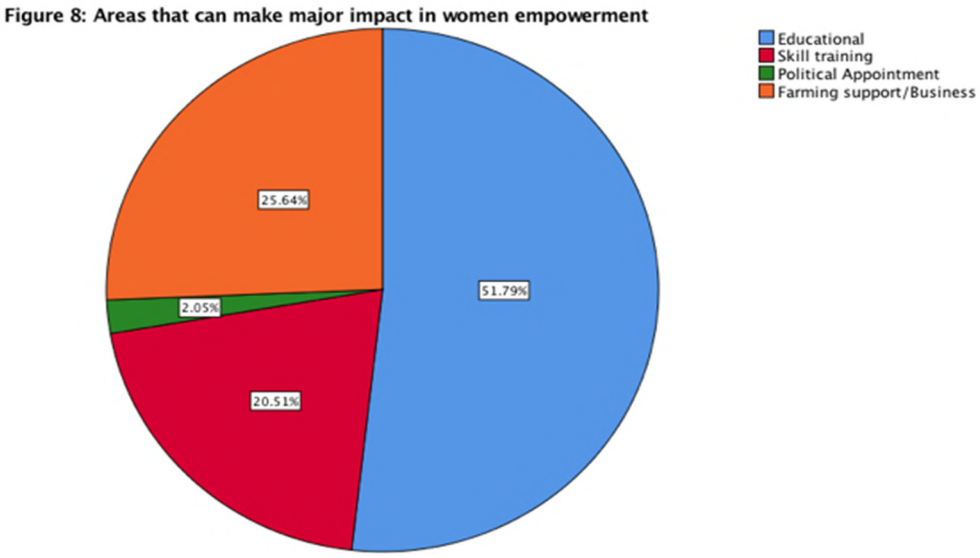
	Reason	Strongly agreed (%)	Agreed (%)	Disagreed (%)	Strongly disagreed (%)	Total (%)
1	It makes women neglect their roles at home	53.3	24.1	22.6		100
2	Feeling in secured by men	49.7	36.9	13.3		100
3	Poor cultural understanding of gender roles	72.8	27.2			100
4	Fear of domination by empowered women	35.4	46.7	17.9		100
5	Illiteracy and lack of exposure	61.5	24.6	8.7	5.1	100
Total						100

Based on questionnaire's survey, 2021

This therefore signifies that poor understanding of culture, illiteracy and lack of exposures negative affect the decision of men to empower their women.

Major Area that will Significantly Empowered Women

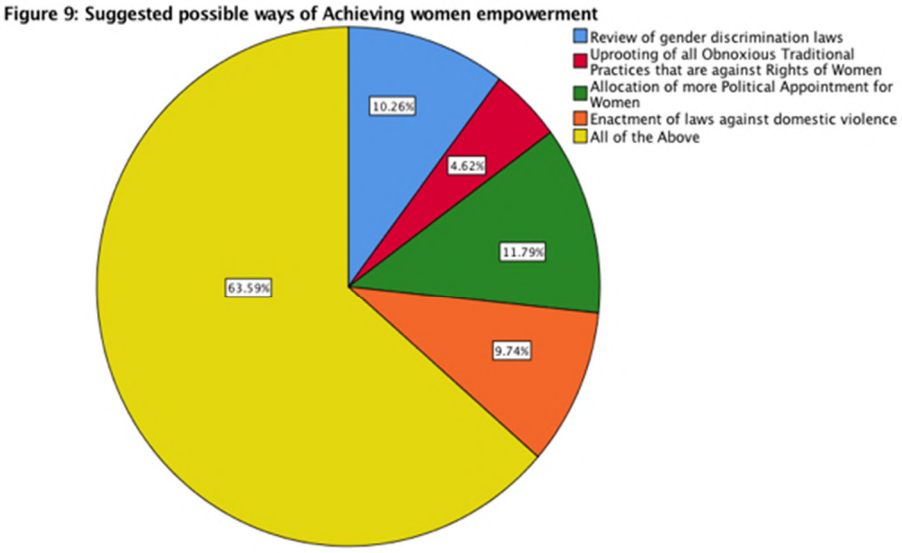
Empowering women entails lots of things, not limited to financial support as often stated but also includes skills acquisition and education. For the purpose of this study education, skills training, political appointment and farming supports and business were identified. The analysis was run to identify the area with more impact on women's empowerment. 59.71% of the respondents identified education performs more impact in women empowerment, 25.64% considered farming and business support has more impact, 20.51% identified skills training and 2.05% of the respondents considered appointment of women into some political offices plays will play a vital role in women empowerment.



Based on questionnaire's survey, 2021

Possible Ways of Achieving Sustainable Women Empowerment in Shongom Local Government Area

To achieve the better study results, discussions were held within the study area with groups and possible suggestion were collected as measure in achieving sustainable women's empowerment which is believed will possibly reduce poverty in the study area.



Based on questionnaire's survey, 2021

4.62% of the respondents suggested the removal of all tradition practices that deny women's right, 9.74% of the respondents opines those laws against domestic violence should be established in these communities, whereas 10.26% suggests review of gender discrimination roles laws and 63.59% considered all the identified items as vital solutions to be followed in ensuring sustainable women's empowerment.

Conclusions

In conclusion, it can be found out that women's empowerment significantly plays vital roles in reducing rural poverty in Shongom local government area where the studied is carried out. This is also applicable to most area of Nigeria that shares the same cultural attributes. The study revealed that majority of women in Shongom local government area stop their education pursuit at secondary level. As only 26.67% of the respondents have gone beyond secondary school. This actually a danger to empowerment of the women in the area. Financial empowerment without educational backup will not go a long way.

Also, empowerment significantly affect income level of most women and their ability to render supports in their families. It was revealed that majority of the women live below the Nigerian national poverty line. This so pathetic to the region and fight against poverty.

The study found out that women empowerment enables them to significantly perform the roles of paying children's school fees, provision of foods, payment of medicals bills, contribution to rents payments, investing into business for the family growth and above all ability to effectively carry out all the house responsibilities in the event of death of their spouse. The study also shows that there is a significant relationship between women's empowerment and poverty reduction in the study area. However, despites all these roles it is discovered that almost all men prefer to empower their sons and some their daughters while only few men are willing to support their wives. These are summarised as results of illiteracy, lack of exposure, poor tradition that opposes women right and low self-esteem of many rural men that feel insecure to their wives' empowerment.

Also, education is identified as the major tool in empowering women in the study area and this can possibly be achieved by abolishing all forms of tradition that bias women's rights and supports domestic violence.

Recommendations

In order to achieve a good reduction at the poverty level in the study area, the study came out with the following recommendation which if carefully followed and adopted may have a greater impact on women's empowerment and poverty reduction level in the area. Adequate funding should be allocated for rural roads connections by the Nigerian government at all levels so as to ensure better rural connections.

- The local authority should take a strong measure in enhancing girls' child education beyond secondary school as this will massively affect their future lives and of the community.
- By-laws should be put in place that would eradicate all forms of bias attached to gender and domestic violence.
- All laws both national and international that protect women's right should be review and strictly implemented to eradicate all form assaults against women.
- More awareness should be created to the rural communities on the impact of women's empowerment on their family and the communities at large.
- More skills acquisition centres should be established to train the uneducated adult women and supports and more farming initiatives should be introduced to enhance the economics of the rural women.
- Government at both levels should fund more programs toward poverty eradications that involve the community in the decision-making processes and implementation and also women should be actively inclusive.

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CHAPTER 2

GOAL-2: ZERO HUNGER

SUSTAINABLE DEVELOPMENT GOALS (SDGS) GOAL 2: ZERO HUNGER

Burhan OZKAN[1]

Abstract

The United Nations during its historical Food Summit held in September 2015 adopted the 2030 Agenda for Sustainable Development. This covers 17 goals popularly referred to as Sustainable Development Goals (SDGs) with 169 targets and 244 indicators to measure global development achievements. By this declaration, the 17 SDGs also known as Global Goals officially came into force on 1st January 2016. The SDGs aim to end all forms of poverty, fight inequalities and tackle climate change while ensuring that no one is left behind. The SDGs was formulated based on the successes of the Millennium Development Goals (MDGs) which ran for 15 years (2000 – 2015) for developing countries. The SDGs also targeted to address some of the shortcomings of the MDGs based on the lessons learned from the MDGs. However, the SDGs unlike the MDGs are universal goals and much more comprehensive in scope and aim to go further to end all forms of poverty. It is unique in that it calls for action for the poor, rich and middle-income countries to promote prosperity while protecting the environment. This paper examines the goal 2 of the SDGs which is to end hunger by 2030. It used secondary data sourced from publication on similar topic and other UN sources as discussed subsequently. The paper concludes that for

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the SDG 2 to be met, there is need for concerted efforts on how to address the underlining courses of food insecurity among the vulnerable population.

1. Introduction

Food is one of the most cited in the international document on fundamental human rights and ironically the most violated where the daily per capita food consumption between 1980 and 1998 in 48 least developed countries declined and that of the developing countries actually improved. Africa has not been able to feed itself since 1970s and may be unable to do so soon this Martin (2004) alluded to as the greatest reality that stakeholders in the food industry in the sub-Saharan Africa often sigh away from but it is real. Wu et al. (2011) also posited that African countries may face decline in per capital food availability in coming years. Agriculture is undoubtedly the largest components of the rural economy in most sub-Sahara African countries (Ogundari, 2017). The production on the other hand has depended largely on the family needs and available resources mostly manpower because the production to a large extent still depend on crude means and has been largely subsistence in nature even in the presence of technologically advanced alternative methods. This is so because agriculture has not been fully considered as a big enterprise capable of generating employments in addition to assist in developing the economies of the affected countries.

This is an indictment on the path of stakeholders including local, regional, NGOs, international development agencies among others that have one or two things to do with the food security of people (FAO, 1996 and Mamadou, 2006). It is pertinent to note that despite the importance of concept of food security, there have neither been comprehensive nor many studies that render detail accounts of its status among Nigerian people due to the absence of centrally processed official data thereby making planning a very difficult if not impossible task (Olanike et al. 2007 and Sanusi et al. 2006).

In many or most African countries, food security at both national and household levels is still not encouraging. The per capita growth rate in food production in some of these countries is still far lesser than corresponding growth in population which is not enough to meet the rising demand for food at household level leaving many undernourished thus creating an embarrassing gap between food supply and demand. For instance, the Nigerian population annual growth rate is around 3.5 percent with accompanying 2.7 percent growth rate or less in agriculture which is largely insufficient to meet food needs of the entire population (Ogundari, 2013). Before now,

agriculture especially food production used to be an important sector of the Nigerian economy because of its significant contribution to national economic growth. As of 2000, it constituted 30% of the annual GDP, 70% of the labour force, 70% of the non-oil exports and 80% of the food requirements of the nation (Adegboye, 2004). Of the Nigerian total GDP, as of 2014 according to the Central Bank of Nigeria (CBN) data as obtained, agriculture constitutes 20.24 percent; of this percentage crop production constitutes 87.76 percent, livestock 8.73 percent, forestry 1.15 percent and fishing 2.36 percent (CBN, 2016).

Starting from the 70s, food security as currently being referred to was defined in the 1974 World Food Summit as “availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices” (UN, 1975). Though some authors believe that food security studies predated this period as confirmed in the early statements “food security as currently being referred to”. Generally, there is a common agreement among researchers and stakeholders as to the word “food security” as currently being pursued was fallout of the world food summit of 1974.

Therefore, to address the challenges of food insecurity as stated above, the SDGs were formulated to address the deficiencies noticed in the MDGs which failed to achieve its stated objectives (Adegbami and Adesanmi, 2018). The specific goal that aims to address food insecurity and hunger is Goal 2 which targets zero hunger otherwise known as Sustainable Development Goal 2 (SDG2). Goal 2 is one of the 17 Sustainable Development Goals to be achieved by 2030. The Zero Hunger (SDG2) of the United Nations has five (5) as follows:

1. End hunger and ensure access to safe, nutritious and sufficient food,
2. End all forms of malnutrition,
3. Double the productivity and incomes of small-scale food producers,
4. Ensure sustainable food production systems and implement resilient agricultural practices,
5. Maintain the genetic diversity of seeds, plants and animals.

1.1 Implementing Mechanisms of Goal 2

The Zero Hunger target is to be achieved through three main mechanisms:

1. Increase investment through enhanced international cooperation,
2. Correct and prevent trade restrictions and distortions in world agricultural markets,

3. Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information.

1.2 Importance of Zero Hunger (ZH)

Zero Hunger pledges to end hunger, achieve food security, improve nutrition and encourage agricultural sustainability by 2030. Extreme hunger and malnutrition remain as barriers to sustainable development and create trap to vulnerable people across the world. Hunger and malnutrition result to less productivity among individuals who are more prone to disease and thus often unable to earn more and improve their livelihoods. Without ending hunger and malnutrition by sustainable and resilient, climate compatible agriculture and food systems, SDGs cannot be achieved. Therefore, a world with zero hunger is capable of impacting the economies, health, education, equality and social development in the world positively. Zero Hunger is key to building a better future for everyone.

2.0 Materials and Methods

This paper reviewed the food insecurity and hunger based on United Nations affirmative action on these concepts and the prospects of achieving SDGs which included Zero Hunger by 2030 as outlined by United Nations. To achieve the objectives of the paper, it reviewed similar papers published by eminent scholars in development studies and United Nations documents and statistics. The findings and conclusions of these documents were compared to come up with policy recommendations and inferences to provide relevant guides for the implementation of food programmes that targets achievement of zero hunger target.

3.0 Discussions and Implications

As stated in the introductory section, zero hunger requires a multi-dimensional approach from social protection to provision of safe and nutritious food particularly for children through transformation of food systems that will guarantee more inclusive and sustainable world where people irrespective of their age, race and other demographic features have access to safe, nutritious and healthy food in right quantity and quality. SDGs are interdependent goals in the sense that the success of one will amplify the improvement in others and vice versa. For instance, the zero-hunger goal cannot be met without achieving the climate action, peace and justice goals of the SDGs which are necessary to guarantee access of people to productive resources necessary for sustainable food production and supplies. The state of food insecurity in the world indicated that over 688 million individuals were in dire need of food by end of 2016 from 150 countries identified with severe food insecurity issues (FAO, 2017). Hunger as

we all know limits human developments since it is a key ingredient for achieving other SDGs such as education, health and gender equality. The number of undernourished people has dropped by almost half in the past two decades because of rapid economic growth and increased agricultural productivity in response to growth in population.

After a period of sustained decline, the absolute number of undernourished persons increased from 777 million in 2015 to 815 million in 2016 and 821 million in 2019 which is explained by two major factors, conflicts and climate induced droughts in vulnerable regions. Therefore, zero hunger goal (Goal 2) cannot be met without achieving the climate action (Goal 13) and peace & justice (Goal 16) of the SDGs (FAO, 2017). Insecurity and instability in some parts of the world have contributed largely to declining food production and food scarcity which has led to high food prices (Fawole et. al 2016). To mitigate all these challenges, agricultural investment is critical for reducing hunger and poverty, improving food security, creating employment and building resilience to disasters and shocks. It is worthy of mentioning that if women farmers had equal access to resources as men, the number of hungry people in the world could be reduced by 150 million which necessitates the gender equality in accessibility to production resources to guarantee improved livelihoods which is a basic requirement for zero hunger world (Fawole, 2017). To achieve this, there is also need for investment in social protection that will target poor people living in rural and urban areas to improve their livelihoods to have access to basic food and nutrition.

Currently, the world faces a new wave of challenges that jeopardize reaching zero hunger target in the world by 2030 not only to the current generation but also to future generations which is the outbreak of novel coronavirus (COVID-19). COVID-19 pandemic has aggravated the worse problems of vulnerability and inadequacy of food system in the world. The unprecedented consequences of this pandemic in health, economic and social well- being threatened the livelihood of many people in the world, making the progress toward the achievement of SDG zero-hunger goals more challenging. The pandemic coupled with other challenges like conflict and climate shocks, poses an additional threat to food systems which is capable of making more millions to slide into food insecurity thereby posing another challenge to ending hunger in the world by 2030 as targeted by SDGs. Even though, no area has been spared of the consequences of the novel coronavirus, the intensity has been more pronounced in developing countries especially among the vulnerable groups including the elderly, children, people with disabilities, migrants and refugees. Therefore, the goal of eradicating hunger in the world remains a challenge especially in the wake of the COVID-19 crisis. During the pandemic process,

production and distribution in the food sector has been disrupted all over the world and food insecurity has increased as the purchasing power of individuals has decreased (Gizem Deniz et. al 2020).

Extreme hunger and malnutrition remain one of the huge barriers to development in many countries particularly developing ones. Current estimates indicate that nearly 690 million people are living with hunger. This means that 8.9 % of the world population is hungry (up by 10 million people in one year and by nearly 60 million in five years). Majority of the world's undernourished which are estimated at 381 Million are found in Asia while more than 250 Million live in Africa where the number of undernourished is growing faster than anywhere in the world (FAO, 2017).

According to WHS, about 821 Million people suffer from hunger in the world and half of these people are small scale farmers who are in rural areas and hungry people are also found in urban areas. There are also hungry people living in urban areas. This means that more than one in nine of the world population do not get the privilege to eat enough in right quality and quantity. One in every three of the world population experience undernourishment. The undernourishment and severe food insecurity appear to be increasing in almost all regions of Africa, as well as in Southern America. Over 90 million children under five are dangerously underweight with about 2 billion people in the world do not have regular access to safe, nutritious and sufficient food. Nearly 750 million (one in every ten people in the world) are exposed to severe levels of food insecurity (FAO, 2017). Furthermore, 144 million children under the age of 5 were stunted with three quarters living in Southern Asia and sub-Saharan Africa and another 47 million children under 5 are affected by wasting or acute undernutrition due to the limited nutrient intake and infection.

4.0 Conclusion

The quest for achievement of SDG 2 (Zero Hunger) is on course and should be supported by relevant stakeholders to ensure the targets are met. This could be achieved by mitigating the threats posed by the pandemic to vulnerable population. All countries particularly the developing ones need to take immediate actions to strengthen food supply chains and increase food production to meet increasing demand due to growing population. The stakeholders must be firm in their commitment and should not allow the pandemic and other threats deter them from achieving the set targets. Consequently, the number of people going hungry and suffering

from food insecurity had been gradually rising since 2014. An estimated 25.9 percent of the world populations were affected by moderate or severe food insecurity in 2019, an increase from 22.4 percent in 2015. The fastest rise in Latin America and the Caribbean, although the highest levels were in sub-Saharan Africa (UNDP Report, 2020). The situation is likely to deteriorate even further due to the COVID-19.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
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GLOBAL HUNGER PROBLEM

Çağdaş ATEŞ[1]

Zero hunger, which the United Nations aims to solve in 5 steps, will be examined on a global scale within the scope of the study. The study will include analysis of the UN's data, as well as an examination of the historical background and current process.

Hunger, which is closely related to developed countries and underdeveloped countries, is actually one of the simplest problems that can be solved when human values are placed on its basis. Therefore, it is very important not to be greedy and not to turn hunger into politics and power in the international system where food is produced enough for the whole world.

Introduction

690 million people still go to bed on an empty stomach each night. Acute food insecurity affected 135 million people in 55 countries in 2019 (UN WFP, 2021). And also, there are 300 million fewer hungry people than in 1990-92, despite a 1.9 billion increase in the world's population. Therefore, hunger is the problem of the international system, which is the easiest to solve but also ossified. In this context, the UN has determined 5 steps to end hunger all over the world.

The historical background and current situation of the hunger problem, which has ossified with the 5 steppes determined by the UN to end hunger, will be evaluated in the light of UN data. The main subject of the study, the solution proposals to the hunger problem, which is at a global level and ossifying day by day, will be expressed before the conclusion of the study. The study will include both qualitative and quantitative analysis. It should not be forgotten that hunger is

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a global problem and at the same time the main problem of humanity. because it contains moral values as well.

The Historical Background of Hunger

Hunger is one of the biggest problems that has been experienced and been experiencing throughout the history. Such that, approximately 24 thousand people die of hunger or hunger related diseases each day, which means one death every 3.6 seconds (Vermon, 2007). Historically, even if hunger is as old as the human history, it started to be handled and studied as a problem in 1970s after the appearance of global food crisis. Especially, the rising number of underdeveloped countries importing food after the period of World War II and price fluctuations of agricultural products in world market revealed this global food crisis (Wisner, Weiner, & O'Keefe, 2006). After this crisis, many underdeveloped countries faced hunger problem with the difficulty of finding food in the world. Especially, African Countries and Southeast Asian Countries became the first counties facing this problem. Since the term of hunger have global impact, it causes it to be conducted studies in this field and taken it seriously.

Hunger appears in different parts of the world depending on different circumstances and different times and its affect still continues. For instance, considering Africa, the biggest factor of Africa's hunger problem is the negative effect of climate change and global warming on food sources. With climate change and increasing global warming, severe reduction in water sources and decline in food production arise. All together with these negative factors, the problem of hunger appears due to reduced access to food (Downing, 1991). As another example, we can take Southeast Asian. The factors causing hunger in Southeast Asia are the tsunami disaster in 2004 and the economic crisis occurring in Asia Pacific economies. With tsunami, reduction in food production occurred and with economic crisis, access to food products became extremely limited. As a result of all these factors, hunger problem has appeared (Renwick, 2011). Another country to illustrate is Iraq. The main reason of Iraq's hunger problem is The Gulf War period and poverty caused by economic sanctions, the war and internal conflicts in after war period. This poverty restricted food access of majority of people and it revealed hunger problem (Dreze & Gazdar, 1992).

Considering the countries where the problem of hunger revealed, it is seen that most of the countries experiencing hunger problem are either underdeveloped or less developed countries. However, it does not mean that developed countries will not experience the problem of hunger.

Even in United States of America that is accepted as the richest nation of the world, it is known that 35 million people experience food insecurity, which means that not consuming enough nutrition for one's life risks livelihood directly (Vernon, 2007). Therefore, in the fight against hunger, food security is crucial and it should be supported by many countries.

Reasons and Results of Global Hunger Problem

The solution determined by the UN in 5 steps is applicable in the long term. but in order to achieve this, all the states of the world must act with the same dedication and make policies. According to the UN "*To realize the full potential of our globalized economy, national governments must expand social protection schemes for the most vulnerable. Providing this opportunity for equitable economic growth will raise the purchasing power of the poorest 2 billion people which in turn will create incremental demand, generating new jobs and jump-starting local economies. Investing in inclusive development isn't just the right thing to do; it makes good business sense*" (UN WFP, 2021) must be a pioneer of countries all over the world.

When we look at the root of the hunger problem in the global system, it is possible to observe that there are political struggles to gain power. Therefore, we can say that moral values form the basis of the hunger problem. We need universal moral values in order to sustain our existence as human beings. These values are very essential for humanity.

On the other hand, it is very wrong to use these values for the survival of states or to bring their own people to a superior position (in terms of welfare, living conditions, etc.) in the international system. However, when we look at both the historical background of the global world and today's structure, we see that this structure has always existed. It is obvious that neither religious elements nor universal moral values are sufficient in this regard.

At the same time, 2020 Global Hunger Index (GHI) shows that although hunger worldwide has gradually declined since 2000, in many places progress is too slow and hunger remains severe. These areas are highly vulnerable to a worsening of food and nutrition insecurity exacerbated by the health, economic, and environmental crises of 2020 (2020 Global Hunger Index, 2020).

In this framework, the 2. nd goal of UN development goals pledges to end hunger, achieve food security, improve nutrition and promote sustainable agriculture and is the priority of the World Food Programme.

Global Hunger Index

TABLE 1.1 **Global Hunger Index Scores By 2020 GHI Rank**					
Rank[a]	**Country**	**2000**	**2006**	**2012**	**2020**
2020 GHI scores less than 5, collectively ranked 1–17.[b]	Belarus	<5	<5	<5	<5
	Bosnia & Herzegovina	9,3	6,7	<5	<5
	Brazil	11,3	6,3	<5	<5
	Chile	<5	<5	<5	<5
	China	13,6	9,5	<5	<5
	Costa Rica	6,1	<5	<5	<5
	Croatia	<5	<5	<5	<5
	Cuba	<5	<5	<5	<5
	Estonia	5,9	<5	<5	<5
	Kuwait	<5	<5	<5	<5
	Latvia	7,0	<5	<5	<5
	Lithuania	6,1	<5	<5	<5
	Montenegro	—	5,5	<5	<5
	Romania	8,0	5,5	<5	<5
	Turkey	10,1	6,3	<5	<5
	Ukraine	13,0	<5	<5	<5
	Uruguay	7,5	6,8	5,0	<5
18	North Macedonia	7,5	7,7	6,7	5,2
18	Russian Federation	10,0	6,8	6,0	5,2
20	Argentina	6,3	5,6	5,2	5,3
21	Kazakhstan	11,4	12,3	8,1	5,4
22	Bulgaria	8,2	7,3	7,8	5,5

23	Tunisia	10,3	7,8	7,0	5,7
24	Albania	20,7	15,8	8,5	5,9
25	Azerbaijan	25,0	16,0	10,6	6,0
26	Georgia	12,3	8,9	<5	6,1
27	Slovakia	6,5	5,9	<5	6,4
28	Serbia	—	6,1	5,3	6,6
28	Trinidad & Tobago	11,1	11,4	10,8	6,6
30	Uzbekistan	24,4	16,9	12,7	6,7
31	Armenia	19,4	13,4	10,4	6,9
32	Dominican Republic	15,2	13,9	10,3	7,1
33	Panama	18,5	15,0	9,8	7,2
34	Peru	20,8	16,5	8,9	7,3
35	Colombia	10,9	11,5	9,1	7,5
35	Paraguay	12,1	11,6	9,6	7,5
35	Saudi Arabia	11,1	12,2	8,2	7,5
38	Mexico	10,1	8,4	7,4	7,7
39	Iran (Islamic Republic of)	13,5	8,9	7,6	7,9
40	Fiji	9,6	9,1	8,1	8,0
41	Jamaica	8,6	9,0	9,2	8,1
42	Kyrgyzstan	18,4	13,9	11,7	8,4
43	Jordan	10,8	8,1	8,6	8,8
44	Lebanon	11,6	13,3	12,4	8,9
44	Morocco	15,5	17,5	9,6	8,9
46	Algeria	14,5	11,7	9,0	9,0
47	Mauritius	15,0	13,6	12,3	9,3

*	Moldova (Rep. of)*	—	—	—	0–9.9*
48	Suriname	15,5	11,7	10,5	10,2
48	Thailand	17,8	12,3	12,7	10,2
50	El Salvador	14,7	12,1	10,4	10,5
51	Ecuador	19,7	19,0	16,3	11,0
52	Guyana	17,3	15,8	12,2	11,1
52	Turkmenistan	21,2	16,6	13,6	11,1
54	Egypt	16,4	14,4	15,3	11,9
55	Oman	14,8	16,0	11,6	12,2
56	Honduras	21,9	19,7	16,9	13,1
56	Mongolia	30,1	23,1	12,7	13,1
58	Nicaragua	22,3	17,1	14,6	13,2
59	Malaysia	15,5	13,3	11,8	13,3
60	South Africa	18,4	19,4	15,3	13,5
61	Viet Nam	26,3	21,9	16,5	13,6
62	Bolivia (Plurinational State of)	27,6	23,2	16,8	14,0
63	Ghana	28,5	22,2	17,9	15,2
64	Sri Lanka	21,9	19,5	20,1	16,3
65	Iraq	24,0	24,0	21,1	17,1
65	Senegal	34,3	24,4	18,0	17,1
67	Gambia	29,2	28,0	22,7	17,8
68	Gabon	21,1	20,4	18,8	18,2
69	Philippines	25,0	20,4	20,4	19,0
70	Cameroon	36,4	31,0	23,2	19,1
70	Indonesia	26,1	29,5	23,1	19,1

70	Namibia	25,3	24,7	23,9	19,1
73	Nepal	37,4	31,0	22,8	19,5
74	Eswatini	26,1	24,1	17,8	20,3
75	Bangladesh	34,1	29,0	27,8	20,4
76	Cambodia	41,2	27,2	24,9	20,6
77	Guatemala	28,5	24,6	22,2	20,7
78	Myanmar	39,8	31,8	23,3	20,9
79	Benin	34,1	28,7	24,2	22,4
80	Botswana	28,2	27,3	22,4	22,6
80	Malawi	43,2	33,8	27,1	22,6
82	Mali	41,9	37,0	31,3	22,9
83	Venezuela (Bolivarian Republic of)	14,7	11,2	7,6	23,5
84	Kenya	37,4	31,4	23,2	23,7
85	Mauritania	32,0	29,0	23,7	24,0
86	Togo	39,3	36,7	26,6	24,1
87	Côte d'Ivoire	33,6	34,7	30,1	24,5
88	Pakistan	37,2	33,5	32,8	24,6
89	Tanzania (United Republic of)	40,8	33,6	30,0	25,0
90	Burkina Faso	45,7	46,3	31,1	25,8
91	Congo (Republic of)	33,8	34,7	27,8	26,0
92	Ethiopia	53,7	43,6	35,5	26,2
93	Angola	64,9	47,0	35,9	26,8
94	India	38,9	37,5	29,3	27,2
94	Sudan	—	—	32,5	27,2
96	Korea (DPR)	39,5	33,1	28,2	27,5

97	Rwanda	49,7	38,1	26,0	28,3
98	Nigeria	40,6	34,1	32,0	29,2
99	Afghanistan	51,0	42,8	33,8	30,3
100	Lesotho	36,0	30,4	24,6	30,7
101	Sierra Leone	58,3	53,3	42,4	30,9
102	Liberia	48,0	40,0	33,1	31,4
103	Mozambique	48,1	38,4	31,4	33,1
104	Haiti	41,9	43,6	35,9	33,5
*	Djibouti, Guinea, Guinea-Bissau, Lao PDR, Niger, Tajikistan, Uganda, Zambia, and Zimbabwe*	—	—	—	20–34.9*
105	Madagascar	42,7	41,4	34,6	36,0
106	Timor-Leste	—	46,1	36,2	37,6
107	Chad	50,9	51,3	47,9	44,7
*	Burundi, Central African Republic, Comoros, Dem. Rep. of the Congo, Somalia, South Sudan, Syrian Arab Republic, and Yemen*	—	—	—	35–49.9*

Source: https://www.globalhungerindex.org/ranking.html

In total, 132 countries are evaluated in 2020 Global Hunger Index (GHI) considering undernourishment, child wasting, child stunting, child mortality and rated between 0-100 while 0 describes the best rating and 100 is for the worst and these are ranked among themselves. Also, this rating categorized as followed: countries having 9.9 points or less than 9.9 as low risky; points between 10.0 and 19.9 as light risky; serious risky for 20.00-34.9 points; alarming risky for 35.00-49.9 points; and 50.0 and upper points as highly alarming risky.

When GHI 2020 is examined, it is seen those 25 countries out of 132 are not been able to evaluate because of inadequate data. The rest 107 countries are ranked among themselves based on their score in 2020. Among the ranked countries, 47 of them have low rate of hunger by getting 9.9 and less than 9.9 points. It is illustrated in the table that 25 of these countries have points between 10.00 and 19.9 and have hunger problem in light risky level. The rest 30 countries out of 33 are in serious risky situation and 3 of them are in alarming risky situation.

In the table of GHI 202, in addition to 2020 year, there are also points of counties in 2000, 2006, and 2012. Examining these points, it is seen that while Albania, Azerbaijan, Uzbekistan, and Peru being serious risky among the first 47 countries in 2000, they reduced the hunger problem and bring it to low risky level. Even if countries like Cameron, Nepal, Cambodia, Myanmar, Malawi, Mali, Togo, Pakistan, Tanzania, Burkina Faso show a progress from alarming risky to serious risky level, hunger related serious problems are still existing. Countries in the table including Ethiopia, Angola, Afghanistan, Sierra Leone and Chad are in the level of alarming while they were in highly risky level in the past.

When GHI 2020 Table data is examined generally, it is seen that there is reduce in the rate of hunger in general from 2000 year towards 2020. It shows that important steps are taken for fighting against hunger.

Conclusion

As a result of investigating the term of hunger historically, it is seen that it has emerged because of different reasons in different regions. Hence, it can be said that this problem does not depend on a single reason. It is known that United Nations (UN) take steps to eliminate these problems on the long view in fighting against hunger. At this point, when Global Hunger Index (GHI) is investigated, a decrease in the risk of hunger in many countries from 2000 to 2020 is seen. Nevertheless, the number of countries where the hunger problem is low is quite little and there are many countries under risk.

Consequently, hunger is a serious problem seen all around the world and systematic decisions should be taken to solve this problem. Especially, implementing the steps suggested by United Nations has a key role at this point. Thus, it is very important not to be greedy and not to turn hunger into politics and power in the international system where food is produced enough for the whole world.

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THE THREATS OF RUNNING WATER WHILE MALCONSUMPTION

Hüseyin Çağatay ÇETİNKAYA[1]

Abstract

World clean water resources are depleted rapidly due to natural and human factors. Rapid population growth, technological developments and negative effects of global warming are the main factors that accelerate this process. Water problems arise in urban areas such as drinking, using water deficiencies and water pollution. In the rural areas, as a result of unconscious excessive irrigation, the groundwater level is gradually decreasing, the chemical wastes used in agriculture contaminate the ground water by polluting the ground water and the evaporation caused by unconscious irrigation increases the water losses. These problems caused the water resources to become more important with each passing day.

Energy, in the process of its generating, delivering the consumer and using, forms environmental impact whatever source type is. Many problems like pollution, energy using, economic and social problems from energy supply and demand are came up as basic issues of environmental policy. These problems are the most political issues for governments both international and national level. In addition to this getting energy is the one of the most important problems at the governments' agenda. Because energy which is important from executing production to daily life, cause important problems for governments both finding sources and getting. So, energy policy takes an significative role in the many issues like power, security, development at the national and international area for governments. Many problems like fossil resources which are nonrenewable resources and nuclear energy and danger of fossil resources depletation, pollution, direct governements to alternative energy source. In addition to this water which is using for energy source ever since old times, are accepted renewable source. Early on especially water which is using for drinking water and irrigation start to use in generating energy with invention of mill and dam. But dams makes environmental damages at the national, regional and global level. Loss of biological diversity, extinction, decreasing

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groundwaters, melting delta, deterioration of soil, economic and social. In spite of all these things, Hydroelectric Power Plant (HPP) is accepted dependable, cheap, clean and renewable energy source relatively. While HPP makes environmental damages, they have an important place at the governments' energy policy because of other speciality. Governments try to build new ones as well as present dams and HPP due to the population growth and development effort because they are cheap and renewable. Prefering to build HPP in despite of its environmental damages by governments who have to realize energy offer with the urgent and compulsory economical reasons is presented dilemma at the economical and environmental problems clearly.

This study consists of literature review and it will include more perspective which is specificly related to running water focusing on human health and agriculture.

Key Words: Running water, HPP(Hydroelectric power plant), Dam, Nature

Introduction

The control and usage of natural resources has shown us their indispensability and importance. For instance, the design and use of various structures contributing to the development and transformation of the society increase the importance of these units for human life by controlling hydrographic units (especially rivers), which are essential for life, (construction of dams and irrigation channels). Therefore it can be said that dams are important factors for natural. The first priority of them in history was for drinking and irrigation water, though. After the revolution of industry, dams became more vital for human life because of the production of electricty. From agies, people have been using water power for daily needs. On the other hand, with the design of water powered machines, industrial revotion got accelerated. Nowadays, any power cut or shortage (especially electrical) may cause really big problems and economical gaps. That is why dams have become essential and strategic constructions for us. There are more than 45,000 dams on the system of running water potantial in the world right now. This also represents 15% of the world's river reserves (Nilsson and Berggren, 2000; Meybeck, 2003; Nilsson et al., 2005). The construction of dams and HPPs provides drinkable water and electricity for people. Thus, there have been alot of cultural conflicts. We are all aware of human population being increased day by day. Because of this rapid growth, new HPP projects are also on the agenda. As an example, dams are being used daily in our country because of the cheap price and definately providing a useful power. Although fossils are used by thermal power

plants, water power is only used by HPP for production. However %80 of required power in the world is still produces by fossils. In the past, power plants were served independently in specific regions, while today these power plants work with an interconnected system. Basicly, the principle of HPP is a conversion of potential energy to kinetic energy.

How about the investors who only try to make a good reputation and profit throgh new constructions. Their traditional way is; 8-10 billion tons of water flow into the sea without any benefit. Of course we have to use the potantial benefits providing by nature unless there is threat or risk for natural system.

Below is the review of some special topics putting both natural system and human health in danger.

Objective of Study

The benefit that we intend to get from this paper aims to study running water usage and the threats while malconsuming.

Research Methodology

Literature review will be the main focus of this study. In other words, A lot of resarches have been done on this topic in different countries and has been reviewed in this paper.

Different usage of running water

Transportation; Public or commercial usage**.**

Industry; Raw materials, storage, power plants, etc.

Trade; Mall, hotel, restaurant, cafe, etc.

Residence; Park, garden, buildings, etc.

Culture and Education; Festivals and concert areas, museums, parks, children's playgrounds, sports fields, exhibition areas.

Sports; Swimming, diving, canoe races, fishing, boat trips, hiking, picnic areas.

Within the scope of this research, there will be some assessments about HPP and dams which can be risky potantial for human and nature health. As it is known, running water is common for many nations. Therefore it should be used in the best way for general developing and sustainability.

Power production

With the increasing of human population all over the world, many problems occur day by day especially the power problems. Countries are trying to dicover new resources power. Besides, if the resources are not used in a right way. The natural system may fall in serious danger. According to the BP Statistical World Review of Energy's data; the average of power usage is the same with 13 billion tons petrol yearly. As mentioned before, fossils make %80 of this power source. Petrol, natural gas and coal are the main materials for production. It is believed that there will not be more advantage in future for us. The deadlines for these material's are; petrol 2050, natural gas 2070, coal 2150. Furthermore, countries have started to tell about power stocks and also this topic has become the first priority of governments as politic.

Another type of energy usage is nuclear energy. Nuclear energy and its resources are all required serious financial investments. Any blowing into the atmosphere, gas leakage / release may lead in danger and cause great risks (1986 Chernobyl disaster and March 2011 Japan earthquake) Moreover nuclear vepon can be maden by different nations.

Within the framework of all these definitions, it seens that, countries are looking for “alternative energy sources” which is why they tend to use natural energy sources such as wind, wave, geothermal, tidal and solar energy as sustainable energy sources. Especially in countries which rich running water systems, Hydroelectric power plants (HEPPs) is the classical energy production.

Transboundary Waters

The running water flows from a country to another. Today, there are 261 transboundary river basins in the world constituting 45% of the earths land area. Globally, 19 basins cross 5 countries or more, including the Mekong, the Nile, the Niger and the Rhine. The Danube, for example, flows adjacent to or through 18 countries. Only in Europe, 20 countries dependent to more that 10% of their water resources on neighbouring countries and 5 European countries draw 75% of their resources from upstream countries. Consequently, this issue is really controversial for many countries in the world. If we want to see sustainable and secure world in the future, everyone has to be sensitive about the usage of naturel running water..

Threats

The International Network of Rivers compares streams to veins in our body, and water to our blood, which gives life to our bodies. Let's take a look at what kind of difficulties made by an

unconscious natural obstacle that can be placed in front of streams such as the distress caused by any disruption in our blood circulation in our body.

- HPP and dams built for power production on running water canal can change the naturel ecosystem as a climate condition. Therefore many flora and fauna that living in these environments can be effected negatively.
- Basicly erosion is defined the transportation soil particles by running water naturally. We erosion can be devided into two catagories as natural erosion and accelerated erosion. Natural erosion occurs under natural conditions and is necessary for nature to continue its functioning. The dangerous type of erosion is accelerated one, which happens as a result of human activities and causes nature destruction. In natural process, this particles are being transported and collected. This location creates qualify agricultural lands called 'Delta and Lowland' If the running water is blocked by a dam, the natural balance will be broken and the particles will remain behind the dam and the advantages will be lost.
- In the lake which created by artificial process, microorganism such as bacteria or fungal populations increase at first. After a while, oxygen level increases and anaerobic environment is formed. Water becomes blurred and stinky. Macroflora start to develop on the surface. Consequently, the evaporation is accelerated.
- As a result of particles block, sea water can raise into the canal and agricultural lands become useless.
- Generally, running water mixes with ground water which is drinkable There are three different and significant threat here; firstly, if sea water raises and presses the running water, it can be mixed with the drinkable water. Secondly, pesticides filtered by soil get mix with running water. This is the normal and natural process for eleminating , if they flow speed is be enough, pesticides go into the sea directly. But if they are flown slowly with HPP project, percentage of getting mix with drinkable water increases and this can be big threat for human health. The last and the third one is drained water which is used in daily life. Sewage treatment is very expensive and difficult process and people do not care about this topic as well. Especially water by the seasides is morelikly to take dirt into the sea. Running water is the transportation. If the speed of the water is decreased the dirt can be mix with drinkable water again, which is really harmful for human health.

- The last one is humidity. Consequently, climate change on surrounding area. there can be many epidemic variety which can be disappeared with this climate change. Furthermore this varieties may be essential for medicine in the future.

Conclusion

There is natural system for sustainability in the world. there are 8 billion people population right now and 3 billion of them are under poverty limit. Adoption, implementation and dissemination of sustainable development goals have to be the first priority. No mather where you live and what you are, to create a peaceful world, you have to improve yourself and your environment at the very first step..

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CHAPTER 3

GOAL-3: GOOD HEALTH AND WELL-BEING

A STUDY ON THE IMPACT OF PANDEMIC ON THE HEALTH OF CHILDREN AND ADOLESCENTS

Ms. Ankita[1]

Debacles and emergencies have had a lot less featured outcomes on weak sub-gatherings, including those regularly neglected, like young people and youth. The COVID-19 pandemic is no special case. While justifiably the country is occupied with battling a pandemic of immense extents, this generally solid and safe sub-populace's necessities may not seem to warrant quick consideration. In any case, as we look forward to the post-lockdown time frame and past, the manners by which the pandemic may have influenced our 365 million or more young people and youth, and their necessities in the forthcoming months and years, should be thought of. All things considered, what befalls this age influences not just their wellbeing and prosperity in puberty, yet additionally their wellbeing and prosperity as grown-ups, and that of the future.

Introduction

In the current setting of lock down and limitation of developments, youngsters have obliged admittance to socialization, play, and surprisingly actual contact, basic for their psychosocial prosperity and advancement. School terminations are keeping youngsters from admittance to learning and restricting their associations with peers.

Youngsters may feel confounded and at misfortune with the current circumstance, prompting disappointment and uneasiness, which will just increment with the overexposure to mass and

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web-based media, uniquely among teenagers. A few grown-ups may battle to discover approaches to clarify and speak with kids about the current circumstance in a manner that is reasonable by this age bunch, which will add dissatisfaction and disquietude. Corona virus is additionally welcoming new stressors on parent and guardians. This can hamper their ability to give mind and stay drew in with their kids. Being extremely sharp spectators of individuals and conditions,

kids will see, retain and respond to the pressure in their guardians and local area individuals, which unavoidably will influence their prosperity. Furthermore, the above is just the start. Levels of pressure will be dramatically higher among weak families.

For youngsters who are denied of parental consideration in Child Care Institutions or in elective consideration, kids living in the roads, or youngsters' transients and progressing, for instance, the circumstance will be especially difficult. Related involvements in general wellbeing crises have exhibited that there is a high probability of an increment of viciousness, including sex-based brutality, abusive behaviour at home or whipping against youngsters and lady. With the current development limitations, young ladies and young men casualties of brutality will confront snags to search out for help and approach emotionally supportive networks.

Objectives of Study

• To study the impact of pandemic situation on adolescent and young adults

• To chart out the reasons that lead to occurrence of issues among young population.

• To understand the major health issues found in young adults and adolescents' due situation because of pandemic.

Research Methodology

The study considers secondary data which have been extracted from various official websites, journals, articles, books and newspapers etc.

Discussion

Youngsters who are most weak face more difficulties and may along these lines need more consideration and consideration. A portion of these kids do not have solid emotionally supportive networks and enthusiastic references. The dread and stress brought about by COVID-19 may build their feeling of uncertainty and cause much more genuine emotional well-being issues if not tended to in a ideal way. This incorporates: • Children in youngster care organization (CCIs) or without parental consideration • Street associated youngsters • Children

of transient specialists put into seclusion offices • Children in other NGO covers and so on. Wellbeing administrations and qualifications are likewise influenced the absence of clean napkins, bringing about them buying these (if accessible) from the market, or returning to practices like utilization of fabric. Reference to inaccessibility, all the more for the most part, of other wellbeing advancing supplies and administrations—iron and folic corrosive dissemination, pregnancy-related consideration, prophylactic supplies, and early termination administrations. A fast deliberate survey distributed in April 2020 in Lancet assessed that school conclusion alone could diminish COVID-19-related mortality by 2 to 4 percent. India shut down its schools on 16 March 2020—one of the principal nations on the planet to do as such and moved to internet learning as a crisis measure. Following the conclusion of schools, virtual stages have been utilized in all evaluations to proceed with youngsters' schooling. Early investigations of India's experience have tracked down that the country's financial disparities are affecting the viability of virtual learning (or absence of it). There are far reaching difficulties confronting critical extents of the young populace, including inaccessibility of cell phones and PCs, problematic web association (if by any means), absence of innovation skills, and absence of electricity. A review of 23 states among younger students (grades 1 to 12) led in April 2020 tracked down that solitary 43.9 percent of them approach cell phones, another 43.9 percent of them approach fundamental telephones, while a critical 12.0 percent don't approach either cell phones or essential phones. In Maharashtra, for instance, just 50% of state funded school understudies from classes I to VIII could get to computerized learning. Around 59.8 percent of government funded school understudies approached cell phones with web, and among them just 30% were utilizing the state's online stage, DIKSHA (Digital Infrastructure for Knowledge Sharing). Of the individuals who can't get to web based learning, 72.2 percent of their folks don't have the advanced abilities to get to the state home bundle, and 66.4 percent of families don't approach cell phones. The accessibility of work areas and workstations among understudies was unimportant at 0.8 percent. Teachers additionally confronted difficulties because of their low degree of advanced literacy.

Health issues found in young adults and adolescents’ due situation because of pandemic. During the pandemic (phase one and two) During the new Corona virus infection 2019 (COVID-19) flare-up in China, 54% of the members of a huge online examination evaluated the effect of the flare-up on their psychological wellness as moderate to serious, with burdensome indications and tension being the conditions regularly expressed. The current emergencies force complex weights on kids. They incorporate the socio-biological effect of the pandemic, which is

perceived to be colossal. The climate of youngsters is influenced at various levels–including local area and family - just as the individual kid itself

Local area related dangers for emotional well-being

Since the pandemic was reported, at the local area level, there has been interruption of, or more restricted admittance to essential administrations, like kindergarten, schools, and routine clinical consideration. A few nations have seen a re-association of emergency clinic administrations, with temporary consideration (counting re-doling out specialists and attendants not generally associated with basic consideration). There have been terminations, fractional terminations or decreased administrations of inpatient and day-care offices, with outpatient contacts diminished in certain spots to crisis cases as it were. A few emergency clinics have been not able to acknowledge new inpatients because of the danger of disease. Questions have emerged on the most proficient method to manage the danger of contaminated patients in shut units tainting staff and different patients. There have been worries for the conceivable future absence of sufficient assets for emotional wellness administrations as most assets are coordinated towards ICU and substantial consideration. Significantly, even the movement of youngster insurance administrations and right now existing projects of help or management by youth government assistance offices have been upset or intruded on. The absence of admittance to these essential administrations can be especially hurtful for weak youngsters and additionally families.

Conclusion

Most youngsters are dared to be solid at the same time, according to WHO, an expected 2.6 million youngsters matured 10 to 24 yr. bite the dust every year and a lot more noteworthy number of youngsters experience the ill effects of ailments 'practices' which impede their capacity to develop constantly to their maximum capacity. Almost 66% of unexpected losses and 33% of the absolute sickness trouble in grown-ups are related with conditions or practices started in their childhood (for example tobacco use, actual idleness, high danger sexual practices, injury and savagery and others). The personal conduct standards set up during this formative stage decide their flow wellbeing status and the danger for fostering some ongoing infections in later years. A huge decrease in the mortality and grimness of transmittable, maternal and neonatal issues since 1990 due to purposeful and coordinated efforts prompted a change in concentration towards the wellbeing, security and endurance of the youngsters. It is

vital to comprehend medical issues of this populace, cycles and systems that influence their wellbeing, distinguish intercessions and vital methodologies that secure their wellbeing and create and execute arrangements and projects.

The current survey centres around the wellbeing practices and issues influencing youngsters in the age gathering of 10-30 yr. in India. The survey additionally analyses some approach drives and intercessions and recognizes issues that should be tended to for wellbeing and security of youngsters in India.

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AN OVERVIEW ON THE CONCEPT OF HEALTH COMMUNICATION & ITS IMPLICATIONS: A QUALITATIVE STUDY

Neelima Keeran VENUGOPALAN[1]

Convincing people to adopt healthy behaviours or policymakers and professionals to introduce and change practices in support of better health has never been an easy task. The main aim of this study is to provide a comprehensive introduction to health communication by combining the theory and practice of this field. Health communication programs should be based on information and facts that draw on the everyday lives of their audiences, as well as the environment where they live and work. Health communication is a multidisciplinary approach that relies on different action areas, such as interpersonal communications, public relations, public advocacy, community mobilization, professional communications, and constituency relations, among others. It is the blend of these areas that allows practitioners to involve communities, individuals, professional audiences, policymakers, and the general public with communication interventions that will prompt them to consider, analyse, and eventually adopt the behaviour, policy, or practice suggested by a given health communication program or approach. Health communication is a multifaceted and multidisciplinary approach to reach different audiences and share health related information with the goal of influencing, engaging, and supporting individuals, communities, health professionals, special groups, policymakers, and the public to champion, introduce, adopt, or sustain a behaviour, practice, or policy that will ultimately improve health outcomes.

Objectives

To understand the concept of Sustainable Development Goals, To understand the concept of Health, Introducing the concept of Health Communication, Theories associated with Health Communication, The Key Features of Health Communication, Models associated with Health Communication.

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Relevance of Health Communication Methodology

The methodology adopted for this paper is purely qualitative form. The reference is from various books, data & web sources to explain the concept of Health Education. Introduction Sustainable development is a central concept for our age. It is both a way of understanding the world and a method for solving global problems. Our starting point is our crowded planet. There are now 7.2 billion people on the planet, roughly 9 times the 800 million people estimated to have lived in 1750, at the start of the industrial revolution. The world population continues to rise rapidly, by around 75-80 million people per year. Soon enough there will be 8 billion by the 2020s, and perhaps 9 billion by the early 2040s. In short, 7.2 billion people are looking for economic improvement. They are doing so in a world economy that is increasingly connected through trade, finance, technologies, production flows, migration, and social networks. The scale of the world economy, now estimated to produce $90 trillion of output per year (a sum called the Gross World Product, or GWP), is unprecedented. By crude statistics, the GWP measures at least 100 times larger than back in 1750. In truth, such a comparison is not all that meaningful, since most of the world economy today consists of goods and services that did not even exist 250 years ago.

Yet for a species that depends on the beneficence of nature, or on what the scientists call “environmental services,” we are doing a poor job of protecting the physical basis of our very survival. The gigantic world economy is creating a gigantic environmental crisis, one that threatens human wellbeing and even the survival of millions of other species on the planet, if not our own. Thus, we arrive at sustainable development. As an intellectual pursuit, sustainable development tries to make sense of the interactions of three complex systems: the world economy, the global society, and the Earth’s physical environment. How does an economy of 7.2 billion people, and $90 trillion Gross World Output, change over time? What causes economic growth? Why does poverty persist? What happens when billions of people are suddenly interconnected through markets, technology, finance, and social networks? How does a global society of such inequality of income, wealth, and power, function? Can the poor escape their fate? Can human trust and sympathy surmount the divisions of class and power? And what happens when the world economy is on a collision course with the physical environment? Is there a way to change course, a way to combine economic development with environmental sustainability?

Sustainable Development Sustainable Development is also a normative outlook on the world, meaning that it recommends a set of goals to which the world should aspire. In this normative

(or ethical) sense, sustainable development calls for a world in which economic progress is widespread; extreme poverty is eliminated; social trust is encouraged through policies that strengthen the community; and the environment is protected from human-induced degradation. Notice that sustainable development recommends a holistic framework, in which society aims for economic, social, and environmental goals. Sometimes the following shorthand is used: sustainable development calls for socially inclusive and environmentally sustainable economic growth. To achieve the economic, social, and environmental objectives, a fourth objective must also be achieved: good governance. Governments must carry out many core functions to enable societies to prosper. Among these core functions of government are the provision of social services such as healthcare and education; the provision of infrastructure such as roads, ports, and power; the protection of individuals from crime and violence; the promotion of basic science and new technologies; and the implementation of regulations to protect the environment. Of course, this list is just a brief subset of what people around the world hope for from their governments. In fact, all too often they get the reverse: corruption, war, and an absence of public services. Thus, the normative side of sustainable development envisions four basic pillars of a good society: economic prosperity; social inclusion and cohesion; environmental sustainability; and good governance of major social actors, including governments and business. It's a lot to ask for, and there is no shortage of challenges to achieving sustainable development in practice. Yet the stakes are high. Achieving sustainable development on our crowded, unequal, and degraded planet is the most important challenge facing our generation. (Age of Sustainable Development)

Concept of Sustainable Development Goal

The most frequently used definition of Sustainable development is from the Brundtland Report "Sustainable development is the development that meets the needs of the present (people) without compromising the ability of future generation to meet their own needs". In other words, it is improving the quality of life of the present generation without excessive use or abuse of natural resources, so that they can be preserved for the next generation.

The term was first coined in 1972 at the United Nations Conference on Human Environment at Stockholm. The most important piece of writing on Sustainable development is in the publication by the World Commission on Environment and Development (WCED) in 1987 titled „Our Common Future". In 1992 at the Earth summit at Rio-de-Janerio, 170 countries signed many important documents on sustainable development pledging preservation of environment.

Sustainable development is often referred as the marriage of economy and ecology. i.e., to attain economic development without compromising the ecological balance. It can be attained by rigorous policy change, taking action and altering practices.

There are three aims of sustainable development:

a) Economic- to attain balanced growth

b) Ecological- to preserve the eco system

c) Social-guarantying equal access to resources to all human communities

The objective laid down in the Brundtland report is as follows

1. Dividing growth

2. Changing the quality of growth

3. Meeting essential needs of all in terms of job, food, energy, water and sanitation.

4. Ensuring a sustainable population

5. Conserving and enhancing the resource base.

6. Reorienting technology, building technology that's less exploitative

7. Managing environment and economics in decision making

Need for sustainable development:

There are several challenges that need attention in the arena of economic development and environmental depletion. Hence the idea of Sustainable development is essential to address the following issues.

1. To curb or prevent the environmental degradation

2. To ensure a safe human life

3. To check the exploitative technology and find alternative sources

4. To check the over exploitation and wastage of natural resources

5. To regenerate renewable energy resources

6. The concept of Sustainable development is based on following principles

7. Integration of environment and economic decision

8. Stewardship or humans as the caretaker of the environment

9. Shared responsibility, accountability and decision making

10. Prevention and mitigation

11. Conservation Waste minimization

12. Enhancement of productivity, capability, quality of nature and human life

13. Rehabilitation and reclamation

14. Scientific and technological innovations

Components of sustainable development:

While discussing the components of sustainable development different criteria have been used depending on the context and the levels of decision making. The components are broadly divided into three elements namely social, economic and environmental.

a) Social components-

• Worker's health and safety

• Impact on local communities, quality of life

• Benefits to disadvantaged groups

b) Economic components:

• Creation for new markets and opportunities for sale growth

• Cost reduction through efficiency and improvements and reduced energy and raw material inputs

• Creation of additional value

c) Environmental components:

• Reduce waste, effluent generation, emission into environment

• Reduce impact on human health

• Use of renewable raw material

• Elimination of toxic substance

(FC-Sem2 -Sustainable Development _Concept _Components)

Sustainable Development Goals & Targets

The Sustainable Development Goals and targets are integrated and indivisible, global in nature and universally applicable, taking into account different national realities, capacities and levels of development and respecting national policies and priorities. Targets are defined as aspirational and global, with each Government setting its own national targets guided by the global level of ambition but taking into account national circumstances. Each Government will also decide how these aspirational and global targets should be incorporated into national planning processes, policies and strategies. It is important to recognize the link between sustainable development and other relevant ongoing processes in the economic, social and environmental fields.

Health

The widely accepted definition of health is that given by the World Health Organisation (1948) in the preamble to its constitution, which is as follows: -

“Health is a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity”

In recent years, this statement has been amplified to include the ability to lead a “socially and economically productive life”

Health has been declared a fundamental human right. This implies that the State has a responsibility for the health of its people. National governments all over the world are striving to expand and improve their health care services. The current criticism against health care services is that they are

a) predominantly urban-oriented

b) mostly curative in nature

c) accessible mainly to a small part of the population

The present concern in both developed & developing countries is not only to reach the whole population with adequate health care services, but also to secure an acceptable level of Health for All, through the application of primary health care programmes

Since health is influenced by a number of factors such as adequate food, housing, basic sanitation, healthy lifestyles, protection against environmental hazards and communicable diseases, the frontiers of health extend beyond the narrow limits of medical care. It is thus clear

that “health care “implies more than “medical care”. It embraces a multitude of “services provided to individuals or communities by agents of the health services or professions, for the purpose of promoting, maintaining, monitoring or restoring healthy”

Goal 3. Ensure healthy lives and promote wellbeing for all at all ages

3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

3.2 By 2030, end preventable deaths of new-born and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per1,000 live births and under 5 mortalities to at least as low as 25 per 1,000 live births

3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water borne diseases and other communicable diseases

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well being

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents

3.7 By 2030, ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade

Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

Health Communication

Health communication is an evolving and increasingly prominent field in both public health and the non-profit and commercial sectors. Because of the multidisciplinary nature of health communication, many of the definitions may appear somewhat different from each other. Nevertheless, when they are analysed, most point to the role that health communication can play in influencing and supporting individuals, communities, health care professionals, policymakers, or special groups to adopt and sustain a behavioural practice or a social or policy change that will ultimately improve health outcomes.

Understanding the true meaning of health communication and establishing the right context for its implementation may help communication managers and other health care professionals identify early on the training needs of staff and others who are involved in the communication process. It will also help create the right organizational mind-set and capability that should lead to a successful use of communication approaches to reach audience specific goals.

Health communication should be based on a two-way exchange of information that uses a “common system of signs and behaviours.” It should be accessible and create “mutual feelings of understanding and sympathy” among members of the communication team and intended audiences (all audiences the health communication program is seeking to influence and engage in the communication process; also referred to as target audiences). Finally, communication channels (the means or path used to reach intended audiences with health communication messages and materials, such as the mass media) and messages are the “connecting doors” that allow health communication interventions to reach intended audiences.

Definition

One of the key objectives of health communication is to influence individuals and communities. The goal is admirable since health communication aims to improve health outcomes by sharing health-related information. In fact, the Centres for Disease Control and Prevention (CDC) define health communication as "the study and use of communication strategies to inform and influence individual and community decisions that enhance health" (2001: U.S. Department of Health and Human Services, 2005). The word influence is also included in the Healthy People 2010 definition of health communication as "the art and technique of informing, influencing, and motivating individual, institutional, and public audiences about important health issues" (U.S. Department of Health and Human Services, 2005, p. 11-2)

Key Features

Health communication is an evolving discipline and should always seek to incorporate lessons learned as well to use a multidisciplinary approach to all interventions. This is in line with one of the fundamental premises that recognizes the experience of practitioners as a key factor in developing theories, models, and approaches that should guide and inform health communication planning and management.

I. Audience Centered- Health communication is a long-term process that begins and ends with the audience's desires and needs. In health communication, the audience is not merely a target (even if this terminology is very well established and used by practitioners around the world) but an active participant in the process of analysing the health issue and finding culturally appropriate and cost-effective solutions. It is a common practice in health communication not only to research intended audiences and other key constituencies but also to strive to engage them in defining and implementing key strategies and activities.

II. Research Based - The overall premise of health communication is that behavioural change is conditioned by the environment in which people live, as well as by those who influence them. Creating a receptive environment in which the target audience can discuss a health issue and be supported in its intention to change by key influential (for example, family members, health care providers) is often one of the aims of health communication programs. This requires a comprehensive research approach that relies primarily on traditional research techniques for the formal development of a situation analysis (a planning term that describes the analysis of individual, social, political, and behaviour-related factors that can affect attitudes, behaviours, social norms, and policies about a health issue) and audience profile (a comprehensive,

research-based, and strategic description of all key audiences' characteristics, demographics, needs, values, attitudes, and behaviour). Situation analysis and audience profile are fundamental and interrelated steps of health communication planning

III. Multidisciplinary -Health communication is "transdisciplinary in nature. (Bernhardt, 2004, p. 2051; Institute of Medicine, 2003) and draws on multiple disciplines (Bernhardt, 2004; World Health Organization, 2003). Health communication recognizes the complexity of attaining behavioural and social change and uses a multifaceted approach that is grounded in the application of several theoretical frameworks and disciplines, including health education, social marketing, and behavioural and social change theories It draws on principles successfully used in the private and commercial sectors and also on the audience-centered approach of other disciplines, such as psychology, sociology, and anthropology (World Health Organization, 2003). It is not anchored to a single specific theory or model. With the audience always at the core of each intervention, it uses a case-by-case approach in selecting those models, theories, and strategies that are best suited to reach people's hearts; secure their involvement in the health issue, and, most important, it's solutions; and support and facilitate their journey on a path to better health.

IV. Strategic- Health communication programs need to display a sound strategy and plan of action. All activities need to be well planned and respond to a specific audience-related need. Communication strategies (the overall approach that is used to accomplish the communication objectives) need to be research based, and all activities should serve such strategies. Therefore, program planners should not rely on any workshop, press release, brochure, video, or anything else to provide effective communication without making sure that their content and format reflect the selected approach (the strategy) and is a priority in reaching the audience's heart. For this purpose, health communication strategies need to respond to an actual need that has been identified by preliminary research and confirmed by the intended audience.

V. Process Oriented - Communication is a long-term process. While in the midst of many process-oriented projects, many practitioners may have noticed that health communication is often misunderstood. Health communication uses multiple channels and approaches, which, despite what some people may think, include but are not limited to the use of the mass media. Moreover, health communication aims at improving health outcomes and in the process, help advance public health goals or create market share (depending on whether health communication strategies are used for non-profit or for-profit goals). Finally, health communication cannot focus only on channels, messages, and tools. It also should be process

oriented and attempt to persuade, involve, and create consensus and feelings of ownership among intended audiences.

VI. Cost-Effective - Cost-effectiveness is a concept that health communication borrows from commercial and social marketing. It is particularly important in the competitive working environment of non-profit organizations, where the lack of sufficient funds or adequate economic planning can often undermine important initiatives. It implies the need to seek solutions that allow communicators to advance their goals with minimal use of human and economic resources. Nevertheless, concerns related to cost-effectiveness should never prompt a significant reduction of the program's objectives unless resources are not adequate to support all of them.

VII. Creative in Support of Strategy- Creativity is a significant attribute of communicators since it allows them to consider multiple options, formats, and channels to reach target audiences. It also helps them devise solutions that preserve the sustainability and cost-effectiveness of specific health communication interventions. However, even the greatest ideas or the best designed and best-executed communication tools may fail to achieve behavioural or social change goals if they do not respond to a strategic need identified by marketing and audience-specific research and endorsed by key stakeholders from target groups. Too often communication programs and resources fail to make an impact because of this common mistake.

VIII. Audience and Media Specific - The importance of audience-specific messages and channels became one of the most important lessons learned after the anthrax by-mail bioterrorist attacks that rocked the United States in October 2001. Messages need to be audience specific and tailored to channels allowing the most effective reach to target audiences. Since it is very likely that communication efforts always aim at producing multiple audience-appropriate behaviours, the one message–one behaviour approach should be avoided (UCLA, 2002) even when time and resources are lacking. As highlighted by the anthrax case study, in developing audience-specific messages and activities, the contribution of local advocates and community representatives is fundamental to increase the likelihood that messages will be heard, understood, and trusted by target audiences.

IX. Relationship Building - Communication is a relationship business. Establishing and preserving good relationships is critical to the success of health communication interventions, and, among other things, can help build long-term and successful partnerships and coalitions,

secure credible stakeholder endorsement of the health issue, and expand the pool of ambassadors on behalf of the health cause. Most important, good relationships help create the environment of "shared meanings and understanding" (Pearson and Nelson, 1991, p. 6) that is central to seeking social or behavioural change at the individual and community levels. Good relationships should be established with key stakeholders and representatives of target audiences, health organizations, governments, and many other critical members of the extended health communication team.

X. Aimed at Behavioural and Social Change - Today we are in the "era of strategic behaviour communications" (Piotrow and others, 2003, p. 2). Although the ultimate goal of health communication has always been influencing behaviours and social norms, there is a renewed emphasis on the importance of establishing behavioural and social objectives early in the design of health communication interventions. Although different theories support the importance of behavioural or social change as key indicators for success, these two parameters are interconnected. In fact, social change typically takes place as the result of a series of behavioural changes at the individual, group, or community level.

Key Communication Areas

Global health communication is a term increasingly used to include different communication approaches and action areas, such as interpersonal communications, social and community mobilization, and advocacy (Haider, 2005; Waisbord and Larson, 2005). Well planned health communication programs rely on an integrated blend of different action areas that should be selected in consideration of expected behavioural and social outcomes (World Health Organization, 2003; O'Sullivan, Yonkler, Morgan, and Merritt, 2003; Health Communication Partnership, 2005e).

Message repetitiveness and frequency are also important factors in health communication. Often the resonance effect, which can be defined as the ability to create a snowball effect for message delivery by using multiple vehicles, sources, and messengers, can help motivate people to change by reminding them of the desired behaviour and its benefits.

• Interpersonal communications, which uses interpersonal channels (for example, one-on-one or group meetings) and is based on active listening, social and behavioural theories, and the ability to relate to and identify with the audience's needs and cultural preferences and efficiently addressing them. This includes "personal selling and counselling" (World Health Organization, 2003, p. 2), which takes place during one-on-one encounters with members of interested

audiences and other key stakeholders, as well as during group events and in locations where materials and services are available. It also includes provider-patient communications, which has been identified as one of the most important areas of health communication (U.S. Department of Health and Human Services, 2005) and should aim at improving health outcomes by optimizing the relationships between providers and their patient

• Public relations, public advocacy, and government relations, which relies on the skillful use of culturally competent and audience appropriate mass media, as well as other communication channels to place a health issue on the public agenda, advocate for its solutions, or highlight the importance that the government and other key stakeholders take action.

• Community mobilization, a bottom-up and participatory process. By using multiple communication channels, community mobilization seeks to involve community leaders and the community at large in addressing a health issue, becoming part of the key steps to behavioural or social change, or practicing a desired behaviour.

• Professional medical communications, a peer-to-peer approach targeting health care professionals that, among others, aims to (1) promote the adoption of best medical and health practices; establish new concepts and standards of care; (3) publicize recent medical discoveries, beliefs, parameters, and policies; (4) change or establish new medical priorities; and (5) advance health policy changes.

• Constituency relations, a critical component of all other areas of health communication as well as a communication area of its own. Constituency relations refer to the process of (1) creating consensus among key stakeholders about health issues and their potential solutions, (2) expanding program reach by involving key constituencies, (3) developing alliances, (4) managing and anticipating criticisms and opponents, and (5) maintaining key relationships with other health organizations or stakeholder.

Theoretical Influences in Health Communication

Health communication is influenced by different disciplines and theoretical approaches. Some of the most important theories can be divided into the following categories: behavioural and social science theories, mass communications theories, marketing and social marketing, and other theoretical influences, including medical models, sociology, and anthropology. In addition, several planning frameworks and models have been developed to reflect or incorporate key principles from some or all of these categories. The overview that follows

focuses on select theories and models as well as their potential or actual impact on health communication practice.

❖ Behavioural & Social Science Theories

Behavioural and social sciences theories seek to analyse and explain how change occurs at the individual, community, or social levels. Some of these theories focus on only the key steps that may lead to behavioural or social change. Most of them also emphasize the interconnection and mutual dependence of individual and external factors.

➢ Diffusion of Innovation Theory -Initially developed by Everett Rogers (1962, 1983, 1995), the diffusion of innovation theory addresses how new ideas, concepts, or practices can spread within a community or "society or from one society to another" (National Cancer Institute and National Instittutes of Health, 2002, p. 226). The theory identifies and defines five subgroups on the basis of the audience's characteristics and propensity to accept and adopt innovation (Beal and Rogers, 1960):

• Innovators

• Early adopters

• Early majority

• Late majority

• Laggards

The overall premise of this theory is that change occurs over time and is dependent on the following stages (Rogers, 1962, 1983, 1995; Waisbord, 2001; Health Communication Partnership, 2005b):

• Awareness

• Knowledge and interest

• Decision

• Trial or implementation

• Confirmation or rejection of the behaviour

➢ Health Belief Model– (HBM; Becker, Haefner, and Maiman, 1977; Janz and Becker, 1984; Strecher and Rosenstock, 1997) was originally intended to explain why people did not participate in programs that could help them diagnose or prevent diseases (National Cancer

Institute and National Institutes of Health, 2002). The major assumption of this model is that in order to engage in healthy behaviours, intended audiences need to be aware of their risk for severe or life-threatening diseases and perceive that the benefits of behaviour change outweigh potential barriers or other negative aspects of recommended actions. HBM is one of the first theories developed to explain the process of change in relation to health behaviour. It has also inspired—among many other influences and models—the field of health education.

HBM has the following key components:

1. Perceived susceptibility: The individual's perception on whether he or she is at risk for contracting a specific illness or health problem

2. Perceived severity: The subjective feeling on whether the specific illness or health problem can be severe (for example, permanently impair physical or mental functions) or life threatening and therefore worthy of one's attention

3. Perceived benefits: The individual's perceptions of the advantages of adopting recommended actions that would eventually reduce the risk for disease severity, morbidity, and mortality

4. Perceived barriers: The individual's perceptions of the costs of and obstacles to adopting recommended actions (includes economic costs as well as other kinds of lifestyle sacrifices)

5. Cues to action: Public or social events that can signal the importance of taking action (for example, a neighbour who is diagnosed with the same disease or a mass media campaign)

6. Self-efficacy: The individual's confidence in his or her ability to perform and sustain the recommended behaviour with little or no help from other

❖ Social Cognitive Theory

Also known as social learning theory, social cognitive theory (SCT; Bandura, 1977, 1986, 1997) explains behaviour as the result of three reciprocal factors: behaviour, personal factors, and outside events. Any change in any of these three factors is expected to determine changes in the remaining ones (National Cancer Institute and National Institutes of Health, 2002). Behaviour is viewed as influenced by a combination of personal and outside factors and events

One of SCT's key premises is its emphasis on the outside environment, which becomes a source of observational learning. According to SCT, the environment is a place where individuals can observe an action, understand its consequences, and, as a result of personal and interpersonal influences, become motivated to repeat and adopt it.

SCT has these key components (Bandura, 1977, 1986, 1997; National Cancer Institute and National Institutes of Health, 2002; Health Communication Partnership, 2005c):

1. Attention—people's awareness of the action being modelled and observed.

2. Retention—people's ability to remember the action being modelled and observed.

3. Reproduction (Trial)—people's ability to reproduce the action being modelled and observed.

4. Motivation—people's internal impulse and intention to perform the action. Motivation depends on a number of social, affective, and physiological influences (for example, the support of peers and family members to perform the action, the knowledge that the action will improve physical performance) as well as the perception of self-efficacy.

5. Performance—the individual's ability to perform the action on a regular basis.

6. Self-efficacy—the individual's confidence in his or her ability to perform and sustain the action with little or no help from others, which plays a major role in actual performance.

❖ Theory of Reasoned Action- The theory of reasoned action (TRA; Ajzen and Fishbein, 1980) suggests that behavioural performance is primarily determined by the strength of the person's intention to perform a specific behaviour. It identifies two major factors that contribute to such intentions (Ajzen and Fishbein, 1980; Health Communication Partnership, 2005d; Coffman, 2002):

• A person's attitude toward the behaviour. In general, attitudes can be defined as positive or negative emotions or feelings toward a behaviour, a person, a concept, or an idea

• A person's subjective norms about the behaviour. In the TRA, subjective norms are defined as the opinion or judgment, positive or negative, that loved ones, friends, family, colleagues, professional organizations, or other key influential may have about a potential behaviour

Under the TRA, attitudes toward a specific behaviour are a function of the person's beliefs about the consequences of such behaviour. These are called behavioural beliefs.

Subjective norms are influenced by normative beliefs, which refer to whether a person may think significant others will approve or not of his or her behaviour.

Another component of normative beliefs is the person's motivation to comply with other people's ideas and potential approval (Coffman, 2002).

TRA is particularly useful in analysing and identifying reasons for action and messages that can change people's attitudes. It is also a good tool in profiling primary audiences (the people

whom the program seeks to influence more directly and would primarily benefit from change) and secondary audiences (individuals and groups who can have an influence on the primary audience) (Health Communication Partnership, 2005d).

❖ Ideation

The ideation theory (Kincaid, Figueroa, Storey, and Underwood, 2001; Rimon, 2002; Cleland and Wilson, 1987) refers to "new ways of thinking and diffusion of those ways of thinking by means of social interaction in local, culturally homogenous communities" (O'- Sullivan, Yonkler, Morgan, and Merritt 2003, pp. 1–3; Bongaarts and Watkins, 1996). This theory is used in strategic behaviour communications to identify and influence ideational elements (Rimon, 2002; Kincaid, Figueroa, Storey, and Underwood, 2001), such as attitudes, knowledge, self-efficacy, social and

peer approval, and other factors that can affect and determine health behaviour .One of the key premises of the ideation theory is "that the more ideational elements that apply to someone, the greater the probability that they will adopt a healthy behaviour" (Kincaid and Figueroa, 2004).

❖ Convergence Theory

Like other theories in the social process category (O'Sullivan, Yonkler, Morgan, and Merritt, 2003), the convergence theory (Kincaid, 1979; Rogers and Kincaid, 1981) emphasizes the importance "of information sharing, mutual understanding and mutual agreement" on any collective or group action that would bring social change (Figueroa, Kincaid, Rani, and Lewis, 2002, p. 4). It is based on the perspective that an individual's perceptions and behaviour are influenced by the perceptions and behaviours of members of the same group, such as members of professional associations, work colleagues, and family members, and by people "in one's personal networks," such as peers, friends, or personal or professional acquaintances (O'Sullivan, Yonkler, Morgan, and Merritt, 2003, pp. 1–4).

This theory is characterized by three distinctive features (Kincaid, 1979; Rogers and Kincaid, 1981; Figueroa, Kincaid, Rani, and Lewis, 2002):

i) Information is shared using a participatory process in which there is no sender or receiver but everyone creates and shares information. Participants in this process include individuals or groups and institutions such as professional associations, community organizations, churches, and schools.

ii) Communication emphasizes individual perceptions and interpretations of the information being shared, encourages an ongoing dialogue, and fosters mutual understanding and agreement on common meanings

iii) Communication is horizontal and involves two or more participants. In a horizontal model of communication, all participants are equal and aim to reach mutual agreement that may stimulate a group action.

This theory has contributed to redefining communication as a process in which all participants need to respect and take into account other people's feelings, emotions, and beliefs. It has also highlighted the importance of social networks and key influential in defining the path to social change.

Stages of Behaviour Change Model

The stages of behaviour change model, also known as trans theoretical model (Prochaska and DiClemente, 1983; Grimley, Gabrielle, Bellis, and Prochaska, 1993; Prochaska and Vellicer, 1997), defines behavioural change as a process that goes through different stages or steps. Each stage describes different "levels of motivation or readiness to change" (National Cancer Institute and National Insitutes of Health, 2002, p. 221; Prochaska and Vellicer, 1997). The model identifies five stages of change (Prochaska and Vellicer, 1997; Weinreich, 1999):

1. Precontemplation, in which individuals have no intention of adopting a recommended health behaviour but are learning about it

2. Contemplation, in which individuals are considering adopting the recommended behaviour

3. Decision, in which people decide to adopt the recommended health behaviour

4. Action, in which people try to adopt the recommend behaviour for a short period of time

5. Maintenance, in which people continue to perform the recommended health behaviour for a long period of time (at least above six months) and, ideally, incorporate it in their routine and lifestyle

In health communication, these stages of change can be used in the segmentation phase of intended audiences to identify groups that, among other related characteristics, will also have similar levels of motivation and readiness for behavioural change (Weinrich, 1999). Therefore, this theory can be instrumental in designing communication objectives, messages, and strategies for each of these groups (National Cancer Institute and National Institutes of Health, 2002)

➢ Communication for Persuasion Theory

This theory was developed by social psychologist William McGuire and focuses on how people process information. Mc Guire (1984) highlighted twelve inter dependable steps in the process of persuasive communications (McGuire, 1984; National Cancer Institute and National Institutes of Health, 2002; Alcalay and Bell, 2000). He suggested that in order to assimilate and perform a new behaviour, a person should (McGuire, 1984; National Cancer Institute and National Institutes of Health, 2002):

1. Be exposed to the message.

2. Pay attention to it.

3. Find it interesting or personally relevant.

4. Understand it.

5. Figure out how the new behaviour could fit in his or her life.

6. Accept the change that is being proposed.

7. Remember and validate the message.

8. Be able to think of the message in relevant contexts or situations.

9. Make decisions on the basis of the retrieved information or message.

10. Behave in line with that decision.

11. Receive positive reinforcement for that behaviour.

12. Integrate the new behaviour into his or her life.

This model also suggests that these twelve steps are interdependent. Achieving any of them is strictly contingent on success at all prior steps. Message design, messenger credibility, communication channels, and the characteristics of both the intended audiences and the recommended behaviour, which should be intended to fit easily in people's lives, all influence behavioural outcomes.

❖ Mass Communication Theories

Mass communication theories include research and studies that focus on the impact of the mass media on target populations. However, many of their key principles and observations can apply in general to the overall field of global health communication.

➢ Cultivation Theory of Mass Media-Developed by George Gerbner, the cultivation theory "specifies that repeated, intense exposure to deviant definitions of 'reality' in the mass media leads to perceptions of the 'reality' as normal" (Communication Initiative, 2003a; Gerbner, 1969; Gerbner, Gross, Morgan, and Signorielle, 1980). "The result is a social

legitimization of the reality depicted in the mass media, which can influence behaviour" (Communication Initiative, 2003a; Gerbner, Gross, Morgan, and Signorielle, 1980). In other words, the media have the power to portray a behaviour and make it socially acceptable by shaping public perceptions and feelings toward that behaviour.

Cultivation is a concept that transcends the mass media and applies to the overall field of health communication. In fact, nurturing the feelings of key stakeholders and interested audiences through continuous message exposure, using all kinds of communication channels including the mass media, is a practice that frequently helps secure their involvement in the health issue and its solutions.

o Marketing-Based Models -In the private (commercial and nonprofit) sector, the field of marketing refers to strategic activities that encourage the use of products or services by consumers or special groups. Over time, marketing-based models have also inspired public health interventions that aim at the endorsement of new health products, services, or behaviours. The two models that are presented next have many similar features and contribute to the theoretical basis of health communication.

o Social Marketing -Social marketing has been defined as "the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of their society" (Andreasen, 1995, p. 7). Similar to commercial marketing, behaviour change is the ultimate goal of social marketing. However, in commercial marketing, behaviour change is sought primarily to benefit the sponsoring organizations (Andreasen, 1995), even if, in some cases, marketing activities also encourage the adoption of healthy behaviours, such as immunization or compliance to medication, that can improve the health conditions of target populations. Social marketing practices are consumer centered (Andreasen, 1995; Kotler and Roberto, 1989) and stress the importance of four elements, referred to as the four Ps of social marketing:

1. Product—the behaviour, service, product, or policy that the organization or program seeks to see adopted by target audiences. In social marketing, products can be tangible (for example,

condoms or mosquito nets being sold and distributed as part of a social marketing campaign) or intangible (for example, the behaviour being recommended and adopted by target audiences).

2. Price—the price of the product that is being promoted or the emotional, physical, community, or social cost of adopting the new behaviour, policy, or practice.

3. Place—the product distribution channels (for example, point of-service locations, wholesale distributors) or the place where it is most appropriate to expose target audiences to communication messages and tools to facilitate the adoption of the new behaviour.

4. Promotion—how a message is conveyed. It thus refers to how to motivate intended audiences, so they try and perform the recommended behaviour or adopt a new policy or practice.

Social marketing is also considered a planning framework to be used with other theories and models in health communication planning (National Cancer Institute and National Institutes of Health, 2002). Additional theoretical constructs should closely fit the specific health issue and its potential solutions and, most important, sustain community participation and involvement (Waisbord, 2001).

➢ Integrated Marketing Communications-Integrated marketing communications (IMC) is a strategic approach used in the private sector to develop, implement, and evaluate brand communication programs. It takes into account and addresses the consumer's perspective, needs, beliefs, and perceptions and relies on the strategic integration of measurable objectives and approaches (Schultz and Schultz, 2003; Nowak and others, 1998). It is considered an avant-garde marketing approach, has been incorporated in several academic programs, and forms part of the curricula of many departments (New York University, 2006; University of Utah, 2006; Emerson College, 2006).

IMC principles are also reflected in some models for strategic behaviour communications. IMC recognizes that the flow and volume of information is constantly increasing for most audiences around the world (Schultz, Tannerbaum, and Lauterborn, 1994; Renganathan and others, 2005). Therefore, message clarity and consistency, as well as "an integrated and coordinated approach with credibility is vital" (Renganathan and others, 2005, p. 310).

The most important contribution of IMC to health communication is its emphasis on the significance of a multifaceted and strategic approach based on the intended audiences' point of view and addressing their key needs

Select Models for Strategic Behaviour and Social Change Communication

❖ Communication for Behavioural Impact-Communication for behavioural impact (COMBI) is an integrated communication approach developed and implemented by the World Health Organization (2003) in collaboration with many partners around the world. Although COMBI has been applied primarily in the health care field, its key principles and methodologies may be relevant to other areas. For example, COMBI has been used as part of UNICEF's programs on child protection and juvenile justice in Moldovia (E. Hosein, personal communications with the author, 2005, 2006).

With its emphasis on behavioural impact, COMBI is a model for strategic behaviour communications. It is a research-based, participatory approach that seeks to identify and address behavioural issues that may have an impact on health outcomes (Renganathan and others, 2005; E. Hosein, personal communications with the author, 2005, 2006).

COMBI is based on two fundamental principles.

"First: Do nothing—produce no T-shirt, no posters, no leaflets, no videos, until you have set out clear, precise, specific behavioural objectives.

Second: Do nothing—produce no T-shirts, no posters, no leaflets, no videos, until you have successfully undertaken a situational 'market' analysis in relation to preliminary behavioural objectives"

COMBI takes into account key IMC learnings, including the influence of people's perceptions—in other words, what people "believe to be important or true" (Renganathan and others, 2005, p. 309)—have on attitudes and behaviours. It also stresses the importance of clear, credible, and consistent communication messages in reference to the healthy behaviours, products, or services that people are asked to endorse and use (World Health Organization, 2003; Renganathan and others, 2005).

❖ Precede-Proceed Model -Designed by Lawrence Green and Marshall Kreuter (Green and Kreuter, 1991, 1999; Green and Ottoson, 1999), the precede proceed model "is an approach to planning that analyses the factors contributing to behaviour change" (National Cancer Institute and National Institutes of Health, 2002, p. 219). The model is based on the principle that long-lasting change always occurs voluntarily (Communication Initiative, 2003b; National Cancer Institute, 2005a) and is determined by the individual motivation to become directly involved with the process of change. Individuals need to feel empowered to change their quality of life

(National Cancer Institute, 2005a) and in doing so are influenced by their community and social structure.

The key factors influencing behaviour change are divided in three categories:

➢ Predisposing factors—the individual's knowledge, attitudes, behaviour, beliefs, and values before intervention that affect willingness to change

➢ Enabling factors—factors in the environment or community of an individual that facilitate or present obstacles to change

➢ Reinforcing factors—the positive or negative effects of adopting the behaviour (including social support) that influence continuing the behaviour [National Cancer Institute and National Institutes of Health, 2002, p. 219].

This model fits well with current thinking and reinforces the importance of considering the individual as part of the social environment. It also supports the notion of individual empowerment and capacity building at both the individual and community levels, one of the most important components of sustainable behaviour and social change

❖ Communication for Social Change -Communication for social change (CFSC) is a participatory model for communication planning, implementation, and evaluation. It was developed with the original input and sponsorship of the Rockefeller Foundation, which in 1997 convened a conference to explore the connection between communication and social change. The actual model was developed on the basis of the recommendations from all participants at this initial conference as well as follow-up meetings (Figueroa, Kincaid, Rani, and Lewis, 2002).

CFSC is defined as "a process of public and private dialogue through which people define who they are, what they want and how they can get it" (Gray-Felder and Dean, 1999, p. 15). It is an integrated model that describes an "iterative process" to community dialogue that "starts with a catalyst/stimulus that can be external or internal to the community," and "when effective, leads to collective action and the resolution of a common problem" (Figueroa, Kincaid, Rani, and Lewis, 2002, p. iii).

In this model, outcome indicators of social change include "leadership, degree and equity of participation, information equity, collective self-efficacy, sense of ownership, and social cohesion" (Figueroa, Kincaid, Rani, and Lewis, 2002 p. iv).

➢ Medical Models -Communication is also influenced by general beliefs about the intrinsic causes of health and illness. Over time, two medical models have been influencing communication in the provider-patient setting and in relation to how health organizations and professionals perceive what kinds of topics and factors should be addressed as part of a public health intervention.

➢ Biomedical Concept - The biomedical model, has been around for many centuries and is based on the assumption that poor health is a physical phenomenon that "can be explained, identified, and treated with physical means" (du Pré, 2000, p. 8; Twaddle and Hessler, 1987). Therefore, the biomedical model does not take into account the person's psychological conditions, individual and social beliefs, attitudes and norms, or other factors that can affect health and illness. As a result, communication efforts that are based on this model tend to be informative, strictly scientific, doctrinarian, authoritarian, "efficient" and "focused" (du Pré, 2000, p. 9). Communication relies on a top-down approach in which medical providers or health organizations limit their efforts to transferring their knowledge on the medical and scientific causes of an illness and to prescribing a solution.

➢ Biopsychosocial model -Based on the premise that poor health is not only a physical phenomenon but "is also influenced by people's feelings, their ideas about health, and the events of their lives" (du Pré, 2000, p. 9; Engel, 1977). Many professional societies and institutions, including the American Medical Association, American Academy of Family Physicians, and several hospitals and universities, have guidelines and courses on provider-patient communications that highlight the importance of relating to patients' feelings, literacy levels, needs, and other key factors that can improve patient compliance and outcomes. Under this model, communication tends to be empathetic, sensible to the audience's needs and feelings, aimed at generating understanding of scientific and medical issues, motivational, and truly interdependent.

▪ Logic Modelling

Logic modelling is a flexible framework (Morzinski and Montagnini, 2002) that has been used for program planning and evaluation in the fields of education (Harvard Family Research Project, 2005), public-private partnerships (Watson, 2000), health education (University of Wisconsin, Extension Program Development, 2005), and many other programmatic areas. In general, it is a one-page summary of the program's key components, the rationale used in defining program strategies, objectives and key activities, and expected program outcomes and

measurement parameters that will be used in evaluating them (Harvard Family Research Project, 2005). In sum, logic models are used to explain the relationship about all program components and related outcomes.

This planning and evaluation framework encompasses the following categories (University of Wisconsin, Extension Program Development, 2005):

➢ An overview of all human and economic resources used for the program

➢ A list of all audience-centered activities, services, events, or products

➢ An outcome analysis, including all results and changes at the individual, community, and organizational levels

➢ Overall program assumptions, that is, the beliefs that guide and inform program planning

➢ All external factors that may influence the health issue and its potential solutions

Health Communication in Public Health

Most public health organizations and leaders (Freimuth, Cole, and Kirby, 2000; U.S. Department of Health and Human Services, 2005; Institute of Medicine, 2003; Bernhardt, 2004; National Cancer Institute and National Institutes of Health, 2002; Piotrow and others, 1997) now recognize the role that health communication can play in advancing health outcomes and the general health status of interested populations and special groups. Most important, there is a new awareness of the reach of health communication, as well as its many strategic action areas

As defined by Healthy People 2010 (U.S. Department of Health and Human Services, 2005), the U.S. public health agenda, the scope of health communication in public health "includes disease prevention, health promotion, health care policy, and the business of health care as well as enhancement of the quality of life and health of individuals within the community" (p. 11–20; Ratzan, 1994). Health communication "links the domains of communication and health" (p. 11–3) and is increasingly regarded as a science (Freimuth and others, 2000), of great importance in public health, especially in the era of emerging infectious diseases, global threats, bioterrorism, and a new emphasis on a preventive and patient centered approach to health.

Current Issues and Topics in Health Care

Implications for Health Communication In addition to theories and models, a number of issues influence the practice of health communication. Many of them are specific to a certain country,

environment, political situation, health issue, or population, among others. Because of the large variety and number of such issues, a comprehensive discussion of all of them is beyond the reach. Some of the issues that are currently influencing health communication practices.

➢ Health Disparities -The concept of health equity has rightly emerged worldwide as a primary guiding principle for the work of most organizations that operate in the health care field. Health equity addresses the importance of eliminating health disparities by minimizing or removing differences in the well-being and health status of diverse populations and groups. “The United States National Institutes of Health (NIH) defines health disparities as the ‘differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States’” (Centre for Health Equity Research and Promotion, 2005). In practice, most health disparities refer to differences in quality of health care received as well as overall access to health services and products among different populations or subgroups of the same population. These differences may result in unfavourable patient outcomes or reduced life expectancy in underserved or minority populations.

Health communication can contribute to reducing or eliminating health disparities by addressing the above factors through audience-specific campaigns and programs. Cultural competence, which can be defined as the ability to relate to the unique characteristics of each population or ethnic group and to address them in an efficient way, is an important pre requirement for strategic programming. If used as part of larger public health interventions, culturally competent health communication strategies can affect change at the individual, community, organizational, and policy levels (Freimuth and Quinn, 2004)

➢ Patient Empowerment-Patient empowerment is an important concept in modern medicine and one of the central pillars of health communication strategies. Partnering for Patient Empowerment Through Community Awareness (2005) and the Standing Committee of European Doctors (2004) are two of the organizations that are focusing on expanding consumer awareness about diseases and health resources or improving patient-provider communications. Others have effectively mobilized and engaged patient groups in the process of policy and social change. AIDS and other life-threatening conditions have taught patients around the world important lessons. Over time, AIDS activists have had a tremendous impact on drug approval regulations, research funding, policies, and access to AIDS drugs, as well as public perception of AIDS, just to name a few topics

When a planned health communication intervention is targeted to patients or the general public, consideration should be given to what patients should ideally be able to do and what kind of empowerment is expected from them.

Emergence Of E-Health

The Internet and related technologies have significantly extended "the scope of health care beyond its traditional boundaries" (Eysenbach, 2001, p. e20) and consequently affected the practice of health communication. Increasingly, patients, health care professionals, the general public, and the overall health care community rely on the Internet for a variety of services and communications, which include advice on health issues, virtual pharmacies, distance learning for practitioners, medical or public health information systems (for example, disease surveillance systems), and health records, to name a few applications (Gantenbein, 2001; Eysenbach, 2001).

E-health has emerged as "a field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the Internet and related technologies" (Eysenbach, 2001, p. e20). In health communication, the increasing reliance on the Internet by consumers and professionals has opened the way to the use of interactive health communication tools (for example, Web sites, Internetbased games, online press rooms, disease symptoms simulations, opinion polls, seminars), which are often designed as part of larger health communication interventions. It has also prompted several initiatives and research studies that attempt to analyse the impact of the Internet on health beliefs, behaviours, outcomes, and policies, as well as health-related encounters and communications such as patient-provider interactions. Finally, it has raised questions about the accuracy of sources of information on the Internet, as well as the importance of understanding the implications of Internet use in relation to issues of patient privacy and equal access to information by those who may not have the resources or skills to take advantage of new technologies (Eysenbach, 2001; Cline and Haynes, 2001).

➢ Low Health Literacy

"Low health literacy is the inability to read, understand and act on health information" (Zagaria, 2004, p. 41). It is one of the most important issues in health communication. No matter how accurate, compelling, or graphically appealing information appears to be, the overall purpose of any materials or verbal communication is defeated if people cannot understand it.

In addition to inadequate reading, writing, or math skills, other factors contribute to low health literacy (Institute of Medicine, 2004; Zorn, Allen, and Horowitz, 2004):

• Poor or insufficient speaking, listening, or comprehension ability

• Language barriers

• Low ability to advocate for oneself or navigate the health care system

• Inadequate background information

• Low socioeconomic status

More recently, the increasing role of the Internet as a key source of health information has been creating a divide between those who can take advantage of this additional resource and those who cannot (U.S. Department of Health and Human Services, 2006a). Therefore, Internet access and computer skills, or the lack thereof, may also affect health literacy levels.

The implications of the current health care environment for health communication interventions:

➢ Health communication planning should take into account both the provider's and patient's opinion on cost-saving interventions and their perceived impact on their professional and personal lives.

➢ Health communication activities can help health care providers improve their communication skills and optimize their time with patients by managing expectations, addressing questions in a brief but efficient manner, and showing empathy with patients' needs and worries.

➢ Through advocacy, mass media campaigns, professional and government relations, and other strategic activities, health communication can help create a climate in which managed care organizations, legislators, and other key audiences would feel compelled to preserve the right balance between quality of care and cost-saving measures

Re-emergence of Communicable Diseases

The re-emergence of many infectious diseases that had started to decline or disappear has influenced health communication in two different but related ways.

➢ Health Communication Renaissance- Because of the rising incidence of several re-emerging diseases such as cholera and tuberculosis (Centres for Disease Control, 1994a), many authors

and organizations have pointed to the need to raise awareness of the ongoing risk for communicable diseases by using the health communication approach (Freimuth, Cole, and Kirby, 2000). In fact, many infectious diseases may again become a public threat in the absence of effective prevention and communication strategies.

➢ Health -Risk Communication -Risk communications has been identified by Healthy People 2010 as one of the relevant contexts of health communication. It is defined as "the dissemination of individual and population health risk information" (U.S. Department of Health and Human Services, 2005, p. 11–3)

The Threat of Bioterrorism

The threat of bioterrorism has forced public health officials, governments, and key community leaders and organizations to revisit their communication strategy in the light of the possibility of an emergency situation.

A few general principles about the key characteristics of communications efforts aimed at averting a potential public health disaster have emerged from the lessons learned from the 2001 anthrax-by-mail bioterrorist attacks in the United States

These include:

• Clear, timely, accurate, and audience-specific messages

• Credible spokespeople

Strategic planning

• Coordinated efforts

• Adequate channels

• Culturally competent attitude to communication

✓ Although all of these elements are standard attributes of well-designed and well-implemented health communication programs, the issue of preparedness assumes a greater importance in emergencies. In health communication, preparedness relates to:

✓ A standard protocol for crisis communications that organizations and agencies across the country can use in a coordinated effort

✓ Early selection and training of key spokespeople who can address target audiences in a crisis

✓ A standard document addressing potential questions from different audiences or from the mass media

✓ Other audience- and issue-specific tools and materials

Capacity and Infrastructure Building in the Developing World

Health communication cannot replace the lack of adequate local capacity, training, or infrastructure. When health services are unavailable or too distant from a significant percentage of interested audiences, health communication interventions should help create the political and social willingness that is needed to build hospitals, recruit and train local health care providers, and make health products available. This is a major issue in developing countries. Nevertheless, lack of capability or training often affects health care in developed countries too. Health communication can play a role in the process of expanding local capacity and infrastructure in these ways:

➢ Engaging local leaders and government officers in the process of assessing local needs and subsequently creating or updating health services.

➢ Raising awareness among local health care providers of standard medical practices that they may not use routinely

➢ Training patients and family caregivers so they can ask the right questions in physicians' offices, local meetings, and all other venues where health care–related decisions are made

➢ Increasing the visibility of leaders and organizations that focus on a specific health issue, disease, or local need

➢ Creating local awareness of disease severity and risk so that the issue can be prioritized and addressed in the community through adequate services and training

Conclusion

Health communication cannot work in a vacuum and is normally a critical component of larger public health interventions or corporate efforts.

Do's

It can help advocate for change and create a receptive environment to support the development of new health services or the allocation of additional funds for medical and scientific discovery, access to existing treatments or services, or the recruitment of health care professionals in new

medical fields or underserved geographical areas. In doing so, it helps secure political commitment, stakeholder endorsement, and community involvement to encourage change and improve health outcomes

Don't's

It may "not be equally effective in addressing all issues or relaying all messages" (National Cancer Institute and National Institutes of Health, 2002, p. 3), at least in a given time frame. Health communication cannot replace the lack of local infrastructure (such as the absence of appropriate health services or hospitals) or capability (such as an inadequate number of health care providers in relation to the size of the population being attended). It cannot compensate for inadequate medical solutions to treat, diagnose, or prevent any disease.

Understanding the role and the potential impact of health communication on different aspects of public health, and health care in general, is important to take full advantage of the contribution of this emerging field to health outcomes as well as to set realistic expectations on what can be accomplished among team members, program partners, intended audiences, and other key stakeholders.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
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ANALYSING ROAD TRAFFIC ACCIDENTS IN INDIA

Tushar JAIN[1]

Road traffic accidents are one the most important concern for good health as due to these road accidents thousands of injuries and deaths take place worldwide. India is among those countries in which these road accidents take place the most. This paper aims to analyse the road accidents in India, measures taken by authorities to reduce the fatality caused due to these accidents and various safety measures proposed by them to reduce these road traffic accidents.

Introduction

Socio-economic development of any country is greatly affected by the injuries and fatalities caused by the road traffic accidents. Fatalities and injuries caused by road traffic accidents is one of the main concerns of the government of every country.

Deaths caused by road accidents are a major and growing health problem in India. Around 2650 and 9000 people get killed and injured respectively in road accidents in India. India surpassed China in deaths caused by road accidents and tops the worlds in road accident deaths with about 140,000 deaths annually. Also, road accidental deaths and injuries in India vary according to time, month, gender and age of the individuals. People of age group 30-50 are found more vulnerable to road accidents than any other age group.

The main of this study is to analyse the road traffic accidents in India, its causes and measures taken by the concerned authorities to reduce the risk of deaths and injuries caused by these road traffic accidents.

Objective

The main objective of this paper is to analyse the road traffic accidents in India. The supportive objectives are following:

- To know about the causes of road accidents.

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- To know safety measures and actions taken by concerned authorities to reduce road accidents.
- To analyse gender, age group, time more vulnerable to road accidents.

Research Methodology:

The study has been done on primary and secondary data. In primary through questionnaire, interview. Secondary- journal, magazine, newspaper and books.

Literature Review

Analysis of Road Accidents at National Level

Over the years, road accidents in India have alarmingly increased. India has low level of motorization but still tops the list of road accidents in comparison with developed countries. Road accidents in India are almost four times than that in United Kingdom and Sweden and about double than that in Japan and Germany.

Age-wise and Gender-wise analysis of road accidents:

In India, the age group of 30-50 found more vulnerable to road accidents than any other age group in the analysis. This age of 30-50 comprises of about 20% of the total population of India but faces about 35% of the road accidents deaths. Age group of 30-60, the economically active one, which is only one-third of the total population of India, faces more than half of the total road accident deaths in India.

According to the 2013 data, if we talk about gender-wise distribution of deaths and injuries caused by road accidents in India, males are more prone to deaths and females are prone to injuries in road accidents. The rate of deaths and injuries increases every year. Males are found more prone to the road accidental deaths as compared to females. While females are found more prone to road accident injuries as compared to males.

Month-wise and Time- wise analysis of road accidents:

When analysed, it was found that number of road accidents in India are higher in May-June and December-January. The reason found was that these months have extreme weather conditions. May-June is the months with highest temperature in India. This high temperature has physiological and psychological effect on drivers. Due to this high temperature, drivers feel irritated, feel tired which causes road accidents. December-January is the month where road get covered with fog which results in visibility difficulty. This causes road accidents.

Time-wise analysis of road accidents shows that road accidents differ during different times of the day. It was noted that road accidents remain higher during 9 A.M to 9 P.M. Road accidents are relatively less in number during early hours of the day and during night-time.

Causes of Road Accidents

There are various factors that cause road traffic accidents. But among all the factors, human error or we can say drivers' fault is the main and the major cause responsible for road accidents. Drivers' fault is considered one of the major causes because it accounts about 78% of total accidents, about 76% of total road accident injuries and about 74% of total deaths. Human errors include over speeding, taking alcohol and drugs while driving, calling or texting while driving and many more.

There are some other factors too responsible for road traffic accidents like age of the vehicle, pedestrians' fault, not taking proper safety measures, overloading or overcrowding of vehicle etc.

State authorities are also somewhere responsible for these road accidents. Not taking responsibility to look after road infrastructure properly causes these accidents. Malfunctioning of traffic lights, no proper roads and road signs etc. are some examples of the responsibilities that state authorities need to look after.

Prevention of Road Accidents

Prevention of road traffic accidents and road safety depends on various factors. Various studies are done to understand the causes of these road accidents which were further analysed to suggest preventive and safety measures to be taken by concerned authorities to prevent road accidents. These preventive and safety measures include number of ways.

These preventive measures vary from place to place. Urban cities need different measures while rural areas have their own needs. Hilly areas require different type of concern while plain areas are looked differently. Thus, preventive measures are implicated according to the need of the place.

Variables like traffic flow, vertical slope, curvature change rate, roadways segment length etc. are studies to form rules and regulation while driving and to prevent road accidents. For hilly areas, rules are formed and roads are constructed by studying variables like road visibility, sharp turns, surface conditions etc. In plain areas multi-lane highways are constructed to ensure proper flow of traffic. In cities proper working of traffic signals, proper road signs are required

to prevent road accidents. In common proper camera surveillance, proper roads without any damage, number plates on vehicles, and speed according to the roads are some measures are needed and should be studied by concerned authorities to prevent and reduce road traffic accidents.

India tops in road accidents due its mixed nature of traffic on the road- bicycles, mopeds, rickshaw, pedestrians, scooter, taxi, truck, bust etc. share same roads. Thus, to reduce the risk of road traffic accidents in India, concerned authorities not only need to segregate fast moving from slow moving vehicles and heavy from light vehicles but also enforce speed limit on vehicles according to their type and type of road.

The Way Forward

Road traffic accidents can be reduced and prevented up to a great extent by existing countermeasures, which are proven to be effective. Integrated approach involving collaboration of various sectors can reduce the deaths and injuries take place due to road accidents. Such approaches include mainly four factors viz. Exposure, behavioural factors, road environment, and vehicle factors.

Out of these four factors, exposure is the least focused factor to reduce the risk. Risk of injuries and deaths in road traffic arises due to exposure or need to travel for any reason. Therefore, there is a need to develop economies in such a manner that reduce the need for short as well as long distance travel and make the cities and town self-sufficient.

Behavioural factors are also a source of injuries and deaths caused due to road accidents. Behaviour such as the way people drive, walk or act on road causes injuries and deaths on road. Enforcement of traffic rules and regulation, stress, intake of alcohol while driving, drugs and many other factors are responsible for injuries and deaths on road.

Road environment contributes to injuries and deaths caused in road traffic. Factors such as visibility on road, divergence on roads, road signs, proper metal roads come under road environment and causes injuries and deaths if they are not properly looked after.

Vehicle factor can be termed as the most important cause of deaths and injuries on road. Over speeding of vehicles is the most common factor of road accidents. Some developed nations use a mechanism in vehicle to limit the speed which should also be adopted in India to reduce the road accidents and limit the speed of vehicles. Evidence shows that an average increase in speed of 1 km/h is associated with a 3% higher risk of crash causing injury and deaths.

Conclusion

This research concludes the various analyses done on road traffic accidents. This literature review summarises the causes of road traffic accidents and suggests various measures to prevent or lower the number of road traffic accidents.

The analysis shows that road traffic accidents in India vary with month, age, gender and time. People of age group 30-50 are found more vulnerable to road accidents. And if we talk gender wise, then male is found more prone to death as compared to females whereas, females are found more prone to injuries in road accidents as compared to males.

Month of May-June and December-January are the months in which most of the road traffic accidents takes place as compared any other month of the year. It is because in these four months, India's weather is at its peak. May-June are months with peak summer and December-January are months with peak winters which somewhere effects driver's psychological mind resulting in accidents. Talking about road traffic accidents according to time, then it was found that most of the accidents take place in between 9 a.m. to 9 p.m.

There are various factors which are responsible for road traffic accidents like age of the vehicle, pedestrians' fault, not taking proper safety measures, overloading or overcrowding of vehicle etc. But among these factors driver's entire fault is major cause of road traffic accidents. Driver's fault account for almost 78% of total road traffic accidents.

Road traffic accidents are preventable by following countermeasures, which are proven to be effective. Integrated approach involving collaboration of various sectors can reduce the deaths and injuries take place due to road accidents. Such approaches include mainly four factors viz. Exposure, behavioural factors, road environment, and vehicle factors.

Exposure on roads can be reduced by developing cities and towns in such a way that they become self-sufficient and there will be less needed to travel resulting in decrease in number of road traffic accidents.

Rules and regulation for road traffic should be formed by concerned authorities by keeping in mind about the behavioural factors of those using roads. In India pedestrians, drivers, cycles any everyone else use same road which is needed to be kept in mind while forming rules. Heavy or light vehicles, everyone uses same road to travel.

Road environment includes condition of roads, traffic signals, instalment of proper road cameras, sign boards, proper divergence on road etc. These should be properly examined on regular basis to prevent road traffic accidents.

Vehicle factors such as condition of vehicle, age of vehicle and speed of vehicle is needed to ensure. Speed limits are needed to be implemented according to type of road and vehicle.

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IMPACT OF COVID-19 ON MENTAL HEALTH OF PEOPLE

Rohit[1]

All through the world, the general population is being educated about the actual impacts of SARS, CoV2 contamination and steps to take to forestall openness to the COVID and oversee side effects of COVID19 on the off chance that they show up. Be that as it may, the impacts of this pandemic on one's psychological wellness have not been learned finally are as yet not known. As all endeavours are centred on understanding the study of disease transmission, clinical highlights, transmission examples, and the executives of the COVID19 episode, there has been next to no worry communicated over the impacts on one's emotional wellness and on systems to forestall slander. Individuals' conduct may enormously influence the pandemic's dynamic by modifying the seriousness, transmission, sickness stream, and repercussions. The current circumstance requires bringing issues to light openly, which can be useful to manage this cataclysm. This viewpoint article gives a definite outline of the impacts of the COVID19 pandemic on the emotional well-being of individuals.

Introduction

Guaranteeing solid lives and advancing prosperity for all at all ages is essential to building prosperous social orders. Nonetheless, in spite of incredible steps in improving individuals' wellbeing and prosperity lately, disparities in medical services access actually endure. The COVID-19 pandemic has upset or ended basic emotional wellness administrations in 93% of nations worldwide while the interest for psychological well-being is expanding, as indicated by another WHO review. Albeit social exercises have been limited in many nations, practically all not fundamental individual developments were disallowed because of isolate, while the neighbourhood clinics got out of nowhere a large number of basically sick COVID-19 patients and had to execute their crisis conventions. In this specific circumstance, everybody just as the vast majority of the cutting-edge medical services laborers got helpless against the passionate

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effect of COVID-19 infection1 because of both the pandemic and its results around the world. Numerous mental issues and significant results as far as psychological wellness including stress, anxiety, frustration, depression, etc. during COVID-19 episode arose continuously.

Review of Literature

More extensive exploration survey from considers done in different nations like Turkey, China, Germany, and USA, have shown the impact of COVID-19 on populace as for arrangements, medical services, economy, and so forth an investigation from China directed in January talked about long haul impacts like PTSD and the result of negative adapting. A survey of related works in India uncovered that the essential spotlight had been on more seasoned grown-ups, medical services experts, and in danger patients. This examination zeroed in on considering the impacts of Coronavirus on the understudy populace in India and measures their reaction to information, demeanour, tension experience, and psychological well-being care. It is basic to survey the understudy populace's point of view, reaction, what's more, progress during the pandemic, particularly in a nation like India where most of the populace contains youth.

Objectives of the Study

- To study the impact of pandemic on mental health.
- To unravel the major causes of mental imbalance during pandemic.

Research Methodology

The present study is focused on analysing the impact of Coronavirus on the mental health of people. The study considers secondary data which has been extracted from various official websites, journals, newspapers, etc.

Repercussions of Covid-19 on Mental Health

The COVID-19 pandemic has modified the manner in which we take a gander at life. The feeling of vulnerability and weakness has devoured us out of hand. Individuals have lost positions, companions, and relatives. News channels don't report positive stories any longer—all we currently have are records of liquor misuse, abusive behaviour at home, joblessness, death toll because of cataclysmic events, and difficulties and difficulties emerging out of monetary shakiness and separation. It is protected to say that the entirety of this has pushed us towards the following huge emergency anticipating us all in India—psychological well-being. While this is probably going to affect, we all in general, its outcomes will be more extreme for poor people and underestimated. The steadily expanding number of troubles approaches our

psychological well-being support help lines opens up a disturbing picture; we are not outfitted to manage the weightiness of the present circumstance. BMC-Mpower 1on1, a 24x7 psychological well-being helpline gotten almost 45,000 brings in only two months. 52% of the calls originated from nervousness; 22% from separation and change; 11% from despondency; 5% from rest related troubles and 4% from fuel of past emotional wellness concerns. While the helpline was presented for Maharashtra, it got calls from the nation over. More calls have been gotten by male guests (69%) when contrasted with female guests (31%). The helpline is right now running in three movements.

A pandemic isn't only a clinical wonder; it influences people and society and causes interruption, uneasiness, stress, shame, and xenophobia. The conduct of a person as a unit of society or a local area effect sly affects the elements of a pandemic that includes the degree of seriousness, level of stream, and eventual outcomes. Rapid human-to-human transmission of the SARS-CoV-2 brought about the implementation of local lockdowns to stem the further spread of the infection. Seclusion, social removing, and conclusion of instructive organizations, working environments, and amusement settings transferred individuals to remain in their homes to help break the chain of transmission. However, the prohibitive measures without a doubt have influenced the social and emotional wellness of people from no matter how you look at it.

As an ever-increasing number of individuals are compelled to remain at home in self-isolation to forestall the further progression of the microorganism at the cultural level, governments should take the important measures to give emotional well-being support as recommended by the specialists. Teacher Tiago Correia featured in his publication as the wellbeing frameworks overall are gathering only to battle the COVID-19 flare-up, which can radically influence the administration of different sicknesses including psychological wellness, which normally intensifies during the pandemic. The mental condition of a person that contributes toward the local area wellbeing changes from person-to-person and relies upon his experience and expert and social standings.

Isolate and self-isolation can in all likelihood cause an adverse consequence on one's psychological well-being. An audit distributed in The Lancet said that the partition from friends and family, loss of opportunity, fatigue, and vulnerability can cause decay in a person's emotional well-being status. To conquer this, actions at the individual and cultural levels are required. Under the current worldwide circumstance, the two kids and grown-ups are encountering a blend of feelings. They can be put in a circumstance or a climate that might be new and can be conceivably harming to their wellbeing.

I. Impacts on elders

Physical separating because of the COVID-19 episode can have exceptional adverse consequences on the psychological well-being of the old and crippled people. Actual separation at home among relatives can put the older and crippled individual at genuine psychological wellness hazard. It can cause uneasiness, trouble, and incite a horrendous circumstance for them. Older individuals rely upon youthful ones for their day-by-day needs, and self-isolation can basically harm a family framework. The older and impaired individuals living in nursing homes can confront outrageous psychological wellness issues. In any case, something as straightforward as a call during the pandemic episode can assist with comforting old individuals. COVID-19 can likewise bring about expanded pressure, tension, and despondency among old individuals previously managing emotional wellness issues. Relatives may observer any of the accompanying changes to the conduct of more established family members

- Disturbing and yelling conduct
- Change in their resting and dietary patterns
- Enthusiastic upheavals

II. Impact on health workers

Specialists, attendants, and paramedics functioning as a front-line power to battle the COVID-19 episode might be more vulnerable to foster emotional wellness manifestations. Dread of coming down with an illness, long working hours, inaccessibility of defensive stuff and supplies, patient burden, inaccessibility of viable COVID-19 prescription, passing of their associates after openness to COVID-19, social removing and segregation from their loved ones, and the critical circumstance of their patients may cause significant damage of the psychological wellness of wellbeing laborers. The functioning productivity of wellbeing experts may diminish steadily as the pandemic wins. Wellbeing laborers should take brief breaks between their functioning hours and manage the circumstance smoothly and in a casual way.

III. Impact on children

Youngsters, away from their school, companions, and partners, remaining at home can have numerous inquiries concerning the flare-up and they look toward their folks or parental figures to find the solution. Not all kids and guardians react to pressure similarly. Children can encounter nervousness, trouble, social seclusion, and an oppressive climate that can have short-

or long-term consequences for their psychological well-being. Some basic changes in kids' conduct can be:

- Over the top crying and irritating conduct
- Expanded misery, despondency, or stress
- Challenges with focus and consideration
- Changes in, or keeping away from, exercises that they delighted in previously
- Surprising migraines and agony all through their bodies
- Changes in dietary patterns

Conclusions

The effect of the COVID-19 pandemic is definitely changing the existences of individuals, including the existences of youngsters. Schools and colleges have shut, tests and occasions delayed, the standard wellbeing data administrations are restricted, associating with companions and more extensive family is profoundly debilitate and in certain spots even culpable. Living in these conditions can be intense for youngsters for their social, physical and mental prosperity. This new COVID-19 Youth Guide is an assortment of data, connections, and assets that can uphold youngsters to explore their lives in these difficult occasions just as motivate them to become pioneers in managing the vulnerability of the COVID-19 pandemic.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK

GOOD HEALTH AND MENTAL WELL BEING: INDIA'S HEALTHCARE CHALLENGES, BARRIER AND SCOPE OF IMPROVEMENT IN FUTURE

Sangeeta Tripathi[1]

Introduction

United Nations sustainable development agenda 2030, Goal 3 aims to ensure healthy lives and promotes mental well-being for all age groups. Healthy childbirth, healthy childhood, the vaccination process to protect kids from different diseases, addiction-free life, information about health-related rights, and easy access to health care have been included under this goal. Remarkable progress has been achieved in promoting health and mental well-being worldwide. Since the beginning of 2020, developing countries' health efforts got a big jolt. The whole world is going through an unparallel crisis due to Covid-19. It has brought some new challenges related to health and mental well-being for everyone.

The deadly spread of the CORONA Virus has reached up to 222 countries. One hundred sixty-nine million, eight hundred eighty, four hundred twenty confirmed cases have been recorded, and the death toll reached up to three million 5 hundred thirty thousand one hundred fifty-one till May 28, 2021. (Worldometer Coronavirus) This graph is continuously increasing in an unprecedented manner. The spread of COVID-19 around the globe did not bring only physical suffering among humans, but it upends billions of lives. Along with health, it destabilizes the world economy badly. The surge of COVID-19 cases has created havoc wreaked public health and put extraordinary pressure on the health infrastructure of each country. The USA, Brazil, India, Russia, Peru, Chile, Spain, UK, Mexico, Iran, and Italy are the maximum affected countries. The advance medical infrastructure of developed countries could not cope up with the situation created by COVID-19. Heart-wrecking visuals from China, then Italy, and Brazil have kept upsetting whole mankind. During the First wave of Covid-19, India did well. Timely lockdown and strict guidelines by the Indian government had managed the situation very well. But it destabilized the Indian economy. The beginning of 2021 was also not so auspicious for

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India. Maharashtra was the first state, where coronavirus cases soared hugely. Due to the economic crisis, and a huge number of migrant workers, working in other states, the Indian Government seemed hesitant to put lockdown. So, People confined themselves in their home isolation. Even then, the highest rate of infection has been reported in India. Later, election campaigns and religious events have intensified the rate of infection in the country. The everyday increasing death toll, people's battling with the scarcity of medical facilities, shortage of testing kits, oxygen, and beds were again terrifying the world by the middle of April 2021. A country like India where a giant population of 1.366 billion shares only 1.28% of the total GDP 194 Lakh Crores. Medical facilitates are limited up to cities only. It has been noticing that the second wave of Covid-19 has affected villages and towns more than cities. In the absence of medical facilities in villages, a huge burden fell upon cities' medical infrastructure. States governments became bound to put lockdown in their states as containment major. But this could not benefit immediately to the country as this was a severe outbreak of Covid-19. It has raised serious concern over insufficient medical facilities in the country. Lack of health Infrastructure urges a great need to upgrade advance medical system and to improve the number of medical infrastructures to overbear crises like COVID-19. The second wave brought lots of trouble for Indians along with health threats. Due to States lockdown, limited economic activities drastically impacted socio, economic and cultural domains. Prolong lockdown has raised concerns about economics dipped down, unemployment, and uncertainty about the Country's GDP. This lead recession phenomenon, which started haunting India. Due to Covid19, socio-cultural behavior got dramatically changed. The second wave of Covid-19 created a profound impact on people's lives. For some, it has shattered the whole family and made children orphans. India has reported 577 Covid orphans in the second wave till 28th May 2021.

Impact of Covid-19 Pandemic across the World:

The pandemic impact has been severely experienced all across the world. It has been difficult to manage the deluge of Covid-19 cases in developed countries like the USA, Germany, Italy, France, the UK, and Japan, etc. Lockdown had been imposed as containment action by several countries. The circumstances created by the pandemic was so unrealistic, and hard to believe. It affected not only physical health but mental health as well. The countries priorities are to maintain the physical health of nationals. Mental health is still unattended in many countries.

In China, Wuhan was the first city, placed under lockdown from 23rd January 2020. It confined 11 million people to their homes. Later whole Hubei province had been put under lockdown. Hospitals were overcrowded amid an acute shortage of testing kits and beds. The whole Wuhan city turned into a ghost town. Wuhan's visuals and news stories of people's cry for help from their apartment balcony were mind-boggling and frightening everyone.

Italy was the most affected country in Europe by coronavirus. In April 2020, Covid cases were increasing at a higher rate than any other country. Two reasons were considered for a huge spike of Coronavirus cases in Italy- Hug a Chinese campaign had launched to curb racism against the Chinese by the mayor of Florence in February (Mayor of Florence, 2020). To encourage Italian, he posted a video of himself hugging a Chinese man to spread the message of unity in a joint battle to fight psychological violence. This campaign was just the opposite of the norm of social distancing. Another reason was considered Italy's highest number of air networks with China (Li, 2020). End of February and March 2020, visuals from China and Italy started scaring the whole world. The vulnerability of virus had created a dread uncertainty among people about their future. In the absence of economic activities, fear of the virus, and a long stay at home became the cause of anxiety disorders and poor sleep. A survey published in PubMed shows that a high proliferation of mental stress had been recorded among the Chinese population during COVID 19. Anxiety and low symptoms were more likely to occur in people younger than thirty-five years. The study showed that health workers are at higher risk for poor sleep. Panic symptoms had increased when the Coronavirus outburst. Nearly one in five respondents had depression signs and sleeping issues that indicate uncertainty of the outbreak would cause greater psychological stress on the Chinese public (Zhao, 2020).

Another study from China had shown similar conditions of Chinses. It showed that higher academic qualification people were considerably more horrified due to the Coronavirus pandemic than low qualified participants (Jianyin Qiu1, 2020). Low-qualified people felt more helpless after the reopening of the Wuhan city. This study showed that participants who had a part-time job experience increased financial stress. Home stress has made them more apprehensive than full-time job respondents (Ma, 2020).

COVID-19 had disrupted not only routines but uprooted almost every facet of human life. Millions of people across the world had tried to settle with these new disrupted routines. But the lockdown was not similar for everyone. A news report by Global Times reported that due to prolong lockdown, Chinese couples were stuck at home and forced to spend too much time

in-home quarantine. It had become a big reason for the spike in divorce cases. The Chinese city of Xi'an had recorded an unprecedented number of divorce appointments since it reopened (English, 2020).

Spike in Divorce cases and domestic violence cases had been recorded not only in China, but it had increased in Arabian and Asian Countries. According to a news report, Saudi Arabia had recorded a 30% increase in requests for divorce (Salama, 2020). In Dubai also, divorce inquiries had been recorded a spike than ever before (Sharmila Dhal, 2020). The term "corona divorce" had been seen trending on Japanese social media sites as married couples stuck up with each other due to prolong quarantine (News, 2020). All these were indicating Covid stress among people which is not related with physical health but mental well-being.

Like other countries, India had also recorded an increased number of domestic violence and divorce cases. According to the data released by National Commission for Women displayed that 257 complaints had been received from 24th March to 4th April 2020, out of which 69 cases were of domestic violence (Ram, 2020).

New deadly transferable diseases can cause fear and anxiety among adults and children. Centers for Disease Control and Prevention, American has mentioned on its page that Coronavirus disease may be traumatic for people. To ensure public health, actions like social distancing and quarantine are essential, but they can be a reason for the feeling of loneliness and low among people. The reason for stress can be any such as dread and concern about their health and loved ones. It may be financial insecurity or loss of a job. Due to this, one can experience several symptoms such as sleeping issues or concentration problems, change in eating and sleeping patterns, deteriorating health and mental condition, and an increase of dependency on addiction such as tobacco, alcohol, and other drugs. The response to stress during the Coronavirus pandemic can be strong or weak, depend on everyone's social support, family background, financial situation, emotional background, and the community where they live. But the government is concerned about their own nationals' wellbeing. That is why they are providing immediate helplines by dialing 911 in a crisis for the Nationals. Along with this, Disaster Distress Helpline, TalkWithUs, and many more other services are working in this direction for a long time and trying to help people during the pandemic as well (Prevention, 2020).

But there are many barriers to use such platforms to secure our mental health. The population of a country and high demands for care contribute as a barrier to accessing services. Mental

health issues are already overcrowding in a developed country like Canada. In Ontario alone, the waiting time is of six months to one year on normal days. In 2017, twelve thousand children and youth were found waiting up to two and a half years for facilities, with an average waiting time for a rigorous treatment of 92 days. If it is happening in general time, we can understand the situation during a pandemic (Association, 2020).

In Oman too, the situation was not different from India and other countries. At the government level, all the precautions and preparations had been done to ensure public health. Due to a long period of lockdown and quarantine, various types of challenges started haunting the people. Prolong lockdown and lack of economic activities brought social pressure and financial worries. People gripped into the fear of highly infectious disease COVID 19, the uncertainty of jobs, unemployment, and financial insecurity as cutting of salaries, loan repayment, and increase of domestic violence. All these factors lead to psychosocial or mental health issues such as chronic stress, anxiety, and depression among the people of India and Oman.

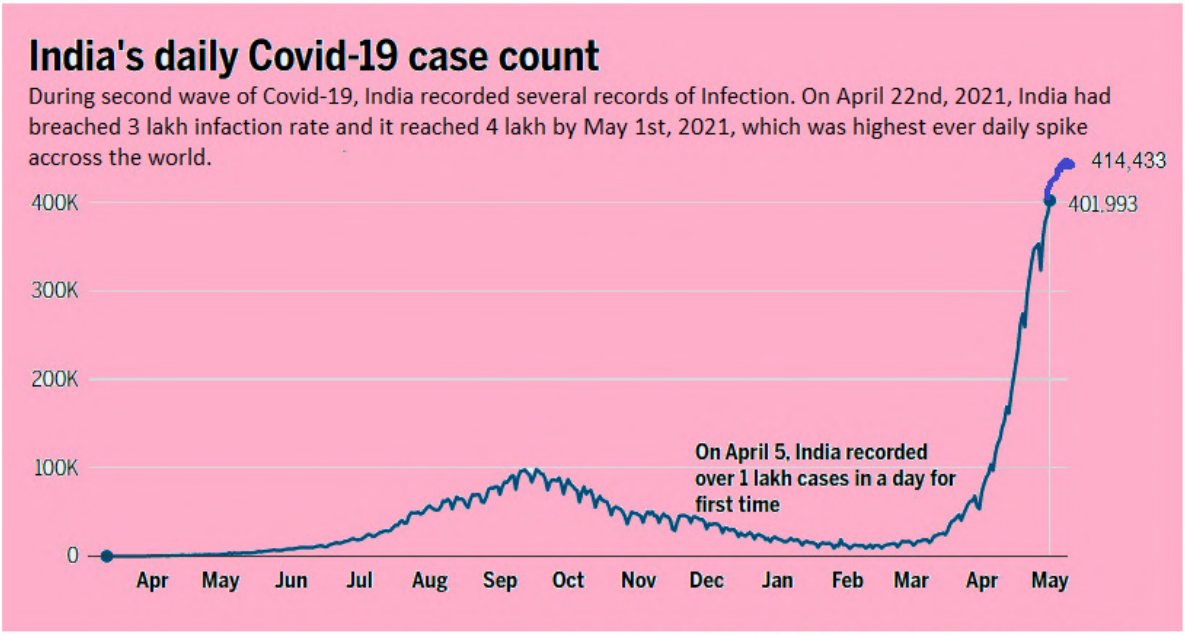
Three Lines Spectrum of COVID-19 Impact on Human lives

The pandemic had created a profound impact on Indians' lives during the second wave of Covid-19. These impacts have been noticed at three lines. That are -

1. High rate of infection and accessibility to medical facilities in India-
2. Financial, social and emotional insecurity for Covid Orphan children
3. Mental health and wellbeing during and after the pandemic.

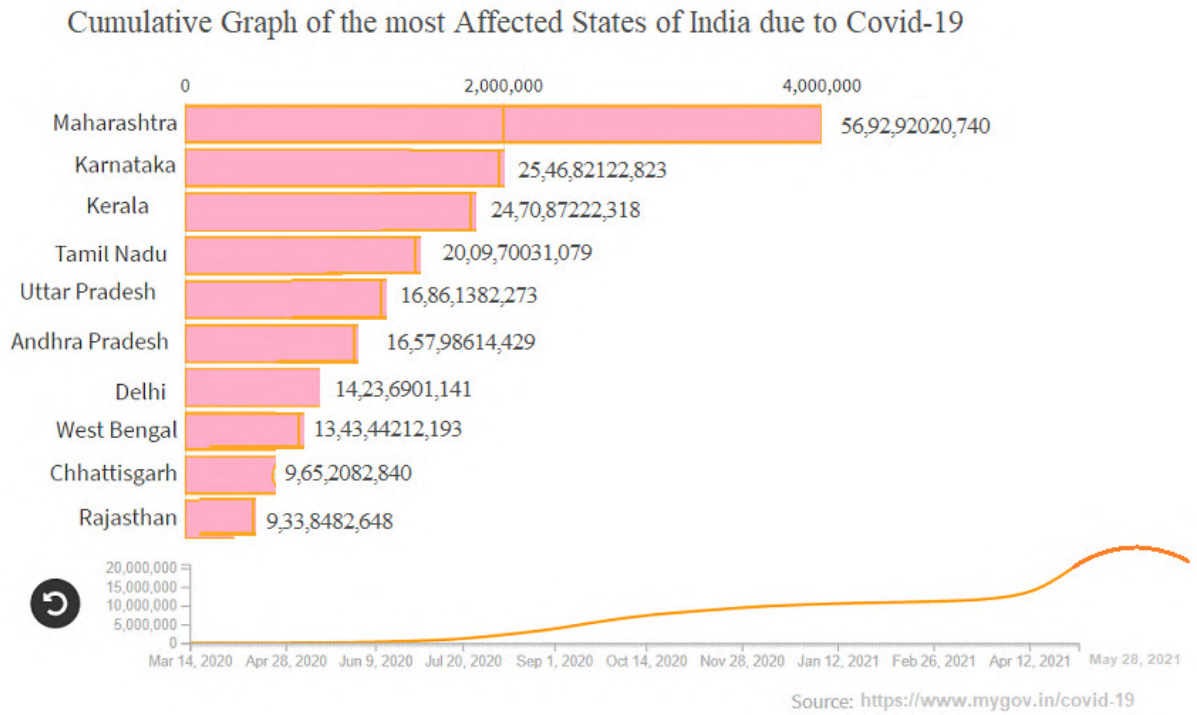
High rate of infection and accessibility to medical facilities in India-

Covid-19 second wave hit India the hardest, particularly the most densely populated cities such as Mumbai, Pune, Indore, Lucknow, Delhi, and Bengaluru. From 23rd March till 20th May 2021, Covid positive cases surged very swiftly. On 6th May 2021, 414,433 cases of Covid-19 have been recorded in India that was the highest ever daily spike across the world. The total death toll reached 3,22,512 on 28th May 2021 (Source: mygov.in/corona-data/covid19).



Source:worldometers.info/coronavirus/country/india/

Cumulative graph of most affected states is mentioned below which displays the terrible situation of the country state wise.



Source: https://www.mygov.in/covid-19

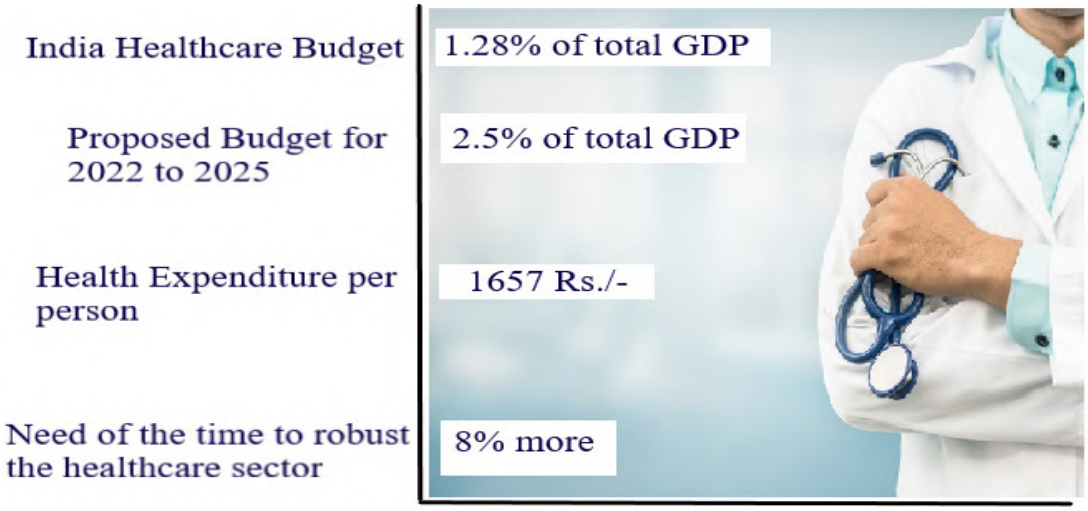
Suddenly, the medical priorities got to change. Media stories overcrowded with news of Covid patients, gasping for oxygen, shortage of beds, ICU, and medical facilities. Mind-boggling visual flooded on media and social media. In lack of oxygen, the death toll rose high. After seeing the devastating second wave of the pandemic, and risen death toll, a severe discussion

has been started on social media about the medical need and available medical infrastructure for such a vast population of 1.366 Billion. Coronavirus pandemic brought an Intensified concern over expenditure on healthcare infrastructure and its accessibility to the common Indians. In comparison to the Unites States' healthcare expenditure (17.7% of their total GDP), UK (9.997% of their GDP), Germany and France (11.2% of their GDP), Japan (10.9% of their Total GDP), India healthcare expenditure is merely 1.29% of its total GDP (World Bank Data). It is the lowest healthcare expenditure for such a giant population. In 2018, Prime Minister of India Mr. Narendra Modi unveiled the Ayushman Bharat Centre's health scheme for 10 crore underprivileged rural and urban people. This scheme shares the same budget, allocated for national healthcare. Although It is the largest healthcare scheme in the world, to assist India's most vulnerable citizens to facilitate affordable healthcare services, it is insufficiently supported on the financial front.

Covid-19 crisis has unveiled the flaws of the underfunded Indian healthcare sector, which fall upon badly to handle the pandemic. Research, carried out in 2016 by the Centre for Disease Dynamics, Economics and Policy (CDDEP) says that 63 million Indians (almost 7% of India's population) are pushed back financially by health expenses every year. According to this research, economically deprived Indians are forced to spend a large amount of money that is out of their pocket and suppressed their routine budget in normal time (Healthcare Expenses and Impact, 2016). Mainly 72 to 75% expenditure is getting spent on drugs while 35% on inpatient or outpatient care (Garg, (2009).) According to World Health Organization, India, in terms of healthcare expenditure of its total GDP, stands 184th rank out of 191 countries. India healthcare facilities can be ascertained from antenatal facilities provided to pregnant women in village areas. According to research, conducted by National Family Health, in rural India, only 16.7% of females get full gynecological care during their pregnancy (National Family Health Survey-4, 2015-16). In rural India, 24.4% and 21% of urban Indians believe that medical facilities are too costly to afford. Another reason is its accessibility and transportation issues.

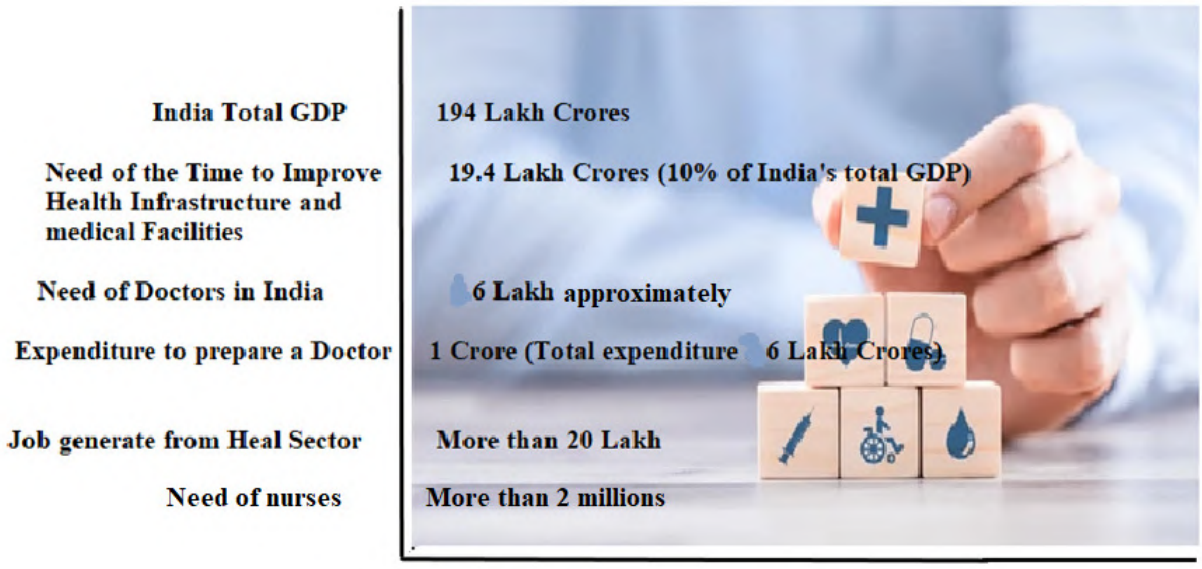
During the pandemic, the pre-establish insufficient infrastructure received a double burden. The situation becomes dire in Mumbai, Pune, Delhi, and Bengaluru. The hospital started denying to admit more patients in lack of Oxygen supplies and ICU beds. The labs have got overburden which makes Covid and non-Covid patients struggle twofold. RT-PCR, CT Scan and other test take more than four days to get it done. It has been seen that test results are coming after the demise of the patients. Infected people are struggling at home to get medical help as hospitals

are choked. Visiting hospitals become so risky as Covid and non-Covid patients are sharing the same lobby, exist – entry points, lifts, toilets, and canteen. The dire pandemic posed many serious questions regarding the need for robust Indian medical infrastructure and medical facilities in both the private and public sectors. An evaluation needs to be done on what India has and what we need to improve to fight back from such a disaster in the future.



In experts opinion: What India has and what it needs
Source: Economic Times

The health sector of India is the 5th most job-providing sector. One doctor generates approximately 6 high and low skills jobs in the country. But India has 1 doctor for 1445 as per the country population while WHO's prescribed one doctor for 1,000 people. India requires 6 lakh doctors and 20 more million nurses (Economic Times).



Need of Evalution of budget and improve it to robust medical system
Source: Economic times

To fight back with a crisis like Coronavirus in the future, India needs to work on several points-

1. Health Infrastructure needs to be improved in both the private and public sectors. In rural areas, 100 hospital beds on every 10,000 population should be built. So that dependency on the urban hospital can be reduced and better healthcare facilities can be given to rural people. It will be helpful to minimize the death rate during pregnancy.
2. To prepare efficient skilled manpower, focused and vocational training needs to be given
3. To secure health, a disease prevention management team needs to be formed whose work is to track the situation and act accordingly.
4. Medication management needs to be done along with transparent distribution of medicine.
5. Drastically need to increase the fund to develop healthcare facilities in remote areas and cities too.

Need to Address Post Covid Complications and Care

Post-Covid protocol needs to be devised carefully to address post-Covid complications and care. Post-Covid complications are still a clinic challenge as there is no conclusive evidence about particular symptoms in Covid negative patients. Sometimes people may experience post-Covid complications because of the long persistence of the virus in the immune system of the body. In many cases, it has been found that Covid patients have some kinds of symptoms after recovery too. These symptoms may vary from person to person. Some people may experience extreme fatigue, chest congestion and tightness with mild pain, pulmonary fibrosis, insomnia, memory or concentration issues, dizziness, illusion, tinnitus or earache, nose bleeding, depression and anxiety, joint pain, mild temperature with headache, poor appetite or upset digestion, cough and sore throat, and abnormal heartbeat, etc. In some cases, it has been found that the patient has recovered from Covid but succumbed to a cardiac attack. So, to address post Covid complication, people need to be aware. A campaign can be organized to inform people that they should not take post-Covid symptoms easy. A separate arrangement must be done to address this issue (Issa Al-Jahdhami1).

Financial, social and emotional insecurity for Covid Orphen children

Due to Covid-19 Pandemic, thousands of children got affected worldwide as it has shattered families. Health, nutrition, and learning schemes got a halt due to major outbreak. Basic healthcare services such as life-saving drug and vaccination are out of reach from common people. According to the Ministry of women and Child Development Indian, 577 children have

been orphaned in the second wave of Covid-19 till 28th May 2021. Due to social media discussion over Covid orphans, Ministry started inspecting the issue. With the help of states, they could track 577 Covid orphans. On 30th May, considering the seriousness of the situation, PM Narendra Modi has announced financial support to Covid orphans under the PM-CARES fund. For financial and social security, PM Modi has announced fixed deposits, free education along health insurance. The PM-CARES will pay through an especially designed system by creating a corpus of Rs 10 lakh for each child. This amount will be used to give monthly monetary assistance or stipend. When they reach age 23, they will receive a lump-sum amount for personal and professional use. Children under 10 years will get admission at the nearest Central School branch. The PM-CARES will also give monetary support for uniforms, textbooks, and notebooks. This initiative from the Indian government is appreciable. But tracking of Covid Orphan in remote areas is still critical. The social responsibility of the common Indian will help in tracking Covid Orphan but it is not so easy. In such situation, there is a huge possibility that Covid orphan from remote areas may not be able to avail the government financial support. Along with financial support, emotional support and assistance need to be given to such traumatize kids who lost their both parents. Their counseling needs to be done from time to time.

Mental health and well-being during and after the pandemic.

The second wave of the pandemic has been devastating for everybody. Doctors and patients are all alike. Doctors and frontline health workers who are taking care of Covid patients, as well as non-COVID patients, have experienced stress at several levels. The risk to doctors and frontline health workers makes their family members vulnerable too. Many of the senior and junior doctors have contracted the virus while treating their patients and succumbed to Covid. More than 500 doctors have died in India from Covid (Washington Post). Many of them were young. Increasing death toll and helplessness for not being able to do anything for the patient dying from Covid-19, doctors are getting frustrated. Due to the tremendous shortage of healthcare workers, the daunting duty hours of frontline workers and doctors dragged up too long. This is another reason for stress and anxiety among them. Due to extreme circumstances, a lack of empathy can be seen which affects the quality of medical care to the patient. The contagious nature of this disease and vagueness in treatment sometimes create hurdles to provide emotional and physical comfort to the patients.

Not only doctors but common people are also got stigmatize due to Covid-19. Uncertainty about future worries, financial ups and downs, job insecurity, hefty medical

expenses, economic upheaval, and social discrimination are the major cause of stigma among common people. I surveyed Delhi, NCR in July 2020. According to the survey, 42 % of respondents were caught in the grip of economic uncertainty 64% of respondents were filled with the fear of vulnerability, life threat, and fear to lose their loved ones. 29% of respondents said that social discrimination is a big reason for mental stigma. Hospital apathy and quarantine period had intensified stress and anxiety. 70% of respondents said that over content media and mind-boggling visuals on social media have created more panicking. Media work to sensationalize the happening around the world instead of informing. India media fail to provide useful information about available facilities, preventions, and cure.

Conclusion

India has a bigger challenge than any other country in the world during the pandemic. The reason is its huge population, poor healthcare management, underprivileged medical infrastructure, underfunded health sector, and minimum than required healthcare workers. This pandemic has made one thing very clear that the Indian government needs to improve its health budget up to 10% of its GDP to robust the health infrastructures to get ready for the future health crisis. Political willpower is strongly needed to ensure good health for all. A strong analysis needs to be done to identify the basic snags plaguing Indian healthcare. The country should apply three 'T' approaches – that is Testing, Tracking, and Trend. Post Covid care centers need to be established in the hospitals, healthcare institutions at rural, urban, and suburban levels with the help of district, subdistrict, and block-level administration. A disease tracking and prevention cell need to be established on the center level. A research collaboration needs to be worked out in partnership with medical institutions, academic excellence, and health sector organization to battle such kinds of crisis and ensuring good public health in future.

Enforcing lockdown is not beneficial for the country's economy in long run. It may lead to unemployment and several issues related to the economy. Financial insecurity may lead to mental illness, anxiety, depression, and other health-related issues. To control pandemic crisis and its after effect, fivefold actions can be applied. 1. Facilitating research findings and valuable information to the country's people, so that they can get aware of the situation and get motivated to follow the pandemic guidelines. 2. Deployment of restriction and lifting it after measuring the situation. 3. Effective deployment of medical facilities, tools, oxygen, vaccine, and healthcare technology. 4. Prioritizing robust medical infrastructure and arrangement of skilled healthcare workers. 5. Arrangement of funds and announcement of relief packages.

To maintain mental health and wellbeing in the country, India should initiate countrywide an awareness campaign in collaboration with healthcare institutions, volunteer psychiatrists, and the National Institute of Mental Health and Neurosciences, India. Private Sector Hospitals should also join hands in this drive under corporate social responsibility.

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CHAPTER 4

GOAL-4: QUALITY EDUCATION

TYPES OF ASSESSMENTS AND GOOD EDUCATION ENVIRONMENT TO IMPROVE QUALITY EDUCATION

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This paper is about the fourth goal in Sustainable Development Goals which is Quality Education. In this paper it talks about how different types of assessment and good education environment helps to improve quality education. The data for this study is taken from secondary data such as newspaper articles, journals, internet and so on. This study contains four objectives related to quality education and four subtopics related to quality education.

Introduction

ASCD and EI characterize that quality education is one that spotlights on the whole child in the aspects of social, mental, emotional, physical, and psychological advancement of every student paying little heed to sexual orientation, race, nationality, financial status, or geographic area. It readies the youngster forever, not only for testing.

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UN Secretary General Ban Ki-moon set the SDG cycle rolling in 2012 by pronouncing that each kid should be in school, and the quality of those schools should improve so students are set up to be useful residents, prepared to lead what's to come. Education must completely accept its focal part in assisting individuals with fashioning all the more, serene and lenient social orders.

Quality education gives assets and aides procedure to make sure that every child attend school solid and gets some answers concerning and rehearses a sound lifestyle; learns in an environment that is really protected and favourable for students and adults; is successfully busy with learning and is related with the school and broader neighbourhood; tweaked learning and is maintained by qualified, caring adults; and is tried academically and orchestrated accomplishment in school or further examination and for business and premium in an overall climate.

Quality education gives the results expected to people, networks, and social orders to thrive. It permits schools to adjust and coordinate completely with their networks and access a scope of administrations across areas intended to help the instructive improvement of their students. There are many ways that quality education can be improved. In this study, factors such as different types of assessment and good education environment is taken into consideration to improve quality education.

Objectives

1. To investigate if curriculum assessment help improve quality education.
2. To investigate if teacher assessment help improve quality education.
3. To investigate if student assessment help improve quality education.
4. To investigate if good education environment is helpful to quality education.

Research Questions

1. How can curriculum assessment help improve quality education?
2. How can teacher’s assessment help improve quality education?
3. How can student assessment help improve quality education?
4. How is good education environment helpful to quality education?

Literature Review

Curriculum Assessment Stated by Wolf, P., Evers, F., & Hill, A. (2006) in the Handbook for curriculum assessment, curriculum assessment is a process of gathering and analysing information from multiple sources in order to improve student learning in sustainable ways. I agree with what is said here as curriculum is the main guideline for students to know what they will be learning in a course and curriculum assessment test and keeps track of their progress in the course they have chosen according to curriculum requirements.

Teacher Assessment Mentioned in the National Education Association. (2010) in Teacher assessment and evaluation: The National Education Association's framework for transforming education systems to support effective teaching and improve student learning, the core purpose of teacher assessment and evaluation should be to strengthen the knowledge, skills, dispositions, and classroom practices of professional educators. In my opinion, teacher assessment is important to test and know the level and progress of each student in the classroom.

Student Assessment

According to Scarsdale Public School, student assessment is the way toward assessing students' capacities and accomplishments. It is a continuous ceaseless and day by day action in each homeroom, and it is necessary to successful instructing. I agree that student assessment is to assess student's capabilities and achievements. It is done daily with lessons conducted by teachers to let them know the potential of the students.

Research Methodology

This study was conducted by using secondary data from newspaper, journals, internet sources and etc. It also includes the writer's opinion on the role each factor plays.

Curriculum Assessment

As written in Model 8, Curriculum evaluation and student assessment. (n.d.). by International Bureau of Education in UNESCO, curriculum assessment plays a huge role in providing quality education especially at a tertiary level. This is because assessment is only given more importance in upper secondary and tertiary education. Curriculum assessment is a fundamental prerequisite in the learning cycle. It chooses if the course's learning objections have been met. A learning objective is what students should know or have the choice to do when an activity is done. Assessment impacts various parts of preparing, including understudy assessments, plan, and progress similarly as instructive program, enlightening necessities, and school sponsoring.

Curriculum assessment may be an internal activity and cycle drove by the various units inside the tutoring structure for their own different purposes. These units may consolidate public Ministries of Education, regional preparing subject matter experts, institutional oversight and declaring structures, parts of guidance, schools and organizations. Curriculum assessment may moreover be outside or dispatched review measures. These may be endeavoured regularly by remarkable boards or groups on the instructive program, or they may be research-assembled examinations as for the state and suitability of various pieces of the instructive program and its execution. These cycles may take a gander at, for example, the feasibility of instructive arrangement content, existing

teaching methods and informative methodologies, educator preparing and course books and informative materials.

The first question here will be how can curriculum assessment help in improving learning that in return helps improve quality education? Firstly, in my opinion, curriculum assessment's main objective is to ensure it is effective in improving quality of student leaning. Curriculum assessments are supposed to be designed to fit and fulfil required course and lessons needed by students. They are the guidelines that help students decide on the course and their future path.

2.Teacher Assessment

As written in the National Education Association. (2010), Teacher assessment and evaluation: The National Education Association's framework for transforming education systems to support effective teaching and improve student learning, the main purpose of teacher assessment and evaluation ought to be to reinforce the knowledge, abilities, dispositions, and study hall practices of expert educators. This objective serves to increase student development and, learning while additionally motivating teachers to remain in the classroom.

Comprehensive frameworks of persistent teacher education and expert development help educators master content, refine their teaching skills, basically analyse their own performance and their students' execution, and carry out the progressions expected to improve educating and learning. Comprehensive performance assessment frameworks give focused support, assistance, and professional growth opportunities openings dependent on educators' individual requirements too as the requirements of their students, schools, and regions.

In teacher assessment, there is summative and formative assessment. Formative assessment is used to monitor student learning, figuring out how to give progressing input that can be utilized by educators to improve their teaching and by students to improve their learning. More

importantly, formative assessment assist students with distinguishing their qualities and shortcomings and target regions that need work and assist staff with perceiving where students are battling and address issues right away. Examples of formative assessment is drawing a concept map, handing in an assignment draft early to get it checked and more.

The objective of summative assessment is to assess student learning toward the finish of an educational unit by contrasting it against some norm or benchmark. Data from summative assessment can be utilized developmentally when students or faculty use it to control their endeavours and activities in ensuing courses. Examples of summative assessment is mid-term examination, final project and more. The question of how teacher assessment helps improve quality education is answered here.

In my opinion, both methods of teacher assessment are useful in improving quality education. It helps teachers to recognise the issues faced by students so that they can be helped early. Besides that, it allows the teachers to keep track of the level of understanding of students or progress in what they have learned.

3.Student Assessment

Student assessment means evaluation of student learning. Student assessment learning has consistently been an incredible effect on how and what instructors educate and is accordingly a significant wellspring of criticism on the propriety execution of educational plan content. The more productive the assessment, the higher the quality education passed on to the students.

Satisfying the assorted goals of finding, affirmation and responsibility requires various types of appraisal instruments and methodologies chose to accomplish explicit purposes. Evaluation of student assessment could be summative or developmental, and there are different kinds of tests to address various necessities like government sanctioned tests, execution-based tests, capacity tests, inclination tests and insight tests.

According to Scarsdale Public School, student assessment begins in the classroom. Teachers evaluate students every day by observing their actions and responses to questions, activities given and more. If they think the students do not understand the concepts taught, they will look for other methods to help students understand.

How can student assessment help in improving quality education? This is because teachers and educators use the result from their observation to decide whether the students understand what has been taught. This helps them analyse the needs of student in learning concepts and in regular classes in my opinion, student assessment is useful in improving quality education as it points

out the weaknesses and strengths of students in learning. Using the results from student assessment, teachers and educators can come up with a better curriculum or concept trainings for students. This is a step forward in providing quality education to students.

Good Education Environment

Composed by Lee Chong Hui in The Star paper on July 26, 2020, Prof Loh Sau Cheong the head of Educational Psychology and Counselling Department, University Malaya (UM) said factors like school size, region or site, and class size; educator to educator and teacher to student connections; workplaces including libraries, specific workshops and labs; teacher quality, school the board, empowering techniques and companion sway are factors that impact students' academic display or achievement.

Poor lighting, study hall commotions and conflicting temperatures make educating and learning troublesome, while poor upkeep and insufficient ventilation frameworks lead to chronic weakness among students just as educators. These lead to horrible showing and high non-attendant rates, she said.

These elements can unfavourably influence students conduct and lead to high levels of frustration among teachers and poor learning attitude among students. "To improve students' scholarly exhibition, and advancement and development, the school climate is a significant region that ought to be examined and overseen well. "A helpful climate for learning, for example, one with agreeable study hall set-ups, important utilization of showing materials and fascinating homeroom exercises, will additionally inspire the students to learn.

A favourable learning climate would empower instructors to all the more likely oversee, inspire and connect with their charges. "This will achieve a fun, intriguing and significant learning measure, whereby students expect going to the exercises while educators expect pondering the exercises energetically" says Prof Loh.

From the article above, it shows that there are a few factors that needs to be taken note of in order to provide a conducive environment for students to gain quality education. Firstly, the infrastructure of schools and educational institutions should be well-maintained at all times. Clean and well- maintained educational institute buildings should include proper lighting systems, clean toilets, accessible drinking water, spacious area for activities and sports, laboratories with necessary equipment and instruments, computer for IT classes and has to be properly maintained at all times so that students will have more interest in gaining education. Through a well – maintained environment, it automatically creates a conducive environment to

gain quality education. This is because they will be more focused in lessons instead of worrying about the facilities all the time.

Secondly, the quality of teaching and teachers that helps improve quality of education. Teachers are the main key here as they are the ones who ensure the students get the required lessons and knowledge and also keeps their mind active in learning. If a student dislikes a class or likes a class can sometimes be linked with the methods taught by teachers. Quality teachers pass on quality education that creates quality students. Teacher quality is something can influence and affect student's performance.

Then there is also the question on how to improve the quality of teaching for teachers? One of the suggestions is to provide in- service or administration training to teachers. It helps them to keep updated with new systems, technologies and curriculums. This can be proven by referring to Senol, H., & Dagli, G. (2017) in Increasing Service Quality in Education: Perspectives on Principals and Teachers, conclusions with respect to in-administration preparing for instructors held the most noteworthy level of 73%. It likewise referenced one instructor considered this subject saying 'educators, particularly beginners in the profession, ought to get in-administration preparing and down to earth seminars on educational programs, modern showing procedures, use of innovation in training, their branches and estimating assessment. During these trainings, data should be divided among experienced educators and new ones' (T (1)).' This shows that the quality of teacher's assessment affects the quality of education. Educator's professional advancement is important for educators to adapt to ordinary changes in information and abilities in training (Koda, 2012) and in-administration courses can assist educators with improving their ability which is a need of present-day teaching (Nawab, 2017).

Most teachers accentuate the in-administration training that they required though 70% of school directors focused on the significance of utilizing effective educating strategies. One principal had reflected on this topic: 'teachers must be well prepared for the lecture. During the lecture they must use technology and make use of different printed and visual resources'(M(4)).' I agree with what they have said as it is helpful to the teachers to improve their quality in teaching that helps to connect with students and provide them with quality education.

Another suggestion is to improve the quality of teaching for teachers is to provide them support in the form of modern tools, methodologies and teaching aids. This helps create a good education environment for students. For example, the usage of smart classrooms, smart boards,

digital classrooms and course contents help teachers connect with the students and keep the students attentive and interested in the learning process.

Thirdly, extra- curricular activities in educational institutions create a good education environment. Extra-curricular activities help improve quality education as students gain soft skills through them. They also help provide a conducive learning or good education environment for students as it helps brain focus, helps to improve focus and motivates students. Examples of extra-curricular activities include sports, indoor and outdoor clubs, performing arts and more.

In my opinion, students can gain confidence and soft skills by attending extra-curricular activities. It helps to broaden social skills of students when they mix around and it motivates students to communicate and engage with others. Students can learn time management when they attend extra-curricular which is also quality education as it instils good skills in them. For example, by managing school life and after school clubs teaches them time management which will be useful in the future. This helps create quality students with quality skills through quality education.

Conclusion

In conclusion, all the types of assessment stated in this paper are very important to improve quality education. Good education environment is important as well in improving quality education. In my opinion, they each play a crucial role in improving quality education and each have their own benefits. They should be considered and given importance to in order to improve the quality of education in the future.

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CAN OPEN EDUCATION RESOURCES ENSURE EQUITABLE AND INCLUSIVE EDUCATION FOR ALL AS ENVISIONED BY SDG 4 IN A PANDEMIC HIT WORLD?

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Abstract

Sustainable Development Goals characterised as 'Agenda 2030' aim at creating a more sustainable future that is determined at ending various forms of poverty, combating inequalities, and creating a more just and dignified life for the citizens of the planet. Created after widespread consultations, SDGs were adopted by UN General Assembly Resolution in September 2015. The goals were created at ensuring that all the countries move in a similar direction and objective for a better future. Out of 17 goals adopted, Sustainable Development Goal 4 which aims at quality education for all is of special significance as United Nations considers education having multiple and multipronged effects on society. Education helps to leapfrog out of the circle of poverty, reduces gender inequality, and creates more robust and peaceful societies. The social benefits of creating an educated citizenry far exceed the economic and tangible gains of ensuring quality education for all. The world has been actively gaining landmark achievements in terms of ensuring higher primary education rates in the last two decades. However, the COVID 19 pandemic has hit children and youth with the closure of schools and

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universities across the globe. Digital Divide and Access to resources have been the primary hurdles to ensure the continued learning in the pandemic situation. Instantly switching to remote learning situations has created chaos and confusion for both students and educators everywhere. The study explores the benefits and possibilities of adopting Open Education Resources for better outcomes for achieving the Sustainable Development Goal 4. It analyses the impact of the pandemic on children and youth across the globe. It also tries to understand the institutional and other barriers that restrict the usage of Open Education Resources in the pandemic world. It audits the Indian initiatives related to Open Education Resources and how they are utilised for creating a knowledge-based society.

Keywords: Open Education Resources (OERs), Sustainable Development Goals, Quality Education, COVID 19

Introduction

Sustainable Development Goals were adopted by the UN General Assembly Resolution on 25th September 2015 which envisioned 17 Goals to be achieved by 2030. The three main targets of these goals were related to combating poverty, reducing inequality, and fighting climate change. (Nations 2020a)

These goals were created for a better future and were thus aptly called the 'blueprint to achieve a better and more sustainable future for all.(Anon n.d.)These goals cover the broad contours of poverty, hunger, gender inequality, health, education, economic empowerment, improvement of institutions, and forging global partnerships. They were aimed at ensuring that all countries of the world towards common objectives and focus on prosperity, peace, people, planet, and partnership. (Org n.d.)

At the time of formulation of these goals, the world was facing enormous challenges and impediments in which billions of citizens were denied a life of dignity and lived in a state of poverty and impoverishment. However, the COVID 19 pandemic has increased these inequalities manifold and further exacerbating disparities in opportunity, wealth, and power(Org n.d.). Some of the other major key concerns addressed in these goals that pose a threat to a just and equitable society are Gender Inequality and rising rates of youth employment especially in the situation of Industrial Revolution 4.0. Whereas Climate Change and global warming pose a great risk to the existence of human life itself on the planet.

Sustainable Development Goal 4 concerns itself with ensuring quality education that is both inclusive and equitable. It also seeks to promote lifelong learning and the creation of opportunities for learning for the citizens of the world. United Nations believes education is a human right and key to sustainable development. It considers it as a crucial factor for enhancing 'socioeconomic mobility and a means to escape poverty. (Nations n.d.). It is an important tool for combating gender inequality. Education is key to emerging out of extreme poverty and helps to accelerate human progress. It is imperative for creating more robust, peaceful, and resilient societies. It is indispensable for the creation of knowledge economies. Over the years, the world has witnessed increased levels of literacy rates and increased enrolment rates with regards to primary education especially related to girl education which is a significant achievement. (Nations n.d.). However, the UN estimates that at least one-fifth of the global population of children and youth were still out of schools in 2018. According to United Nations, youth segment that covers the 15 to 24 age group, the literacy rate has risen from 83 percent to 91 percent from 1990 to 2015. But it is imaginable that COVID 19 pandemic must have increased the dropout rates dramatically as it has impacted the economies of both the developed and developing countries badly. To provide a glimpse of the economic devastation, IMF has predicted negative growth for most countries barring India and China in 2021 and believes that

growth numbers would depend on the handling and preparedness of COVID 19 cases in 2021. (Kannan 2020)

Even UNDP estimates that the combined global human development might fall below the statistics for 1990 when such measurements began to understand the human development in terms of social indicators. (Tapia n.d.) UNDP Administrator Achim Steiner remarked that

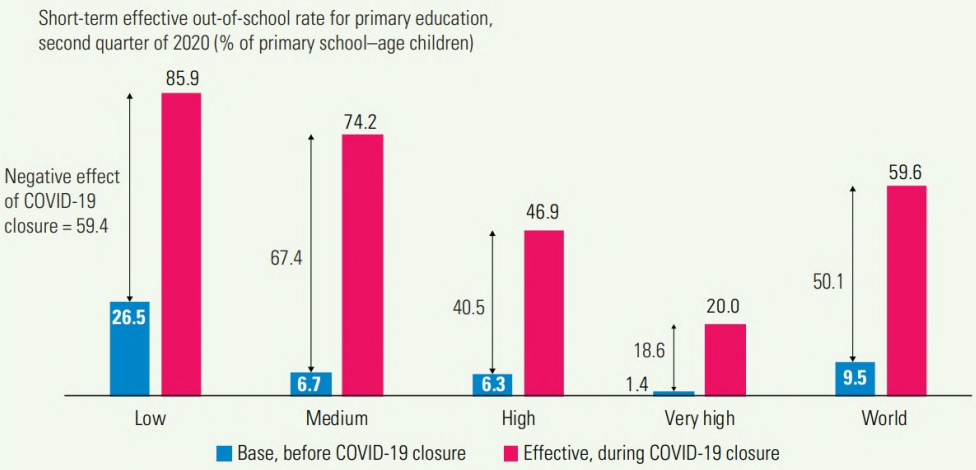
“The world has seen many crises over the past 30 years, including the Global Financial Crisis of 2007-09. Each has hit human development hard but, overall, development gains accrued globally year-on-year. COVID-19, with its triple hit to health, education, and income, may change this trend.”(UNDP 2020)

The Challenge of Pandemic and SDG 4: Estimating the Damage

According to UNDP Report titled ‘COVID 19 and Human Development: Assessing the Crisis, Envisioning the Recovery’ around 1.4 billion children and youth have been adversely impacted by the pandemic. It constitutes 86 percent of the entire student population. (Tapia n.d.). Education which is supposed to break the chain of inter-generational disadvantage and shackle the cycle of poverty is under severe threat due to the pandemic. The closure of schools and universities has brought institutional and structural disadvantages to the student community across the globe.

According to the same report, the out-of-school rate has increased alarmingly high with low human development countries showcasing numbers as high as 86% witnessing a rise of 59 percentage points. Whereas in medium development countries it is around 74% showcasing an increase of 67 percentage points. Only the high human development countries have a rate of around 20%. It puts the achievement of Sustainable Development Goal 4 which seeks quality education for all under serious threat.

Box figure 1. The short-term effective out-of-school rate for primary education has jumped substantially for all human development groups

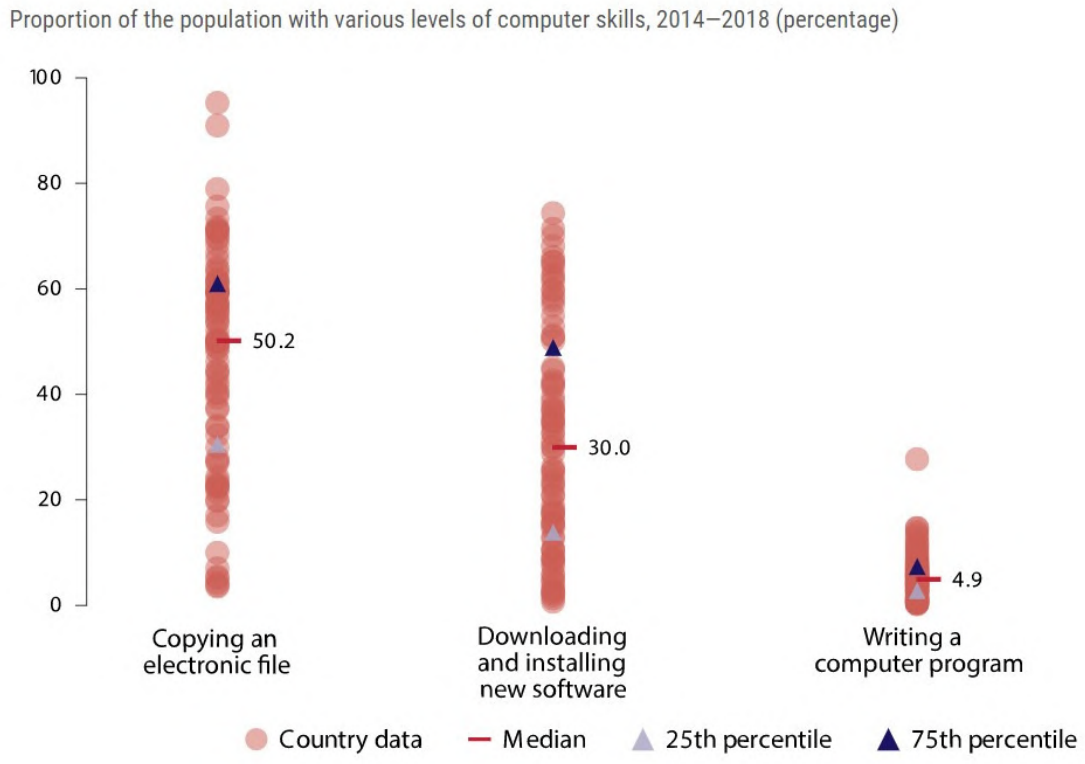


Note: Data account for 86 percent of students in primary school–age children worldwide.
Source: Based on data from the International Telecommunication Union, the United Nations Educational, Scientific and Cultural Organization Institute for Statistics and the World Health Organization.

Source . (Tapia n.d.)

The pandemic led to the closure of schools across the world and alternatively distance education solutions were provided to the students. Students were given the option of remote learning from home through virtual classes among other options. However, Sustainable Development Goals Report 2020 points out that around 500 million children and youth across the countries were excluded from the distance learning solutions attributed to various factors.(Nations 2020b). The report acknowledges the long-term impact on learning due to prolonged absence from the schools and institutions. It may impact the learning outcomes, retention rates, and graduation outcomes. The report points upon the regional diversity in the access to the internet and computer ownership in the home which further disadvantages the marginalised communities. It reports that 87 percent of households had internet connectivity in Europe in 2019. In stark contrast, only 18 percent of households in the African continent had access to internet facilities at home. Similarly, 78 percent of houses owned a computer in Europe in 2019 whereas only 11 percent had the luxury in Africa in 2019. This leads to the conclusion that the digital divide is an important hurdle in achieving the quality education goal

especially to make its distribution inclusive and equitable. However, digital literacy and navigating complex computer skills are a requisite for successful remote learning and only access to resources could not be considered as a singular factor in effective virtual learning.



Source. Sustainable Development Goals Report 2020

A report by World Economic Forum suggests that 320 million learners have been negatively impacted by the pandemic due to the transition to digital platforms(Sushma Modi and Ronika Postaria 2020). This is in addition to the 32 million students who were already out of school even before the pandemic had set in. The rural-urban divide in access to internet facilities and ownership of smartphones or computers complicates the situation even more. According to the National Sample Survey report (2017-2018), only 15% of rural households have access to the internet in contrast to 42% of the urban households. (Sudevan 2020). Whereas Gendered access to the internet was another issue faced by the Indian households where females had less

privilege of using the internet for e-learning purposes than their male counterparts. Girls had to face the burden of domestic duties or care while the education of the male child was prioritised.

Open Education as a Means for Achieving Better Outcomes for SDG 4

COVID 19 pandemic disrupted the education system and learning process. The institutions and systems had to switch to remote learning almost overnight. They had the responsibility to continue the learning and engagement process and were required to provide interactive and motivational educational experiences to their learners. It led to a paradigm shift in the way education was accessed, taught, and learned. The scale of the pandemic ensured that the systems were disrupted across the globe and both educators and learners were trying new ways and methods to access information and knowledge. Different pedagogical approaches were tried and experimented with the online medium. However, the access to education via the internet remained skewed due to a variety of factors. China became the first country in the pandemic scenario to adopt the policy of 'Disrupted Classrooms, Undisrupted Learning'.

The scale and reach of Open Education Resources have grown dramatically from the initial coinage of the term in 2002 by UNESCO’s 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries. (Miao, Fengchun, Mishra, Sanjaya, McGreal 2016). They have become popular with higher educational institutions, universities, and policymakers as they have realized their value and worth for the student community. They have promoted and supported through government policies as they support both the traditional classroom teaching with the ability of the teachers to adapt it to suit the needs of the student community and also support the cause of lifelong learning.

Governments have also showcased enhanced interests in the concept of Open Education Resources as they can help those students who don't have access to the uninterrupted internet access as they can be downloaded and can be studied in a shifted timing. Cape Town

Declaration of 2007 defines Open Educational resources as course materials that can take various formats like lessons, modules, textbooks, games but are open-licensed for reuse, revision, improvements, alterations, and these resources can be utilised, shared, and reused by anyone. (Cape Town Declaration 2007). However, it is not to be confused with any materials available on the internet as most materials have copyright licenses. Most OERs use creative commons licenses which allow individuals to adapt or re-use the materials according to the needs of the specific student community, socio-cultural norms, and pedagogy. Most countries who have signed the treaties with World Intellectual Property Organisations strictly adhere to the copyright laws-both national and international.

Whereas UNESCO (2019) defines the Open Education Resources as “learning, teaching, and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open licence that permit no cost access, [reuse], [repurpose], adaptation, and redistribution by others.”

Realizing the importance of OERs in the pandemic situation where both learners and educators are having a sense of being left alone navigating the vast world of online learning, the joint statement of Mrs. Stefania Giannini, UNESCO Assistant Director-General for Education, and Mr. Moez Chakchouk, UNESCO Assistant Director-General for Communication and Information in the document titled Guidance on Open Educational Resources during School Closures: Utilising OER under COVID 19 pandemic in line with the UNESCO OER Recommendations said that :

"Today we are at a pivotal moment in history. The Covid-19 crisis has resulted in a paradigm shift on how learners of all ages, worldwide, can access learning. It is, therefore, more than ever essential that the global community comes together now to foster universal access to information and knowledge through OER."(Huang et al. 2020)

OERs can play a significant role in saving the time of educators in the pandemic situation. (Huang et al. 2020). It can help the educators prepare better learning materials that are adapted to the needs of the student community. Thus, focussing their vital time, skills, and energies on developing critical thinking and problem-solving skills. In the higher education system, educators can even collaborate with their students for improving the Open Educational resources thus, opting for active learning and engagement for the students. Usage and enhancement of the open education resources also help to improve the digital literacy skills of the student community thus serving dual purposes. However, access to uninterrupted internet supply and the ownership of a device may serve as an impediment for envisioning and executing such an engagement with the learners. But pandemic has necessitated the need for active learning and open education policy for institutions that wants to create future leaders and active decision-makers.

OERs provide enhanced opportunities for accessing good quality content for education and even encourages the possibilities of lifelong learning. (Zhang et al. 2020). OERs serve both for Sustainable Development Goal 4 i.e. Quality Content availability free of cost for quality education and increasing the opportunity for lifelong learning. Open Education Resources also cater to the democratisation of education and related resources especially for the countries where the budgets for creating such quality content in digital formats are not available. It can be considered as a welfare approach to education that fosters partnerships between countries and people as envisioned in the Sustainable Development goals.

There is an increasing acceptance for the OERs in the educational policy and decision-makers as it is beneficial for a large segment of students who can afford internet connectivity and smartphone devices. There has been a dramatic increase in internet penetration in the last

decade due to the lower cost of smartphones as well as internet plans offering good bandwidth and network.

There are certain barriers to acceptance of OERs in the classrooms which can be both institutional as well as individual in nature, thus, hampering the vision of quality education for all. Some teachers fear that the open policy approach which is inherent in Open Education Resources may lead to loss of control over the classes whereas others may lack the adequate skills to incorporate them in their courses and re-adapt them according to the socio-economic environment. (Huang et al. 2020). The cost of adopting and re-adapting it to the needs of the student community may serve as another institutional challenge in the pandemic scenario where the budgets for education are skewed and funds are being diverted towards health budgets. To address the various barriers to education in the COVID 19 pandemic, UNESCO has launched an initiative named COVID 19 Global Education Coalition. It is a multi-level partnership and multi-sectoral collaboration that involves various stakeholders such as development agencies, civil society organizations, United Nations and its agencies, media, and others. They undertake various initiatives that help the children who have a disruption in their academic schedules due to the pandemic. The main aim of the initiative is to address the various content and connectivity gaps that disrupt the learning process. It seeks to find innovative and equitable solutions and enhance access to resources by leveraging low-cost technology. (UNESCO 2020)

Indian Government Initiatives for Realizing SDG 4

Amidst the pandemic, the Indian Government launched the New Education Policy 2020 with enhanced weightage laid upon the creation of open education resources and massive online open courses. National Education Policy 2020 is based upon five pillars and is synchronised with Sustainable Development Goal 4 of the United Nations. These five pillars are Access, Affordability, Equity, Quality, and Accountability. (Ministry of Human Resource Development

2020) It plans to create a body named the National Educational Technology forum that aims to utilise technology for the exchange of ideas on digital learning, assessment, planning and other important aspects of device-mediated learning. (Ministry of Human Resource Development 2020) The policy also created the provision of Academic Bank of Credits where the students can access courses from open education platforms like SWAYAM and get their credit transfer for the degree. It will also encourage students to take up interdisciplinary courses along with their degrees and enhance their overall potential. It will make learning more meaningful and increase the possibilities of collaborations between students belonging to various streams in the higher education system. It also provides access to the teaching pedagogy and content from the premier institutions like IITs and IIMs.

According to the data provided by the

Ministry of Human Resource Development, the DIKSHA platform which provides engaging learning materials for school students saw an overwhelming increase in access to their website. The increase in website access after the national lockdown announced by Central Government on 23rd March 2020 is 215 million times according to the statistics. (MHRD GoI 2020) The Government in its COVID response for ensuring Digital Equity for access to learning and education used the multi-pronged strategy of enhancing the accessibility to open learning resources websites like DIKSHA, E-Pathshala, National Repository of Open Educational Resources, National Digital Library, and SWAYAM platform. However, for catering to those areas which have low internet access or connectivity issues it adopted radio and television to ensure smooth access and continued learning despite the unprecedented circumstances of a health emergency. The Government utilised its 32 DTH channel consortium called SWAYAM Prabha for such areas or for those households who could not afford internet connectivity. 12 channels out of the total 32 channels were dedicated to school education from classes 1 to 12.

These channels were aired using DD Free Dish Set Top Box and Antenna. Radio was also utilised by the government for students having no access to the internet and even community radios were utilised. According to the data provided by the Ministry of Human Resource Development, around 289 community radio stations were used for education purposes. SWAYAM platform which is India's national MOOCs initiative has more than 2100 courses from various streams like Law, Management, IT, Media among others. According to an estimate, 10 million learners have already taken courses through the platform and may have become the world's largest free-of-cost MOOCs platform during the pandemic period. (Tripathi Durgesh 2020)

Policy changes also accompanied the initiatives for OERs and MOOCs courses as University Grants Commission enhanced the limits on the credits that could be earned from the MOOCs course from 20% to 40% thus, giving an impetus to the idea of blended learning. These initiatives were aligned with sustainable development goal 4 and seek to provide access through remote learning and otherwise to the large segment of Indian students and sway through the crisis without creating a hindrance in their learning and academic schedule.

Conclusion

Open Education Resources provides an effective tool to navigate the crisis posed by the COVID 19 pandemic. It provides quality content at almost no cost for ensuring effective remote learning however, the educators and learners need to engage with the content available according to their needs and capabilities. Sustainable Development Goal 4 has been formulated to help citizens lead a meaningful and dignified life but the disruption caused by COVID 19 has derailed the process of acquiring literacy and education. However, forging partnerships and collaborations between various stakeholders in the education sector is the way forward and would create prosperity and opportunity for all.

Digital Divide and Digital Literacy is a major challenge especially for the developing countries to realise the vision of SDG 4 that pertains to quality education and lifelong learning. However, initiatives like Global Coalition for Education offer a ray of hope to citizens having skewed access. Innovative solutions like using community radio as undertook by the Indian Government could be replicated in other countries as well.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK

DEFINING QUALITY EDUCATION

Ichita SARAF[1]

The highest performing education systems are those that combine equity with quality. They give all children op-opportunities for a good quality education. This report presents policy recommendations for education systems to help all children succeed in their schooling. It looks into system level and school level policies to promote equity and quality. It also provides evidence on how to support disadvantaged students and schools, as improving opportunities for them benefits education systems and societies as a whole.

School failure penalises a child for life. The student who leaves school without completing upper secondary education or without the relevant skills has fewer life prospects. This can be seen in lower initial and lifetime earnings, more difficulties in adapting to rapidly changing knowledge-based economies, and higher risks of unemployment. The same child is also less likely to take up further learning opportunities and less able to participate fully in the civ-ic and democratic aspects of modern societies. Educational failure also imposes high costs on society. Poorly educated people limit economies' capacity to produce, grow and innovate. School failure damages social cohesion and mobility and imposes additional costs on public budgets to deal with the consequences – higher spending on public health and social support and greater criminality, among others. For all these reasons, improving equity in education and reducing school failure should be a high priority in all OECD education policy agendas.

The evidence shows that equity can go hand-in-hand with quality; and that reducing school failure strengthens individuals' and societies' capacities to respond to recession and contribute to economic growth and social wellbeing. This means that investing in high quality schooling and equal opportunities for all from the early years to at least the end of upper secondary is the most profitable educational policy. Students who have enriching school experiences will be more likely to stay in education and successfully transfer to the labour market. Those who

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struggle at early stages but receive adequate, timely support and guidance have higher probabilities of finishing, despite any difficulties in their family or social background.

Investing in education pays off…

This chapter focuses on why improving equity in education and preventing school failure is cost-beneficial, even more in the context of the current economic crisis. Inequitable education policies and practices have a negative impact on individuals and also limit economic and social development. Often, inequities hamper the educational achievement of specific population groups such as students from lower socio-economic backgrounds or migrant students, and the crisis may have worsened this situation. The chapter first reviews what the report refers to by equity in education, school failure and dropout. It follows with evidence on the economic and social benefits of reducing school failure and investing in equity in education. It emphasises that investing early in all students - and more specifically in students from disadvantaged contexts – and supporting them through upper secondary education pays off, especially in times of budgetary constraints. It reviews how the current recession has brought education to the forefront, highlighting the potential risks of increasing inequities and school failure for individuals and for young people in their transition from education to the labour market. The chapter ends by outlining the key policy implications for governments to consider, which are developed further in later chapters.

Children's life chances are strongly influenced by the quality of their education. Schools aim at providing children with knowledge, skills and interpersonal competences required for their development, adult life and contributions to economy and society. Schools can offer learning experiences that a child may not obtain at home, particularly if he or she is living in a disadvantaged environment (Heckman, 2008; Heckman, 2011). However, despite efforts by governments to provide high quality education, significant disparities in educational outcomes continue to exist in OECD countries. A large number of students fail to obtain a minimum level of education, jeopardising their own future and the progress of their society. OECD countries' education goals for their youth are ambitious: providing enriching learning opportunities to all from the early years and until at least the end of upper secondary education. The OECD report No More Failures: Ten Steps to Equity in Education (Field, Kuczera and Pont, 2007) already high-lighted this. More recently, OECD ministers of education have signalled the importance of offering all children a strong start in life, including high quality schooling until the end of secondary education. "We need to provide a range of alternatives in (lower) secondary education and upper secondary for all, without making education systems too easy. This does

not imply lowering the bar. We aim to make our education systems more inclusive, by developing mechanisms whereby we can ensure that everyone succeeds by providing tailored approaches" (OECD, 2009). This is a major challenge, but a steppingstone towards cohesive societies and competitive economies.

Equity in education can be defined in many different ways. Building on the conceptual framework defined in the OECD Report No More Failures, equity in education can be seen through two dimensions: fairness and inclusion (Field, Kuczera and Pont, 2007).2 Equity as inclusion means ensuring that all students reach at least a basic mini-mum level of skills. Equitable education systems are fair and inclusive and support their students to reach their learning potential without either formally or informally pre-setting barriers or lowering expectations. Equity as fairness implies that personal or socio-economic circumstances, such as gender, ethnic origin or family background are not obstacles to educational success. An equitable education system can redress the effect of broader social and economic inequalities. In the context of learning, it allows individuals to take full advantage of education and training irrespective of their background (Faubert, 2012; Field, Kuczera and Pont, 2007; Woessmann and Schütz, 2006).

Strategies for low performing disadvantaged schools to improve require a coherent and balanced curriculum that provides the basis for each student to learn to high standards, combined with the appropriate support to help each student achieve his or her potential (Riley and Coleman, 2011). The curriculum has to be coherent and well-articulated along the different educational stages. Schools need to set high expectations for what every child can achieve, despite their levels of disadvantage and the achievement levels with which they enter the school. These high expectations can be complemented with supportive structures and services: positive learning environments offer strong instructional and emotional support (Hamre and Pianta, 2005). Box 3.12 summarises an initiative in the United States with a curricular design that aims at supporting low performing disadvantaged students.

Engaging students through the curriculum in the United States A curricular measure that seems to have a great impact is placing low achievers in advanced programmes rather than lowering the expectations. University preparatory programmes such as Advancement via Individual Determination (AVID) use acceleration instead of remediation as a tactic to improve students' performance. In addition to being enrolled in advanced classes, the students receive an hour a day coaching lesson from student peers or teachers to help them with study skills and critical thinking (www.avid.org). Programmes such as AVID reduce dropout rates and increase college

enrolment. In California for instance, AVID schools witnessed a 34% decline in dropout rates compared to a 14% drop in non-AVID schools (American Youth Policy Forum, www.aypf.org). AVID also involves a set of extra-curricular activities and engages the family at a variety of levels. Evaluation of the measure showed that all programme components were necessary to obtain a successful outcome.

Systematically linking instruction, assessment and curricula is challenging. Further research is still needed as to what are the optimal combinations of these practices as there is no clear evidence to what works. For example, practitioners need to know what assessment strategies can be matched to specific teaching repertoires and curricular goals in a way that is most effective for students with specific learning needs. Schools need to adapt these learning practices to their needs, and not necessarily reproduce the practices that work in schools whose students have different characteristics and needs. For example, it is generally accepted that to improve student achievement at primary school level, it is important to focus on literacy. However, the specific pedagogies used in more advantaged schools may not work with disadvantaged students, and strategies to improve reading achievement among beginner readers may vary from school to school (Corallo and McDonald, 2002). Similarly, students who enter secondary school with poor academic skills will also need to be supported in improving their literacy, but the strategies used will be very different in disadvantaged schools (Herlihy and Quint, 2006).

Data can support teachers and inform their pedagogical decision-making. Examples of data relevant for the class-room context include data on individual student achievement (formative assessment data, test and report card data), instructional time, disciplinary referrals and absenteeism. In the Netherlands for example, 85% of schools use a “learning monitoring system”, which contains test results, and which is used to monitor students’ progress and development. Prioritise linking schools with parents and communities’ Key findings Disadvantaged parents tend to be less involved in their children’s schooling, for multiple economic and social reasons. Engaged parents encourage more positive attitudes towards school, improve homework habits, reduce absenteeism, disengagement and dropout and enhance academic achievement.

Policies need to be designed to ensure that disadvantaged schools prioritise their links with parents and communities, building the capacity to:

• Improve and diversify communication strategies to align school and parental efforts. The more effective strategies target parents who are more difficult to reach and provide them with clear guidelines on how to best support their children.

• Identify and encourage individuals from the same communities to mentor students from disadvantaged schools and support their learning. This can be particularly effective in improving schooling outcomes. Links can also be built with local stakeholders, such as the business community.

Greater parental involvement in education encourages more positive attitudes towards school, improves home-work habits, reduces absenteeism, disengagement and dropout and enhances academic achievement. “Children are more likely to learn when they have structured home environments with clear expectations about learning but adapted to child specific needs and personalities” (Schneider et al. in Dumont, Istance and Benavides, 2010). Parental engagement in education mostly happens through two vectors (OECD, 2010f): the support parents give to their children at home, such as discussing school activities and helping with homework, and in-school activities, such as taking part in parent-school meetings and other school activities (Nusche, 2009; Dumont, Istance and Benavides, 2010). The evidence shows that parental involvement – regardless of the economic and social constraints – can make a difference in their children’s cognitive and social development (Schenider et al. in Dumont, Istance and Benavides, 2010). Families can be instrumental in developing the values and attitudes that encourage student engagement, motivation and success with learning. For instance, in helping with homework parents not only reinforce lessons and concepts learned in school, but also demonstrate attitudes and behaviours associated with success in school (Desforges, 2003; Hoover-Dempsey and Sandler, 1995). High achieving students in disadvantaged schools are more likely to have parents involved in their learning at home and actively participating in their schooling (In-gram, Wolfe and Lieberman, 2007). Schools struggling with unsatisfactory student achievement can benefit from building parenting capacity and encouraging learning-at-home activities. But many disadvantaged schools have to invest significantly more time than other schools in outreach to parents to establish a productive dialogue (Mac-Beath et al., 2005).

As low performance can result from home environments that do not encourage school engagement (Murphy, 2010), schools have to reach out to parents, especially those who may require extra support to engage in their child’s learning. To be effective, efforts have to be aligned with school goals and activities (Schenider et al. in Dumont, Istance and Benavides, 2010) and be perceived as positive by all parties. For example, if parental involvement puts

teachers and parents in opposition to each other, it can be difficult to establish trusting relationships that will benefit the child. Learning is adversely affected when schools lack these trusting relationships (Bryk and Schneider, 2002).

Therefore, specific policies should be designed to ensure that disadvantaged schools have the capacity to engage parents in ways that are meaningful and supportive of their children's achievement, creating partnerships. Ensure schools have the capacity to support parental involvement with specific communication strategies Good communication between parents and schools allows better coordination between the learning activities carried on between school and home. Homework can be a channel of communication that aligns parents with school goals. Other approaches can be found for parents to take more of an active role in their children's learning activities at home. However, as mentioned before, this can be difficult for families that are far from the schooling culture and for those lacking a clear picture of what school is like. Some key characteristics of effective strategies are described below:

• Use diverse communication channels: Formal arrangements to link parents and schools may not work for disadvantaged groups (Field, Kuczera and Pont, 2007). Communication with heterogeneous groups of parents has to be strengthened, and in many cases diversified (beyond to the traditional report cards and newsletters). Schools need to identify ways to work with parents to enhance their skills and enable them to provide more informed support for their children. This can include schemes with financial, logistic and expert support, and actions such as home visiting and community based initiatives in adult and parental education (MacBeath et al., 2005).

• Ensure balanced communication: Particularly for children of parents who are less familiar with the working of schools, their behaviour and achievements need to be relayed to parents in a balanced way (Field, Kuczera and Pont, 2007). If the only information reaching home is bad news, there will be little chance of winning support from parents for the efforts being made at school. A diversified teaching force (see policy point 3) can also facilitate the communication between schools and parents and present information in more relevant ways.

• Target efforts to reach out to certain parents: Esler, Godber and Christenson (2008) recommend that schools proactively and systematically identify families who are not yet involved in their children's schooling and extend personalised invitations to become involved – whether the child is performing well or not in school. This sends the message to parents that

the school values the child and his or her progress (Dumont, Istance and Benavides, 2010). Box 3.13 presents relevant programmes aimed at obtaining support of specific groups of parents.

• Provide clear guidelines on what is expected from parents: Schools should seek to encourage interaction be-tween teachers and parents through explicit guidelines on how parents can contribute to their child's schooling, in particular with homework. Examples of what the guidelines can include are: finding an appropriate place to study; devoting sufficient time to homework; helping their children with assignments but not completing them; and conveying messages about the value of homework and particularly its relationship to children's educational goals and those of the school.

1. Strengthen and support school leadership

School leadership is the starting point for the transformation of low performing disadvantaged schools but often, school leaders are not well selected, prepared or supported to exercise their roles in these schools. To strengthen their capacity, school leadership preparation programmes should provide both general expertise and specialised knowledge to handle the challenges of these schools. Coaching, mentoring and networks can be developed to further support leaders to achieve durable change. In addition, to attract and retain competent leaders in these schools, policies need to provide good working conditions, systemic support and incentives. Support for restructuring schools should be considered whenever necessary. Split-ting low performing disadvantaged schools, merging small ones and closing failing ones can be policy options in certain contexts.

2. Stimulate a supportive school climate and environment for learning

Low performing disadvantaged schools are at risk of difficult environments for learning. Policies specific for these schools need focus more than other schools on the following: prioritise the development of positive teacher-student and peer relationships; promote the use of data information systems for school diagnosis to identify struggling students and factors of learning disruptions; adequate student counselling, mentoring to support students and smoother their transitions to continue in education. In addition, these schools may benefit from alternative organisation of learning time, including the duration of the school week or year, and in terms of the size of schools. In some cases, creating smaller classrooms and schools can be a policy to reinforce student-student and student-teacher interactions and better learning strategies.

3. Recruit, develop, support and retain high quality teachers

Despite the large effect of teachers on student performance, disadvantaged schools are not always staffed with the most effective teachers. Policies must raise teacher quality for disadvantaged schools and students by: providing targeted teacher education to ensure that teachers receive the skills and knowledge they need for working in schools with disadvantaged students; providing mentoring pro-grammes for novice teachers; developing supportive working conditions to improve teacher effectiveness and increase teacher retention; and develop adequate financial and career incentives to attract and retain high quality teachers in disadvantaged schools.

4. Ensure effective classroom learning strategies

Often, there are lower academic expectations for disadvantaged schools and students, while there is evidence that certain pedagogical practices can make a difference for low performing students. To improve learning in classrooms, policies need to ensure and facilitate that disadvantaged schools promote the use of a balanced combination of student-centred instruction with aligned curricular and assessment practices. Schools and teachers should use diagnostic tools and formative and summative assessments to monitor children's progress and ensure they are acquiring good understanding and knowledge. Ensuring that schools follow a curriculum promoting a culture of high expectations and success is highly relevant.

5. Prioritise linking schools with parents and communities

Disadvantaged parents tend to be less involved in their children's schooling, for multiple economic and social reasons. Policies need to ensure that disadvantaged schools prioritise their links with parents and communities and improve their communication strategies to align school and parental efforts. The more effective strategies target parents who are more difficult to reach and identify and encourage individuals from the same communities to mentor students. Building links with the communities around schools, business and social, can also strengthen schools and their students.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
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QUALITY EDUCATION: NEED OF THE HOUR AND EVERYBODY'S RIGHT

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A quality education emphasizes each student's social, emotional, mental, physical, and cognitive development, independent of gender, colour, ethnicity, socioeconomic background or geographic location. It not only prepares the youngster for testing, but also for life. Quality education is often confused with just giving simple education to children it actually means the all-round development of a child as it is the most important thing it helps in developing their overall skills so that they can deal with their life properly. An elevated education equips all students with the skills they need to become economically productive, developing better livelihoods, contribute to peaceful and democratic societies, and enhance overall well-being. The learning outcomes that are required vary depending on the setting, but they must include threshold levels of literacy skills at the completion of the basic education cycle. There are various dimensions that needs to be discussed in this phase "quality education" because it contains a lot of things more than just education as it includes all the other fields too. The quality of education needs to be determined correctly in order for the children develop skills for their future endeavours.

Introduction

What is exactly quality education? Learners who are healthy, well-nourished, and ready to participate and study, as well as those whose families and communities support them in their learning; Healthy, safe, protective, and gender-sensitive environments with enough resources and amenities; Content for the teaching of basic abilities that is expressed in applicable curricula and materials, particularly in the areas of reading and numeracy and life skills, as well as gender, health, nutrition, HIV/AIDS prevention, and peace knowledge. To support learning and decrease inequities, qualified teachers use child-centred teaching practices in well-managed

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classrooms and schools, as well as skilled assessment. Knowledge, skills, and attitudes outcomes that are tied to national educational goals. Quality education, emphasizes holistic growth, training is imparted with future-ready knowledge and skills, trying to instil the right values in students, and inculcating a positive learning attitude in students. Good teachers offer quality education, which is aided by efficient teaching and learning processes and a friendly learning environment.

Why the quality education is important? Education means to teach to let them learn and aquire the knowledge for their own benefit so that they can stand up for themselves and live life fully and also can have proper skills so that they can get the job of their own interest and have access to all the information and must be aware about his or her rights and duties so they can live a civilized life and must know how to behave in the society. Hence, education is important for each and every individual and quality education are not exactly education as education only includes theoretical knowledge but with quality education the aspect of gaining practical knowledge also came forward and this concept is helping in developing the overall skills of the children so that they can stand in their life and also to develop their mental and physical being. Education is the most critical method for improving society and advancing civilization's modernization. Every government considers education to be the most important pillar that keeps the country together and leads the state to ultimate success. Education is at the heart of both individual and community development; its mission is to empower each of us, without exception, to grow properly all of our talents and recognize our creative potential, including self-responsibility and accomplishment of our life goals.

Students will grow all of their strengths and abilities through quality education, allowing them to reach their full potential as human beings and members of society. As a result, quality education entails determining the desired improvements the educational institution wishes to see in each pupil. Setting a high bar and assisting the student in meeting it.

Specialties of quality education

(1) Because quality education is a civil right and a social welfare, policymakers and other public authorities should ensure that all civilians, from beginner to advanced, have access to it.

(2) A solid basis for societal justice is provided by high-quality education.

(3) Quality education not only informs, but also fosters creativity, allowing them to participate to the greatest extent possible.

(4) A good education focuses on the whole individual student's social, emotional, behavioural, physical, and intellectual development of gender, race, ethnicity, socioeconomic

status, or geopolitical proximity. It not only prepares the child for learning outcomes, but also for existence.

(5) Good education produces the results that people, communities, and societies need to thrive. It helps schools to align and connect completely with their communities, and also access a variety of resources from various sectors that support their students' cognitive development.

(6) Three main pillars promote quality education: ensuring access to qualified teachers, providing quality learning experiences and professional growth, and promoting healthier and positive learning environments.

Training teaches people basic societal standards, laws, legislation, and values. Furthermore, high-quality education helps us live a better life by improving our intellect, skills, and awareness, as well as bringing positive improvements to our lives. After all, good people are the only ones that can ensure the availability of quality education. We need good doctors, good engineers, good lawyers, and good teachers. Education is also a must for every country's growth and modernization. Humanism, independence, equality, democracy, and human rights are the foundations of modern education. Education's content keeps up with contemporary society's needs and reflects its aspirations, beliefs, and priorities.

What are the Challenges

(1) The task of enhancing teaching quality by educating teachers and providing them with modern teaching aids, resources, and methodologies — such as smart classrooms and interactive course material — must be met so that teachers can take pride in their classroom performances without difficulty.

(2) The country's future depends on high-quality education in every school, and it plays a critical role in the country's growth.

(3) Alternatively, quality is at the core of education. The completion of licensing requirements exams isn't the only indicator of a good education. The efficacy of the curriculum and teaching techniques, as well as the consistency of the school and home setting, are all influenced by the availability and value of school inputs.

How many children are deprived of the basic education;

According to the current global situation, about 124 million children are out of school and 250 million children are not learning basic skills as a result of low-quality education. Girls, children with disabilities, children from marginalized communities, and children from rural and remote communities are the most likely to be deprived of quality education.

Despite some of the aforementioned challenges, our government has already founded educational institutions in all underserved areas of the country, providing stipends, teacher training, infrastructure growth, ICT facilities, and free textbook distribution to students, as well as promoting free, equitable access to quality education for all students from early childhood.

Features Of Quality Education

1. EDUCATORS; Perhaps the most significant aspect in educational quality is the teacher. Is he/she a certified educator? Is it right for you? Is he/she using teaching strategies that encourage active participation from the students? Do the teaching approaches take into account the students' various starting places, including gender? Teachers who can't make ends meet will become less motivated and take more sick days. They will have less time to prepare if it takes them two to three hours to go to school.

2. CURRICULUM; Is the curriculum and teaching materials up to date? Are basic literacy and numeracy abilities stressed enough? Is there a focus on basic skills like cleanliness, nutrition, HIV/AIDS knowledge, conflict resolution, gender equality, or other critical national and worldwide topics in the curriculum?

3. SURROUNDINGS; Is the learning environment for both girls and boys safe, secure, protective, motivating, and adapted? Is there a learning environment that is welcoming to minorities and students with disabilities? Do the students learn to appreciate one another and the natural world around them? Do the teachers work together to create a positive learning environment? Do they scold the students?

4. EDUCATION SYSTEM; Is the school in good hands? Is it compliant with national regulations? Is your school day well-planned? Is the school's administration transparent, allowing everyone to see how funds and other resources are allocated? Do teachers have clear guidelines for how they should educate and interact with their students and (female) co-workers? Do principals and school board members treat teachers with respect?

5. PREREQUIREMENTS; What kinds of experiences do students bring to school? Has the student faced any unique difficulties, such as natural catastrophes, maltreatment, child labour,

or AIDS? Is the student from a family where both girls and boys have equal opportunities? How different is the language spoken at school from that spoken at home?

6. FUNDING; All six critical parts require funding and structure, which are primarily governmental responsibilities. A school with insufficient money and unclear guidelines will be unable to provide high-quality education. Each school, on the other hand, is responsible for managing its own resources and organizing work in the most efficient manner feasible on its own conditions.

Education And Indian Society

The role of Education in Indian Society is very important when it comes to national integration and development and India's fate is being sculpted in her schools right now. This isn't just speech, we believe. Education defines the amount of wealth, welfare, and security of the people in a world built on science and technology.

Why education is necessary in India? Since independence, India has made steady development to keep up with fast changing conditions in numerous fields. Aimed at sustainable progress, the emerging Contemporary society is beset by challenges in a variety of areas, including the economy, education, and politics, as a result of British colonial control.

Indian governments have recognized the value of education since our independence. As a result, numerous education commissions have been established from time to time in order to improve education and society. A society that does not value education will not be able to proceed. Any administration, whatever it might be, must have the desire to make India a global leader in academia.

Modern India and Education

In modern India, what is the role of education? Education is crucial to the modernization of Indian society. In contemporary culture, training and education should be able to produce the following results: To stay abreast of current advancements in the field of knowledge 1 To stay abreast of new advancements in knowledge and curriculum modifications. 2 Adopting the most up-to-date methodologies and methodology to change the way teachers teach pupils. 3 Place a strong emphasis on technical disciplines, understanding of science, and investigation.

Education And Its Impact on The Economy of India

Schooling adds to the monetary development of a nation up generally. It ingrains a sense in an individual that permits him to act and think in an objective peculiarity. On the off chance that

we take a gander at insights and the consequences of different explores, it very well may be discovered that there is a gigantic expansion in the quantity of confirmations every year from grade schools to universities and to colleges. Government colleges as well as private establishments have likewise arisen in the instructive areas which are acknowledged with great affection by understudies. Studies uncover that the quantity of in general enlistments from government colleges to private organizations has been increased as time passes. The developing contest has caused individuals to comprehend the significance of training as far as individual improvement as well as adding to the movement of the whole country.

Why There are Still Some Children in India Who are Deprived of The Basic Right to Education?

Though, the constitution of India has made laws for the children between the age of 6-14 years under the right to education act, to have free and compulsory education for those who cannot afford and comes under the minority group. This pertains to the state government's commitment to give out free basic education and to ensure that every kid is enrolled, studies, and completes elementary school. Regardless of the fact that every Indian child has the constitutional right to a free and mandatory primary education, 20.2 percent of children also don't get to enjoy it.

But why so? There could have been plenty of reasons due to which a lot of children in India are still not getting the proper access to the basic educational right and those reasons could be poverty, unemployment, hunger, not proper access to sanitation, illiteracy, no proper knowledge of the importance of the education. But the underlying defects in the legislation as a whole, as well as in its enforcement, are the major cause for all of the above-mentioned concerns.

And also, the funding is inadequate due to which the government schools are not getting the capital required to make education available for all and the age factor also plays a major role because of which there are many children who cannot get the access to the basic elementary education as the government has made education compulsory till the age of 14 which makes children above 14 difficult or almost impossible to be enrolled and accepted by the schools that’s why Indian children are deprived of the education and because of the huge gap between the rich and the poor.

Some people in India still don’t get proper food in a day so they indulge their child in child labour due to which even if the child wants to go to the school cannot go because of his/her situations.

Thus, if we want to talk about the quality education firstly, we need to take in notice these above-mentioned issues because a country cannot develop fully if its youth is uneducated and illiterate. So, in order to give quality education to our children we need to start focusing on the ones who still do not get the access to education and to develop the world fully we need to start digging up the core elements of these problems because not only India but there are also a lot of countries where the people are still illiterate.

Suggestions

- Good quality of education can only be ensured if the people have the proper knowledge, awareness and information and this can be done only by providing the basic education to the children and help them to have access to it.
- The government need to extend the age group of people who can have the compulsory and free education.
- The quality education aspect is the most important which can help a country to develop fully as it impacts the culture, economy and society, etc. as a whole.
- The learning environment need to be enhanced so that the children can actually put some interest in learning.

Conclusion

To conclude this, quality education can play a vital role in enhancing the growth of a country but if some of the people amongst them do not get the basic right to education then it can pose great difficulties in providing quality education and even the concept of quality education is somewhat difficult to conduct as it requires a lot of efforts from government to educators and to children and even their parents too as if we provide quality education to each and every children then it requires technology as technology plays a very big role in quality education and technology is acquired by money and those who cannot afford this will be deprived of the education so in order to do so the whole education system needs to be improved from the root level so that everybody can enjoy the quality education.

TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK

IMPACT OF COVID-19 ON EDUCATION & LEARNING

Ms. Tikshita Manchanda[1]

COVID-19 has immensely disrupted the functioning of every single industry and the Education industry is one of them. Universities, Schools, and various other institutions are closed throughout the World. This pandemic has led to the lockdown and it impacted the holistic approach of Education and learning. The only solution is distance learning to continue with education. This pandemic provides us with a chance to prepare for presenting computerized information. Students and teachers are coping up with various difficulties in the online learning management system, which as a result, has declined the quality of education and learning ability of the students to an extent. Both learners and instructors are trying their best to make online learning a success but still lacking. In this paper, the advantages and disadvantages of online learning have been talked about. This paper highlights the loopholes in the online learning system. How and where the education system is lacking and at last various suggestions are highlighted to improve the online learning experience for students.

Introduction

Education is the foundation of development and that foundation got frailer in the pandemic. The Traditional Education Method is far more different from the Digital Education Method. India as a developing nation was not ready to fully adopt digital learning. As many teachers are not very qualified to teach on online platforms neither every student has access to internet connectivity and electronic gadgets such as a smartphone or a computer.

Due to the surge over the COVID-19, in March 2020 lockdown was announced throughout the world and in many countries, it has been imposed in January 2020 only. As Nationwide lockdown was imposed, the Education Method got changed. Classrooms were converted into

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Zoom, Google meets, and other platforms. Exams were replaced by online quizzes. Break time with friends was only limited to video conferencing. Overall a child's development is not only limited to academics, but it also relies on extra-curriculum. All those sports meet, cultural fests, competitions, and all the exposure just got limited to a screen. Through digital learning, it's tough to give that exposure but various Schools and Universities spare no effort but still, they couldn't compete with the exposure which a child gets in the traditional method. Lockdown has been imposed to slow down the spread of the virus but it may not slow down the spread of the virus, but it has slowed down the economy, the learning, the life of people.

As stated in the report by UNESCO that 87 % of the world's student population was overworked by the surge of the pandemic. Not only this, but it also stated that more than 1.5 billion children across 195 countries were affected by this pandemic. UNESCO is taking several steps to help those students who are more at risk.

As of July 2020, 98.6 % of learners worldwide were affected by the pandemic representing 1.725 billion children and youth from pre-primary to higher education in 200 countries. It's almost now a year the schools are closed, and as a result over 100 million additional children

will fall below the minimum proficiency level in reading.

In these difficult times, children have to sit in front of the screen and gave their examinations and assessments but in such times rather than prioritizing mental health, assessments and examinations have been prioritized by institutions.

Various researches have shown and proven that the infrastructure needs to be more advanced to conduct online learning efficiently but what needs to be done to make this possible?

This paper explains the challenges and opportunities of online and continuing Education during the COVID-19 pandemic and way forward suggested.

Impact Of Covid-19 on Education and Children

COVID-19 surge has also led to a rise in social inequality as students who come from an economically stronger section were able to access education without any hurdle whereas those students who come from the weaker economic section were not able to grasp digital learning and many of them left education. Pandemic had deeply impacted the children who come from an economically weaker section. Many of them got forcibly married or got engaged in household chores.

The reality is that in a developing country like India, the approach to online learning is vague. Firstly, Indian technology is not that advanced through which we can acquire strong internet bandwidth.

Secondly, not everyone has access to a smartphone, laptop, or internet modem. As we couldn't stay limited to home only this same goes for a child. Going out to play, meeting friends, and seeing the world through your vision, is not possible by staying within just four walls. All these things are a part of a child's overall development, but all of this got hampered. Online learning needs to be interactive; a conversation needs to take place between students and teachers the way it used to take place in traditional learning and that is possible by having a face-to-face conversation.

While the cameras are off, and the teacher comes and recites the lesson without even knowing how many students are hearing and how many are understanding. In addition to all these various assignments and projects are given to students as a part of their curriculum but do they benefit the students? The answer is yes they are beneficial but only when it's a relevant assessment or project which makes students interested in that in that he/she works on their own and learns by themselves. Assignments and projects should be given in a way that they shouldn't feel like a burden to students but an interesting activity.

In this pandemic, children have already seen horrific situations around them and online classes feel like a burden, and that too with a lot of assessments in these difficult times is like one more stone on their head.

Pros & Cons of Online Learning

● Working from home blurred the lines between work and home responsibilities for both students and professors.

● This pandemic has also robbed many of the opportunities to experience college life. For students, a campus is a place to grow, learn and make new friends. It's an environment where consistent learning takes place. Online education robbed every student's experience of college exposure.

● Earlier screen time was also limited but, in this pandemic, children have to sit in front of the screen throughout the day which has affected their mental as well as physical health to an extent.

● In Urban and Suburban areas, a consistent connection with decent speed is a problem. Just think about the backward areas where the internet is not even present or even if it is present but without a decent bandwidth.

● Despite all the cons, COVID-19 has accelerated a move towards blended learning.

● It encouraged students as well as teachers to become more familiar with the technology.

● It also leads to better utilization of the learning systems, which indeed opens an opportunity for those who have been into this area.

● Due to online learning, location is no longer a barrier. Anyone can learn or teach from anywhere.

● The major advantage is that due to the pandemic various resources that were not easily available earlier are now available on the internet. Various coursebooks are now available in the form of e-books. NCERT has launched its app which provides various resources.

● Lastly, it enhanced the digital knowledge of teachers and students.

Objectives

● To highlight the loopholes in the Education System.

● To emphasize the impact of COVID on Education and Learning.

● Measures to improve Education and Learning experience for students.

Methodology

The research has been done both on a qualitative and quantitative basis as well as primary data and secondary data have been taken into consideration.

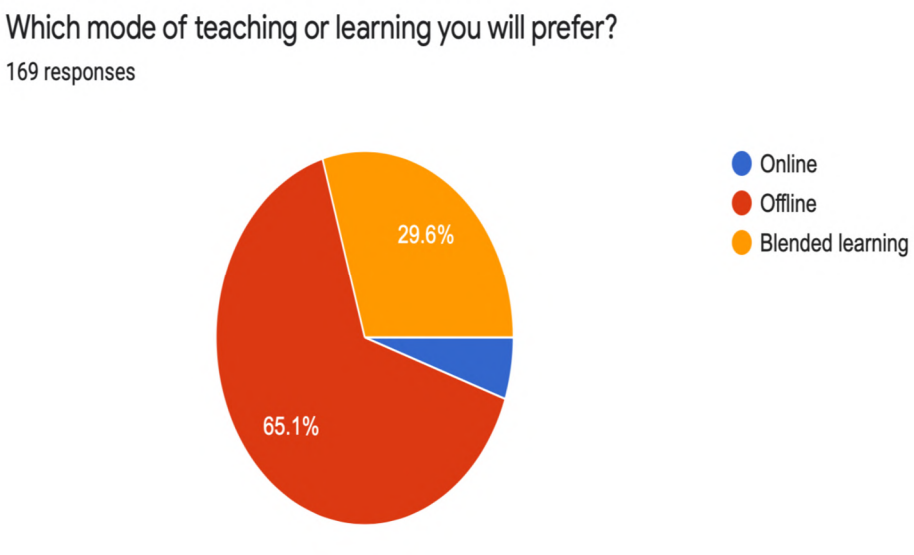
Secondary Research: Various resources have been taken into consideration to write this paper. Journals, news articles, websites, etc. Summary, collation, and synthesis of the impact of COVID on education have been taken into consideration. Studied viewpoints of several researchers, scholars, and experts in the respective area.

Primary Research: Moreover, I used the quantitative method to gather data about the opinion of various Students, Teachers, and Parents. To exactly know how they feel about this new method of Learning. This includes a survey that contains several questions related to online learning. Such as how efficient they find online learning, do they find online learning better than offline, or are they able to learn things as efficiently as they used to learn in the traditional

method. The survey has been distributed among 200 people, which include Parents, Teachers, and Students.

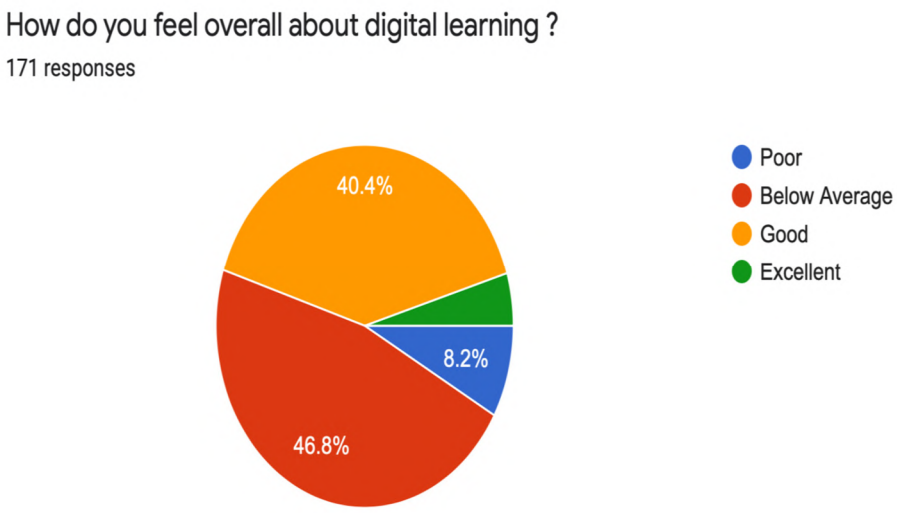
Results & Findings

● The survey results indicated strongly that children prefer Offline Education over Online and in such a long course of time, they are still not able to adapt to Digital Learning. Reasons in support of it could be lack of interaction with teachers, not friendly with technology, lack of support from institutions, etc.



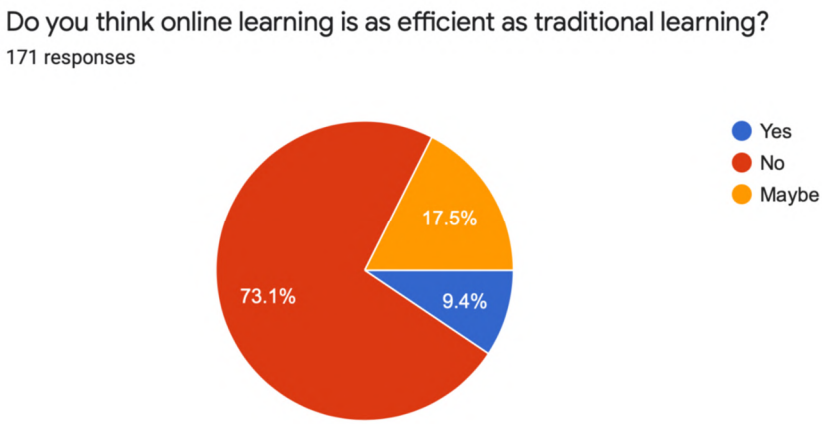
Among 200 people; more than 65 percent of people prefer Offline Education and less than 30 % prefer online learning and the rest prefer online learning.

● For many, Digital Learning is not efficient. Digital learning basically learning through technology and online resources which takes place virtually. Not everyone is satisfied with the Online mode as it is different from the traditional method. The reasons behind this could be the same as stated above. One reason could be because home is not a place where one can study peacefully and maintain balance with all other tasks. Moreover, Digital learning has made students less involved in physical activities.



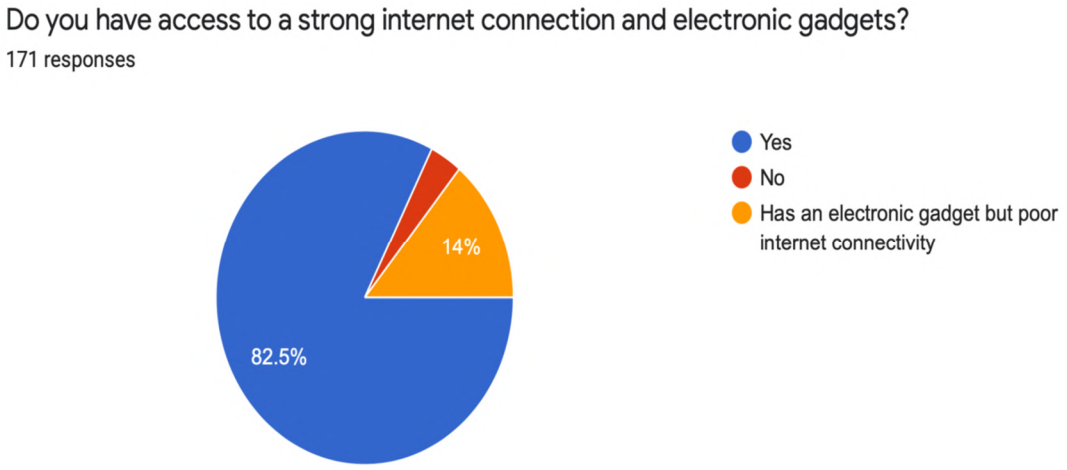
46.8 % of people find Digital Learning below average and the rest find it ok, poor and some only find it efficient.

● The majority of people are still in favour of offline learning because the way which has been followed throughout the centuries and a sudden change in the method is not easily adaptable. Online learning doesn't have a physical place and direct interaction is not as feasible as it is in offline learning which is the traditional approach where in a surrounding teacher and students interact directly and learn.



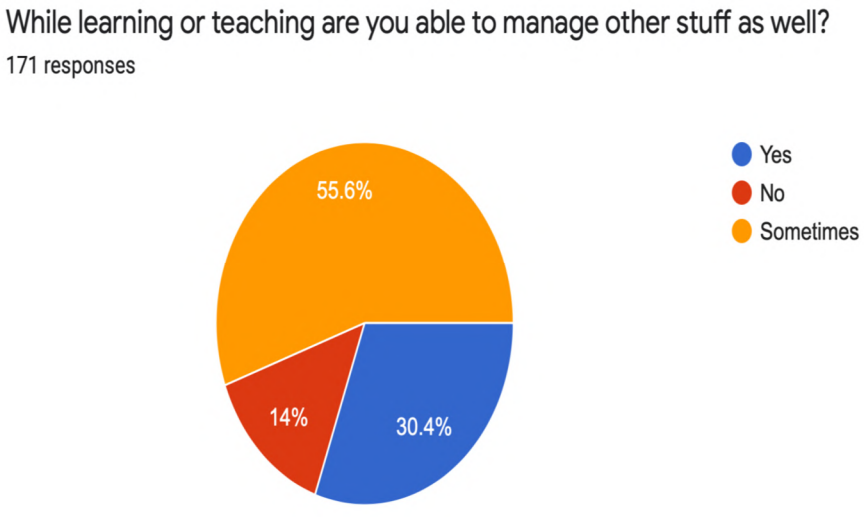
More than 70 % of people do not find online learning as efficient as offline learning.

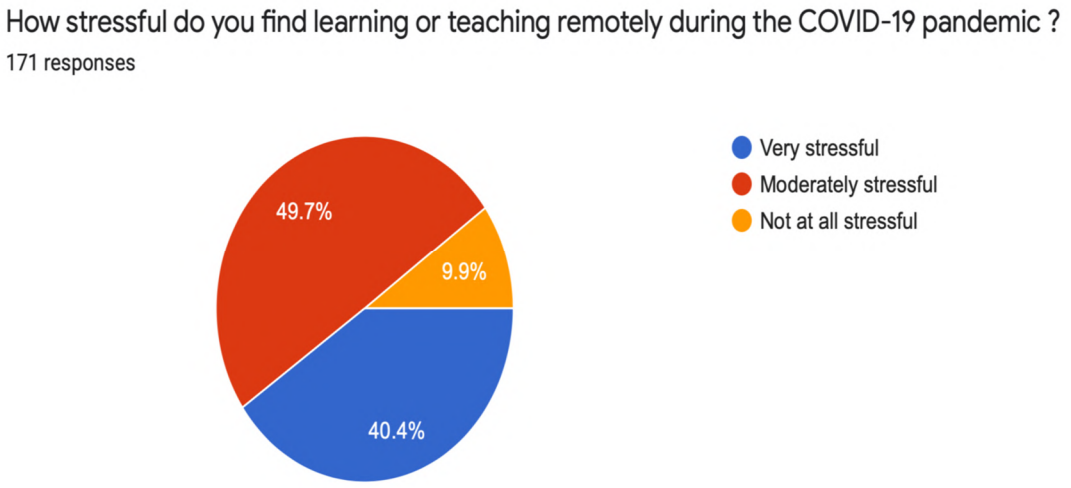
● Everyone doesn't have access to electronic gadgets and a strong internet connection. Some may have a smartphone, but stable internet is still not available to them. As India being a developing country is still lacking behind advanced infrastructure.



The Internet is a wide connection through which various operations took place on the web on a daily basis. Gadgets such as a smartphone, a desktop, and a laptop through which you can access a lot of things. Still, 14 % of people do not have a stable internet connection.

● As working from home was not very convenient for everyone. Some may find it pretty good and some not. As working from home blurred the lines between personal and professional chores. Some people were not able to manage everything and find it stressful. This goes along with children and studying through the comfort home lead to a lack of physical activity which as a result impacts health.





Stress is a feeling or an emotion which a person feels due to the pressure of coping up with something which may be uncontrollable. Through the survey, it has been identified that 40.4% of people find learning or teaching very stressful during the COVID-19 pandemic, and 9.9% of people not at all feeling stressed during the pandemic.

Conclusion

As per the findings, beyond question, COVID-19 influences the Education Sector. Institutions, Schools, and Universities got restricted to a screen. Without a doubt, technology laid a helping hand to all the sectors. If technology wouldn't be there, the academic year 2020 will be besotted and the future of youth will be at peril. But, due to technology continued education was possible and that too from the comfort of home but the question is: does Online Learning be effective?

It wasn't that effective but for the meanwhile, it was the only solution. India being a developing country was not in the position to adapt fully to online learning. Moreover, not everyone is skilled enough to access things online.

As a result of online learning, student's progress will not be the same. As changes are not adapted, they require time.

Various strategies need to be developed in order to make the education system effective. There is a lack of security in online learning management. Child safety should be the top priority and this has come up to an utmost risk.

In short, Online Learning is the path to make education available to all, but this path needs more advancements in all aspects to make it a success. More and more effectiveness and efficiency need to be employed in the existing education system in order to make it more versatile.

Suggestions

● Online Learning is the need of the hour and to achieve success in that, India needs to advance its IT Infrastructure. On the other hand schools, universities need to make their staff, students providential with the technology.

● Special policies for online learning need to be commenced by Education Boards, Government, Authorities, etc to make online learning effective.

● The government needs to introduce certain schemes to help children who are coming from economically weaker sections.

● Advanced and Economical Online Learning Management Systems should be made and promoted.

● Special workshops in order to develop the technical skills of teachers and students should be organized.

● Alterations need to be made, including terminating learning through strategies that leverage the online delivery mode, such as interactive discussions, student-led teaching, and the use of games to increase motivation and attention.

● Proper Timetable needs to be enforced by the authorities in order to make the education system more viable.

● The activities which make students mentally, socially and physically active need to be initiated via online platform.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK

A STUDY OF EMOTIONAL INTELLIGENCE AMONG URBAN YOUTH AND IT'S SIGNIFICANCE IN SUSTAINABLE DEVELPOMENT AS A PART OF EDUCATION

Prabhuta PANDEY[1]
Sakshi Kishan POPLI[2]

Education must guide students' emotional development, not only to impart skills and help them achieve their utmost potential but also to establish the foundations of a cooperative and compassionate society. Therefore, achieving the Sustainable Development Goals, implies focusing on emotional aspects as well as financial, social, environmental, and scientific objectives. Based on this context, the goal of this study is to show how emotional intelligence, which is an essential dimension in the development and management of emotional competences required to build sustainable societies, plays a key role in optimizing student's academic performance in the classroom through compassion and academic commitment.

We have studied primary and secondary data. The primary data has been collected by circulating questionnaires among 50 students from different colleges of Maharashtra. In addition to which certain interviews were also taken. Various journals, research papers and articles have been referred for secondary sources of data. Efforts were taken to inquire if the students were taught about Emotional Intelligence at primary levels of schooling which has opened up avenues for further research on the importance of Emotional Intelligence at primary levels of education.

Introduction

The United Nations Summit, held in New York in 2015, adopted the outcome document "Transforming our World: the 2030 Agenda for Sustainable Development" set out in 17 Sustainable Development Goals (SDGs) to be implemented in the period of 2016–2030. These 17 interrelated goals are designed to tackle a range of social, economic, and environmental challenges. However, these goals will not be achieved until there is a fundamental

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transformation in the actions and behaviours of the citizens, and in the way societies and economy's function, which are all heavily dependent on the role that education plays in this entire process. Accordingly, target 4.7 of SDG 4 which is based on Quality Education refers to the need to ensure that all learners acquire the knowledge and skills which are needed to promote sustainable development. The SDG 4 which deals in quality education places the human being in the centre of sustainable development and the emotional learning as a priority place.

Therefore, it urges paradigm shift in education, trying to avoid the traditional bias toward methods that only encourage the reason-cognition development, dealing with tasks detached from the reality, and from real local and global problems.

Emotional Intelligence, as a psychological theory, was developed by Peter Salovey and John Mayer in the late 90s. "Emotional intelligence is the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth - Mayer & Salovey, 1997.

Emotional Intelligence is sought to be perceived as the can be thought of as the ability to process emotional information accurately, efficiently and effectively. This processing includes the capability to perceive, assimilate, understand, and emotions. The present study aims to study the emotional intelligence and determine whether both the genders behave in the same manner in a given situation.

The ability to understand, express, manage and regulate emotions of an individual as well as others in positive way is referred to emotional intelligence. Good Level of emotional intelligence builds a character, personality and add interpersonal skills which helps to maintain personal and professional relationships judiciously. Emotional intelligence revolves around and involves five elements known as self-awareness, self-motivation, empathy, self-regulations and social skills. The paper aims at studying the level of emotional intelligence amongst youth with special reference to Urban students. Emotional intelligence is important and help us maintain healthy relationship, communicate effectively, empathize, defuse conflicts, stress and anxiety management etc.

Emotional intelligence is one the important and critical aspect of the education. It helps students acquire skills and understand themselves as well as others and influences day to day decisions.

Emotional intelligence is a skill to be taught and can be acquired through practice which can add up to the academic excellence.

It includes the skills like self-awareness, self-expression, motivation, conflict resolution, empathy etc. Students who have good EI tend to have a good check on their performance, communication, emotions and be empathetic. This helps them have better motivation, confidence, effective communication and ultimately helps in building a personality. Researchers have conducted research to understand the need for and importance of EI as a part of education.

Objectives

1. To draw the focus on introducing the concept emotional intelligence at primary levels of education

2. To identify the research work conducted about concept and application of emotional intelligence

3. To analyze the level of emotional intelligence amongst young males and females

Literature Review

Cary Cherniss (2000), "Emotional intelligence: What it is and why it matters. The paper has emphasized basically on importance of Emotional intelligence specifically in work life & then author has given various instruments to measure Emotional intelligence & competence.

Alfred C.W. Davis " Emotional intelligence:" (mentioned about the book EMOTIONAL INTELLIGENCE written by Daniel Goleman) The paper mainly focuses on the concept of two brains i.e., heart & head & balance between both. scientific approach about thinking is explained, According, to another the process of emotional intelligence includes/requires Intra-personal & inter-personal skills.

John D Mayer, David R Caruso, &Peter Salovey (2000)- "Emotional intelligence meets traditional standards for an intelligence " In this paper authors talked about three criteria for emotional intelligence conceptual, correlational, and developmental. They have explained the four- branch model in detail & further elaborated primary & secondary criteria of emotional intelligence. The factors affecting Emotional intelligence are discussed along with the explanation of survey & study conducted.

Peter Salovey & Daisy Grewal (2005) " The Science of emotional intelligence " The paper begins with the introduction of four branch model. & Further discuss the context of Emotional

intelligence which includes personality traits & behavioural traits & continued with the explanation of measuring tools of emotional intelligence.

James D. A. Parker, Donald H. Saklofske, Laura M. WoodTerri Collin, (2009) The Role of Emotional Intelligence in Education. Researchers have linked lack to EI with low earnings, unemployment, social issues etc. Emotional intelligence if taught can solve economic and social issues like health problems, unemployment etc.

John D Mayer & Peter Salovey (1993) "The intelligence of emotional intelligence " The paper explains the concept of Emotional intelligence its criticism & importance of the same with reference to the difference between emotional intelligence the general intelligence. The mechanism of emotional intelligence is explained well with different aspects.

John D Mayer (2004) "What is emotional intelligence " This research paper includes explanation of emotional intelligence with the help of four branch model further the four-branch model compared with another model. Personality traits relating to emotional intelligence is elaborated along with its importance.

Smrithi Shetty, Shiblin Girish Parakandy, Sparshadeep Eregod Manjunath (2012) “Gender preferences in emotional intelligence among first year medical students” The paper studied the emotional intelligence among students and suggested that the emotional intelligence is significantly high in females when compared to males, the reasons for the same is given to be that women are more expressive emotionally along with the scientific reasons.

Maryan Meshkat and Reza Nejati (2017),” Does emotional intelligence depends upon gender? A study on undergraduate English majors of three Iranian Universities”. The paper attempted to find the difference in emotional intelligence on the basis of gender, the researchers concluded that there is no significance difference in the level of EI but there are elements of emotional intelligence like self-awareness, regulation, empathy which differs.

Research Gap

The researchers after doing literature review found certain gap in the research in the same field. Firstly, there is a no study done which focus upon introducing the concept of emotional intelligence at primary level of education. Secondly, there is no concrete study done on the level of emotional intelligence amongst youth males and females. The researchers decided to conduct the study on the same.

Research Methodology

The researchers have collected primary and secondary data from various sources

1. Primary data- collected through survey and personal interview method wherein a Questionnaire was circulated among students and interviews of various people were taken respectively. This study has qualitative method as the study relies on data obtained by the researcher from first-hand observations, interviews, questionnaires and the data are non-numerical.

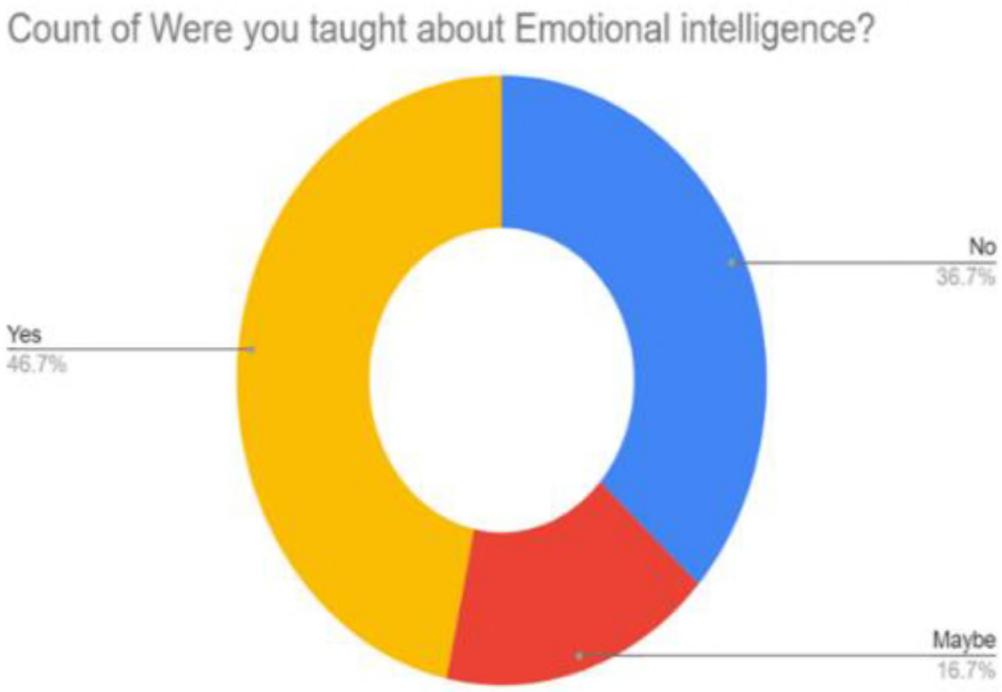
2. Secondary data- collected by studying various articles and research paper published in the field of emotional intelligence.

Sample size

We have interviewed 50 students from different colleges across Maharashtra. The population was huge, so we randomly selected 50 students at our convenience as a sample.

Data Analysis

The data has been collected by circulating questionnaires and taking interviews of various people. In order to get a clear picture various situational questions have been incorporated. The analysis of the survey has resulted a vast area for research in the field of gender and emotional intelligence.

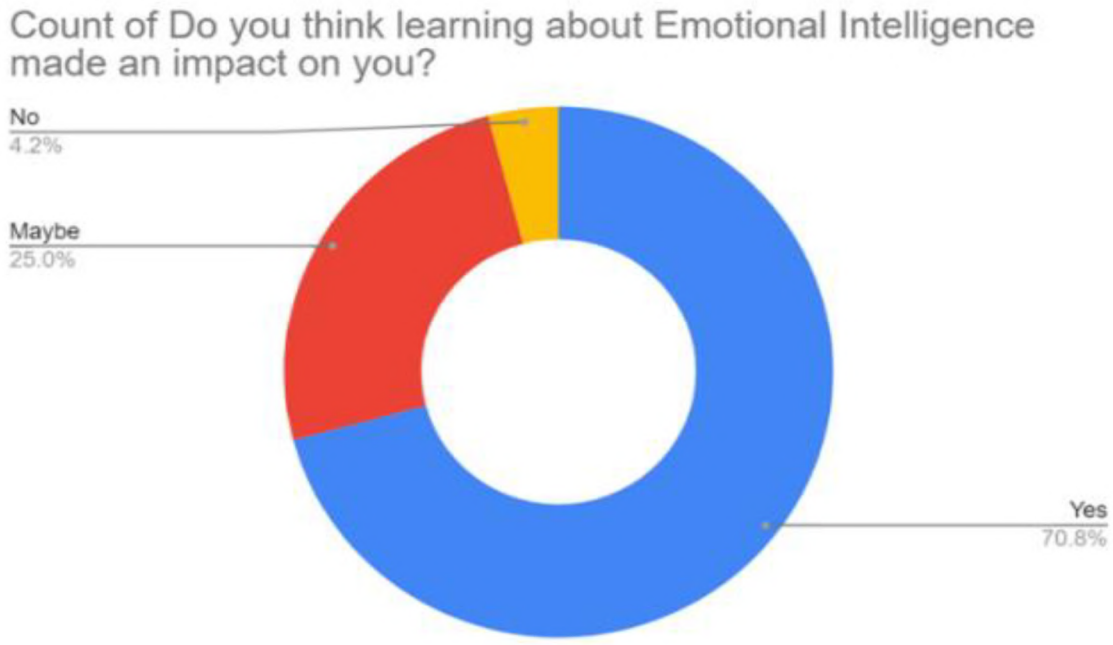


Females

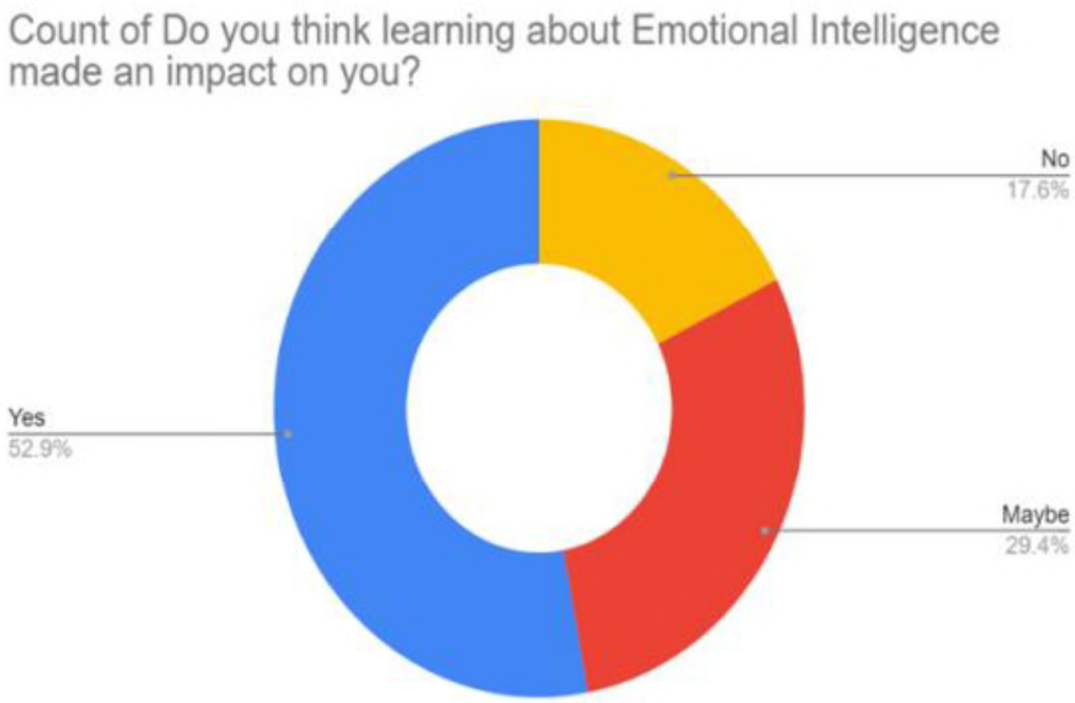


Males

About 46.7% female respondents were taught about emotional intelligence on the other hand only 23.6% of the males were taught about emotional intelligence. This would rather be an unusual trend, but our survey found that more women were aware about the concepts of emotional intelligence when compared with men.

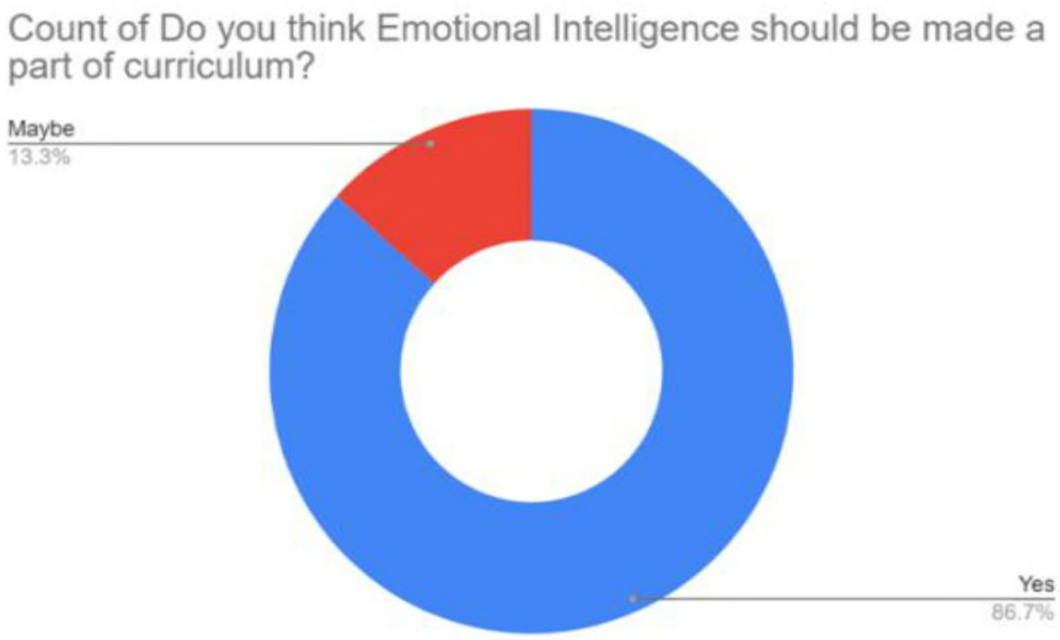


Females

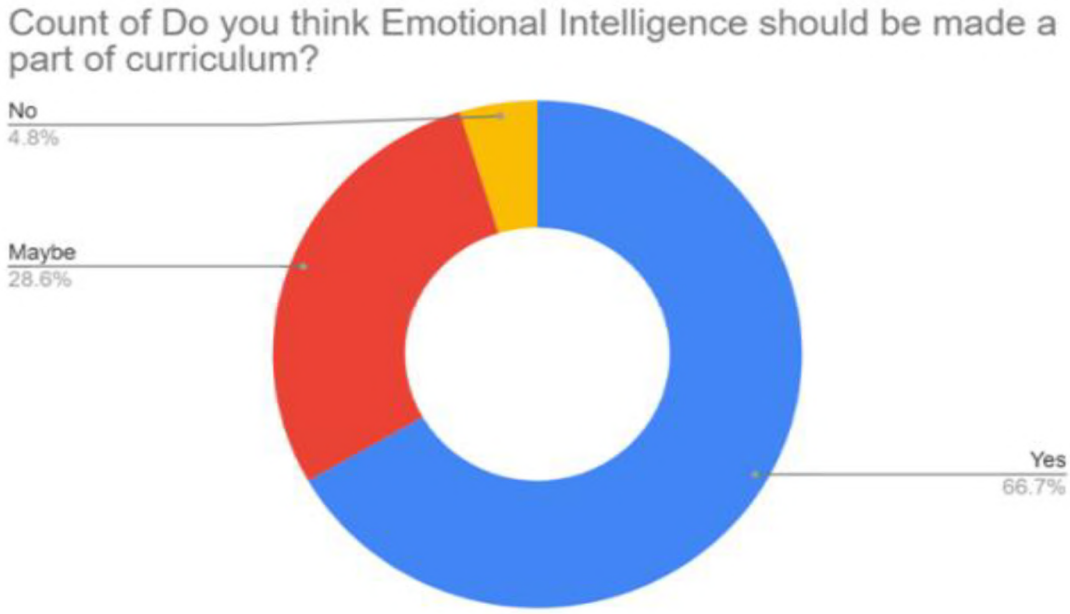


Males

70.8% female respondents think that EI had made an impact on them on the other hand 52.9% of the male respondents think that EI had made an impact on them. This clearly indicates that knowledge about emotional intelligence also teaches the significance it plays in an individual's life. Therefore, it becomes critically important to impart skills and values related to emotional intelligence among young individuals.



Females



Males

Around 86.7% of the female respondents think that EI should be a part of the curriculum when compared to the male respondents who stood at 66.7%. This highlights that awareness about emotional intelligence is significantly low even in urban areas therefore it should be

incorporated in the curriculum since the primary levels of education so that individuals become more aware about themselves and their surroundings.

same.

Observations

1. More females are eager to learn more about emotional intelligence as they had studied about it in their schools or colleges and they know it is important for personal and professional growth

2. More female when compared to males are following the aspects of Emotional intelligence.

3. Women can't give negative feedbacks to people easily

4. It is difficult for females to hear negative feedback about themselves.

5. There is a significant difference in the no of students who want to study emotional intelligence and those who have studied.

6. Emotional intelligence amongst youth is low and it plays a vital role as a part of quality education in student's personal and professional lives.

7. Quality education should ensure the concepts like emotional intelligence to see overall growth and success of education.

Conclusion

1. This is one the important but most neglected skill

2. The awareness about EI is significantly low

3. Only a few institutes teach EI at primary level of education.

As per the study conducted researchers have comprehended that emotional intelligence amongst youth is significantly lower and it plays a huge role in personal and professional lives. Emotional intelligence not being taught in schools and colleges, only a few schools and colleges have considered emotional intelligence in their curriculum and it has become one of the most neglected skills. It is important to create awareness about emotional intelligence to meet the goal of having quality education amongst youth. Education without interpersonal skills like emotional intelligence, is not complete education.

Limitations

1. The research is done on small sample

2. The sample was chosen randomly

3. The research was restricted to the Maharashtra and Urban region

4. No field specific research is done.

Further scope

1. Research can be done on large sample.

2. Research can be conducted in various region across India

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CHAPTER 5

GOAL-5: GENDER QUALITY

WOMEN EMPOWERMENT AND ECONOMIC GROWTH AND DEVELOPMENT

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Ahmad Albattat[2]
Tham Jacquline[3]

Women are an essential part of our culture, but they face challenges in obtaining their privileges and equality treatment. Women's rights to education, health, welfare, employment, expertise, decision-making authority, a decent quality of life, and fairness should be strengthened. This paper reviewed the available books, journals, conferences, and official reports, to highlight the importance of woman empowerment in economy. Using conceptual data from previous research, it's provided a clear understanding regarding certain factor that can contribute to discouragement of women contribution in economy growth and development. It is hoped that the findings of this paper can help the understanding and highlight the important of woman in economy and discussion potential solution the several issue that can discourage the woman empowerment in economy.

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Introduction

Cultural disparity is prevalent in all countries, but the question of women's liberation and gender inclusion is at the top of everyone's agendas around the world (Lee, 2021 and Olatokun, 2021). Gender inequality is much more prevalent in developing countries than in developed countries (Altuzarra, Gálvez-Gálvez, & González- 2021 and Torres, Jain, & Leka, 2021). The role of women in Malaysian society is changing. Women are now free to lead more autonomous lives and have more opportunities than in previous generations' conventional societies (Sear, 2021). This systemic opening has resulted in a temporary state of inequality in which women's job standards and socialisation patterns are still dominated by old codes of behaviour, including in fields accessible to them (Urbano, Felix, & Aparicio, 2021; Kumari & Khalidah, 2020; Kumari, Azam, & Khalidah, 2019; Kumari, Azam& Yusoff 2019; Kanapathipillai & Azam, 2019).

The increased labour-force engagement of women presents a host of obstacles. One of the most important difficulties women face is balancing employment and family roles (Collica-Cox, & Schulz, 2021; ALobaid, Gosling, McKenna, & Williams, 2021; Chen, Severt, Shin, & DiPietro, 2021; Mun, Azam & Albattat, 2021 and Shabir, Khan, & Gani, 2021). Women have begun to self-employed in order to achieve greater independence and autonomy of their job and personal lives in an attempt to improve work-life balance (Lekchiri & Eversole, 2021; Kuranga, 2021 and Ceular, Navajas & Zambrano 2021). Because of the unequal responsibility of family obligations, balancing job and family is often more daunting for women than for men (Subbarayalu, Prabaharan & Devalapalli, 2021; Fink, 2021; Moodley 2021; Aczel, Kovacs, Lippe, & Szaszi, 2021 and Baker, 2021). Women experience unequal allocation of childcare and other household duties, which becomes a significant impediment to their career development (Hawkins & Crouter, 2021; Uddin, 2021; Carreiro, 2021; Gregory & Verhoeven, 2021; Allen et. al., 2021 and Heintz, 2021).

Managing job and family becomes much more daunting for working woman and mother in conservative societies such as Malaysia, where women are forced to bear the vast burden of family treatment (Chen, 2021; Jayasingam, Lee, & Zain, 2021; Au, 2021 and Aleem, 2021). There is still a widespread misconception that work-family roles are primarily influenced by conventional gender roles (Jayasingam, Lee, & Zain, 2021), owing to the long-held belief that men are “breadwinners” and women are “housemakers.” As a result, the societal construction

of gender leaves motherhood less negotiable than fatherhood (Kricheli-Katz, 2021; Bodin, 2021; Kokot, 2021 and Singh, 2021).

Work-life balance is no longer a uniquely Western phenomenon. Though the bulk of study in this field is based on western contexts, it is also expanding to eastern cultures as a result of globalisation and has had a significant impact on organisational environments around the world (Jayasingam, Lee, & Zain, 2021; Gribben & Semple, 2021; Uddin, Ali, Khan & Ahmad, 2021 and Au, 2021). According to the previous research, the majority of work-life balance study has been undertaken at the management level in Western countries (Rashmi, Kataria, & Singh, 2021; Uddin, 2021 and Perreault & Power, 2021). There are few articles that discuss the work-life transition problems focusing only on working woman and mother, though most of the research includes surveys of both men and women (Graham, & Smith, 2021 and Dilmaghani, & Tabvuma, 2021). This paper will discuss the important of woman role in economic growth and issue that prevent and unmotivated factors that discourage the contribution of women in economy development and growth.

The Important of Women Empowerment in Economy

Women's roles have been critical in the global growth process today (Bullough, Guelich, Manolova, & Schjoedt, 2021). Women's development and development by women's have been intertwined topics in Malaysian economic development. Women played critical roles in various aspects of society throughout the last decade of the twentieth century. Women's involvement in schooling, social life, industrialization, science and technology, work, and politics has been steadily increasing in this nation (Laging, Schäfer & Lorenz, 2021; Alam, Forhad & Ismail, 2020; Allison, McCrory, & Oxnevad, 2019; Hoobler, Masterson, Nkomo & Michel, 2018and Olsen & O'Connor, 2018). Protecting women's legal rights and ensuring that their interests are understood are critical components of empowerment (Mun, Azam, & Albattat, 2021; Tanima, Brown & Dillard, 2020 and Brieger, Terjesen, Hechavarría& Welzel, 2019).

Women who are economically empowered make a greater commitment to their communities, cultures, and national economies (Hendriks, 2019). Education is an advantage that women will conveniently obtain in comparison to other opportunities that can contribute to their advancement in society and to prevent the women to dependence on men (Masadeh, M., Al-Ababneh, M., Al-Sabi, S., & Habiballah, D. M. (2019). Societies who do not invest in women must pay a price in terms of lower income and passive development (Epstein2020). Women contribution to economic growth in Malaysia was 46 percent with a minimum of 43.09 percent

in 2008 and a maximum of 51.37 percent in 2018 (Lee et. al., 2021). The latest value from 2019 is 51.33 percent. From here we can see the contribution of woman in Malaysia economy growth and development is undeniable (Lee et. al., 2021). Moreover, GDP of Malaysia would expect to be increase by 26.2% if all obstacles to the employment for Malaysian women are eliminated and their inclusion in our economy is increased (Lawal, Suleiman, Adisa & Mohammed, 2021).

Issue with Woman Empowerment in Economy

Create Work-life Balance Environment

Work-life balance (WLB) relates to an employee's ability to satisfy the overlapping demands of the two realms of life: "work sphere" and "personal domain" (health, families, societal relationships and responsibilities, mates, recreation, etc.) by reducing tensions and interferences and improving enrichment and facilitation between the domains (Hebert, 2021; Warren& Scoulas, 2021; Sallee & Lewis, 2020 and Denson & Szelényi, 2020). Balancing work and life have often been difficult for individuals employed in various sectors, especially for women, since it is difficult to do day-to-day duties at home and office work concurrently either operating from home or from the office on a daily basis. Balancing work and family obligations is also more difficult for women than for men, since women have more family obligations (Denson& Szelényi, 2020; Kelliher, Richardson & Boiarintseva, 2019; Chung, & Van der Lippe, 2018; Felstead, & Henseke, 2017). The impact of additional and growing stresses on women will be long-lasting, as they struggle to shoulder job and family commitments.

According to Moreira da Silva (2019), women and girls are responsible for 75% of all household duties. Furthermore, according to an International Labor Organization (ILO) survey, a woman spends four hours and 25 minutes per day doing domestic and care duties, opposed to one hour and 23 minutes for their male counterparts (Moreira da Silva, 2019). Because of the unequal division of labour between men and women, working women face many difficulties in balancing work and home responsibilities (Collica-Cox & Schulz, 2021). Unbalanced job and personal life, caused by unequal domestic family position representation, often poses obstacles to their career. When working women struggle to satisfy the needs of both domains adequately, it creates an inconsistency, eventually leaving some domain conditions or desires unattended; this leads to contradictions or inter-role interferences. Certain positions performed by employees can result in an uninvited and difficult-to-manage overflow and function contradictions occur when two positions are contradictory or clash with one another. (Dickson, 2020; Gupta & Srivastava, 2020 and Van, Greer & Van, 2018). This will result in a life

mismatch that would jeopardise the cohesion of an overall outlook and success for all that is faced. When one domain needs more and is neglected, it causes frustration and disappointment, which eventually leads to burnout and a lack of healthy mental and physical health. Giving equal consideration to work and non-work spheres of existence strengthen the equilibrium of employees' domains.

Family-work Conflict

Work-family conflict is a well-studied subject of organisational action (Zivnuska et. al., 2019). Job and family are also important aspects of every working persons. However, work-family conflict may occur as a result of job incompatibility. This work-family conflict will lead to a number of negative consequences, including career frustration (Brar & Sharma, 2020; Hirschle & Gondim, 2020 and Riemenschneider, Buche & Armstrong, 2019), Job satisfaction and dissatisfaction with personal and marital life (Maloni, Gligor, Cheramie& Boyd, 2019; Adhikary, 2018 and Page, Robles, Rospenda & Mazzola, 2018). Managing the job-family issue is all about maintaining the distinction between work and family roles. Since work-family tension arises if there is a spill over between work and family. As a result, there must be a distinction between job demands and family resources, as well as between family demands and work resources, in order to maintain the work-family balance (Wayne, Matthews, Crawford & Casper, 2020).

Despite the fact that the number of dual earner households has increased in recent decades, numerous surveys show that women continue to bear the brunt of childrearing and horse work in developed countries (Babar, 2019). As a result, it is reasonable to conclude that they are more impacted by school closures than their male partners (Boca, Oggero, Profeta& Rossi, 2020). Several research and media attention have shown complexities and difficulties, appears to have exposed or exaggerated underlying gender differences and divisions within families (Zhang & Bray, 2020; Hyde et. al., 2019 and Street& Dardis, 2018). Some may also point to this strange scenario as the 1950s revisiting homelife (Ferguson, 2020), reflecting a reaction in terms of social equality and power positions in the household during these circumstances. Under recent disasters, women were more inclined to cut their working hours or temporarily step away from their employment (Alon et al., 2020; Andrew et al., 2020).

Family Support

Family encouragement is described as the personal, organisational, and financial assistance obtained by working women from their loved ones or family members (Power, 2020;

Constantinidis, Lebègue, El Abboubi & Salman, 2019; Ris, Schnepp & Mahrer Imhof, 2019 and Lu, Mårtensson, Zhao & Johansson, 2019). The amount of social, organisational, and financial help a working woman receives from her partner, family members, and/or friends can decide her degree of participation in working activities and the performance of her in organization (Charles, Moore de Peralta, Rosas & Smithwick, 2021). As a working individual, one requires mental and organisational support and advice, as well as assistance from other skilled individuals. For example, in many poor and developing countries where men and women are treated differently, a shortage of access to certain facilities has been discovered, which has been due to the low participation of women in industry as workers (Phonthanukitithaworn, Ketkaew, and Naruetharadhol, 2019). Working women's access to services is limited in many nations, limiting their contribution and contribution to economic development (Rajan, Muralidharan and Ravi, 2019). As a consequence, emotional encouragement from family members is critical in encouraging women to join the labour force. Furthermore, in certain nations, women are historically less expected to play the functions of income provider (). Many Muslim nations, for example, deem women to be dishonouring their husbands by entering the labour force. According to Yusuf, Azizi, and Shuhymee (2016), a woman in Iran must obtain her husband's permission before taking on a job or starting a company. The social obstacles that women can encounter have a significant effect on the success of their projects.

Research Methodology

This paper reviewed the available books, journals, conferences, and official reports, to highlight the importance of woman empowerment in economy. Using conceptual data from previous research, it is hoped that the findings of this paper can help the understanding regarding the several issue that can discourage the woman empowerment in economy. This paper highlighted the importance of the woman role in economy growth and development, issue with woman empowerment in economy and discussion regarding the highlighted issues.

Discussion

The collaboration with woman not only in the economic development process, but also in administration. It is extremely challenging to establish an empirical metric to quantify the contribution of males and females to economic theory since both males and females participate in an unknown way (Gebre, Isoda, Amekawa & Nomura, 2021and Bunch et. al., 2020). However, the assessment of their jobs, in evaluating the employee performance base on gender never been made in the public (Ali et. al., 2020; Chirumbolo, Callea, & Urbini, 2020; Bishu &

Headley, 2020; Kumari & Khalidah, 2020; Kumari, Azam, & Khalidah, 2019; Kumari, Azam& Yusoff 2019; Kanapathipillai & Azam, 2019). The need to have the research in evaluating the contribution of gender in the various spheres of economics, example, productivity, use, spending, income allocation, saving, and so on; this form of research would then show the contribution of male and female to economic philosophy as well as their relative utility in the various spheres of economics.

Despite the fact that the number of dual earner households has increased in recent decades, numerous surveys show that women continue to bear the brunt of childrearing and household labour in developed countries (Alon, Doepke, Olmstead Rumsey, & Tertilt, 2020; Carlson, Petts, & Pepin, 2020). As a result, it may be concluded that they are more upset by school closures than their male partners. Several research (Alon et al., 2020; Andrew et al., 2020; Carlson et al., 2020) and media attention (Ascher, 2020; Miller, 2020 and Topping, 2020) on the effects of working women and working mother on families have exposed complexities and difficulties, as this extraordinary condition seems to have revealed or exaggerated existing gender differences and tensions within families. Some have also pointed to this strange situation as the 1950s revisiting homelife (Ferguson, 2020), implying a reaction in terms of gender representation and power structures in the household with working mother or working women. For working mother and working woman, they were more inclined to cut their working hours or temporarily leave their employment when it comes to choose between work and family (Alon et al., 2020; Andrew et al., 2020).

During pandemic situation as example, more mothers and working woman has cut their working hours, and those who have quit working perform twice as much parenting and domestic work from their male counterparts (Andrew et al., 2020). In addition, even if the working mother or the working women have to works at least 5 hours a day, there are no divided parenting and household responsibilities evenly in communities where the male spouse can stop working and take a rest after the working hour but not for the working mother or working women. Working mother and women are expected to perform household work after their working hour because it’s a silent compulsory rule and responsibilities’ that they need to fulfil (Craig & Churchill, 2021; Reichelt, Makovi & Sargsyan, 2021 and Collins, 2021).

In this case to create the work life balance for working mother and women are quite impossible because this silent rule and compulsory responsibilities have been practicing more than a decade (Kusha, 2020; Pérez, Ulloa & Iglesias2020; Caporrino, & Puccia, 2020 and Dee, Dizon, Aldaba, & Teng-Calleja, 2020). No male member of the family wants to help out with household chores.

It’s can be considered as a new phenomenon if the spouse and subjective norm to accept the reality to provide a space and accept the equality in sharing the household chore silent rule and compulsory responsibilities with their spouse (Ensor et. al., 2021; Taniguchi & Kaufman, 2020 and Lazar, & Sun, 2020). In this case, the role of parent to educate the male in sharing this silent rule and compulsory responsibilities is needed from the early ages (Loderup et. al., 2021; Du, Xiao & Zhao, 2021 and Kreyenfeld, & Zinn, 2021). The child regardless it’s a boy or girls need to be teach to share the responsibilities equally to ensure both of them can be more cooperative in the future toward the household work (Pakarinen, Lerkkanen, Viljaranta& von Suchodoletz, 2021; Frödén & Tellgren, 2020 and Määttä & Uusiautti, 2020).

Moreover, the acceptance of society toward these new phenomena needs to be shape by educating the new norm which woman and a mother of new generation can be entered and have the opportunity like a man in economic growth. Usually, it is uncommon for men to take on family duties and they are expected to be breadwinners for their families (Sear, 2021). Being interested with some family roles and helping their wives/counterparts is considered dishonourable and an inconvenience for males, and it sounds strange in terms of social and family position (Joseph, Alika, Genevieve & Thobejane, 2021; Hughes, 2021 and Mtenje, 2021). The importance of women in the workforce should be emphasised further in order to foster recognition and normalisation of subjective norms against the existing understanding and expectation of women's roles in society. Their positions and obligations must be emphasised as one of the contributions to economic prosperity on par with men. Through sharing household roles, it will provide emotional help and inspire the family of a working mother and woman. Aside from good moral encouragement, individuals near to the working mother and women in the family are still needed to ensure they will continue to contribute to the economy's development and family.

Conclusion

Gender equality especially in economic contribution can become a sensitive issue when it’s come to the perception and acceptance of the culture and the subjective norm. Women's achievement in sustainability objectives such as sustainable growth, poverty reduction, wellness, schooling, and healthcare should be apricate in developing the positivism acceptance toward their role in economy growth and development. The acceptance toward the role and contribution of woman in working area need to be highlighted and appreciated by the society.

The need to understanding the sharing responsibilities in household should be educate in the early stage to create the understanding citizen toward the role and responsibilities on working woman and mother. Besides that, the role of subjective norm in accepting the new norm toward the role of woman should be encouraged to ensure it can create the positive support value toward the working mother and woman in today's world.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
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A STUDY ON THE GENDER EQUALITY AND WOMEN EMPOWERMENT IN INDIA

Ms. Tanu[1]

Gender equality between women and men refers to the equal rights, responsibilities and opportunities for women and men and girls and boys. Gender equality is a human right which entitles all persons irrespective of their gender to live with dignity and with freedom. Gender equality is also a precondition for all round development and reducing poverty. The ultimate goal in gender equality is to ensure that women and men have equitable access to, and benefit from society's resources, opportunities and rewards. And, as part of this, women need to have equal participation in defining what is valued and how this can be achieved. Equity is a means. Equality is the result. Keeping the status of women empowerment and its determinants in India, in this paper an attempt is made to present some of the key determinants of inequalities that exist in our country so as to have an idea about to what extent the women are empowered.

Introduction

Gender equality will be achieved only when women and men enjoy the same rights, opportunities and obligations in all spheres of life. Everyone is affected by gender inequality – women, men and transgender diverse people, children and families. It impacts people of all ages and backgrounds.

We need gender equality urgently. Gender equality prevents violence against women and girls. It is essential for economic prosperity. Societies that value women and men as equal are safer and healthier. Gender equality is a human right. Everyone benefits from gender equality. Gender equality demands the empowerment of women, with a focus on identifying and redressing power imbalances and giving women more autonomy to manage their own lives. Women empowerment in India is heavily dependent on many different variables that include education status, social status and age. The scope and coverage of the schemes launched has

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been expanding that include initiatives for economic and social empowerment of women and for securing gender equality. The following schemes at present are aiming at women empowerment and gender equality in India:

1. Support to Training and Employment Programme for Women (STEP)

2. Short Stay Homes

3. Swadhar

4. Ujjawala (2007)

5. Dhanalakshmi (2008)

6. Integrated Child Development Services (ICDS) (1975)

7. National Mission Kosh (1993)

In spite of the effective implementation of all the above schemes and programmes, there are significant gaps between policy achievements and actual practice at the community level. The Global Gender Gap Index (2016) observed that India is simply not doing enough for its women.

Objectives of the Research Paper

- To know the Gender Equality and Share of women in economic participation and opportunity
- To understand the level of equality among girls and boys in primary secondary and higher education.
- To Identify the Gender Equality and Women accessibility to resources.
- To examine the Gender Equality and Women Empowerment in Political Field.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
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ROLE OF GENDER EQUALITY

Aashima DUGGAL[1]

Abstract

To get a sense of the role that gender equality plays in the process of development and growth, diverse literature is reviewed from microeconomics and macroeconomics and developing and developed country perspective. Some global stylized facts are reported and both empirical and theoretical results are surveyed. Women's roles are found to be in a process of a global change. These changes may stem from changes in technology as the industrialization has made the extensive home-based production obsolete and reduced the demand for children as an input for this production.

Instead of the gendered specialization in autarkic households, the modern specialization in the marketplace may have led to lower fertility and the changing roles of women in the economies.

Adjustment to these changes poses challenges globally as the old hierarchical gender valuations still appear in many different disguises. Overall, the literature gives hints as to what the issues in gender inequality are that seem to be associated with the overall level of economic development: values and religion, cultural restrictions and roles, legal and inheritance laws and practices, the marital pattern of resource allocation, monogamy vs. polygyny, labour market access, education, fertility, gender specific market failures in finance, power in the political decision making.

Introduction

How might gender equality affect growth and development? Typically, women have globally less economic opportunities to improve their lives. They are often restricted in terms of education, the ownership of wealth, monetary return for their work, financial opportunities, and opportunities to influence the decision making at the level of the family and the society.

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Much less attention is paid to men's issues. Jacobsen (2002) points out the importance for development of addressing the specific disadvantages that men face. Much like in women's case there are global problem areas for men, in both developing and developed countries.

At the level of macroeconomics, it has been quite difficult to show effects of the status of women on aggregate growth for econometric reasons among others. However, there is more microeconomics literature that might help in understanding how the economic development and growth might be affected by direct or indirect restrictions or exclusion that women have adjusted to.

Standard economic theories e.g., in public choice or welfare economics do not focus on individual characteristics. The individual actor in welfare economics could equally well be a world citizen, a country national, a man or a woman. As a consequence, these theories can be of limited help to policymakers, who are often particularly concerned about the effects of income redistribution on different groups of people, like mothers, single households, families, etc.

Welfare economist, public choice economist or labour economist does empirical work, he or she is forced to consider gender as women's behaviour differs from that of men to the extent that a single explanatory model is clearly often not applicable.

Historical Perspective

When we are talking about women's relatively lower status today, it is useful to remind ourselves of how today's world looks like from the historical perspective. Lagerlöf (2003) suggests that the reason why the economic development spurted in Europe had to do with changes in gender equality over the past 2000 years. These changes were possibly initiated by the spread of Christianity. As opposed to the Greco-Roman world, the early Christians improved the status of widows allowing them to keep her husband's estate and extended women's rights to inherit and hold property. Christian women also got married later.

Towards 1000 A.D. the Roman Catholic Church in Europe took an increasingly negative and ambivalent stance towards women. Evil was seen to come to the world through women, women's sexuality was seen as impure and priests were required to leave their wives and stay celibate. The church had already been establishing its hierarchical structures long ago and along with-it women's role got more restricted than in the initial centuries after the birth of Christianity. Reformation did not free women either and consequently some of the traditions from those times still carry on even to the church of today (see Tucker and Leland, 1987).

However, the rise of Protestantism may have indirectly been a crucial catalyst for gender equality: Everyone was expected to read the Bible themselves, which led to increased instruction and literacy for girls as well as boys (see Lagerlöf, 2003, for references). This built the basis for women's education and literacy.

Indeed, we need to go back in time less than a hundred years to find that women still did not have the right to vote anywhere in the now developed world. In the US, the struggle for women's suffrage started in the mid 1800's by Susan B. Anthony and several other women1 who joined forces with black men – the latter gaining the right to vote before the white women, who achieved their goal only in 1920. The first country in the world to introduce universal suffrage was Finland in the 1906 Parliament Act.

. Before the modern production technology households were practically self-sufficient entities where the family patriarch ruled over the servants, the children and the wife. In these autarkic household economies children served as a valuable input to production. For these 'technological' reason's fertility was high and under the scarcity – along the lines of Becker – women specialized in the childbearing and in the production activities at home where the children and the female production activities could be taken care of simultaneously. Men specialized in the jobs that needed to be taken care of outside the home. The industrial revolution was the beginning of a complete change in the autarkic and patriarchal household economy. Much of the domestic production became obsolete as many items could be more efficiently produced in the specialized marketplace. As this development progressed, children lost their value as direct inputs to production, fertility was lower, and women lost much of their jobs at home. Children became consumption goods instead of production goods. They served e.g., the emotional needs, rather than production needs. This changed the role of women. Specialization within the autarkic household economy became specialization at the marketplace, and the former gendered nature of specialization was no longer natural or necessary. There was a need for women's roles in the economy to change.

Ability to make economic choices requires often earnings and resource ownership. Going forward in time towards the present decades, the feminists of our time have forcefully pursued employment for women. As a consequence, women moved from payless care of children and elderly to do mostly the same work at the marketplace or for the government. The care work is still today largely women's territory. In a modern welfare state gender hierarchy can be seen e.g., in the gendered segregation of the labour market combined with the fact that the female sectors of the economy are generally less paid and less valued.

Macro Level Literature

Growth and status of women

The role and status of women around the world is very closely tied to fertility rates and ultimately, population growth trends. Universal education and gender equity are both very important topics to consider when discussing the link between fertility trends and women.

A Tradition of Discrimination

Progress toward gender equity is hampered by long-held traditions that define women's roles narrowly as child bearers and unpaid workers in the home and fields. This is especially true in many of the less developed countries, where the cycle of discrimination against women begins with the treatment of girls. Some societies limit girls' access to formal education, thereby limiting future employment and economic freedom. Girls' education often ends with an early marriage.

The Importance of an Education

Investments in women's education have proven especially effective at lowering fertility rates, since better educated women tend to marry later and have fewer, healthier children. Studies on every continent show that as literacy rates rise, especially those of women, income levels, nutrition levels, and child survival rates rise as well. A study using data from 219 countries from 1970 to 2009 found that, for everyone additional year of education for women of reproductive age, child mortality decreased by 9.5 per cent.

Participation in the Economy

When more women work, economies grow. Increasing women and girls' education contributes to higher economic growth. But today, women still earn substantially less than men and bear a disproportionate responsibility for unpaid care work. When paid and unpaid work are combined, women in developing countries work more than men, with less time for education, leisure, political participation and self-care. Women make a significant contribution to agricultural work worldwide, yet fewer than 20 percent of landowners are women. This jeopardizes their long-term economic security.

Government Participation

Women have historically had fewer opportunities in the policy-making bodies, and change has been slow. In 2020, women comprise just one-fourth of legislators worldwide and only 7 percent of heads of state. Some countries have only recently granted women the right to vote,

including Saudi Arabia (2015) and the United Arab Emirates (2006). When women have greater participation in policymaking, they can more effectively advocate for policies that advance women's status and child health, both essential for healthy, sustainable societies.

Conclusion

What can be said about the role of gender equality in development based on this survey to various fields of study? First, the current situation in many developing countries is strikingly similar to that of Western Europe roughly a hundred years ago. The development issues of today's developing countries are the same that the now developed countries solved over the past century or two: education for girls, women's political, legal and marital rights, outside the home employment for women and men alike, lower fertility and reduced child mortality. It can be argued that the immediate push for greater gender equality in the developed countries came through the technological changes that moved the production from autarkic households to the marketplace. These changes led to a change in the specialization, the function of children and the role of women. Children were no longer needed for production purposes at home nor were women. The organization of household economies, where women specialized in the home production along with childbearing and rearing, became obsolete as more and more of the needed goods were produced outside the home. The economic pressure to have many children disappeared. Instead of production purposes children started to serve consumption purposes. There was a growing need for a change in the role of women in the economy. The required adjustment to these changes has not been quick or easy. It required a profound change in the old patriarchal world where the roles of men and women were distinctly different - women's identity and roles centred on the childbearing (see Miles, 2006, for the development of these 36 arguments). Much of these challenges still lie ahead in many developing countries and the process is not finished in the developed world either. As this paper reviews mostly the current day economics literature, it portrays the issues seen relevant today. The literature illustrates how the hierarchical (or patriarchal) gender valuations appear in very many different disguises. Overall, the literature gives hints as to what are the issues in gender inequality that seems to be associated with the overall level of economic development: values and religion, cultural restrictions, legal and inheritance laws and practices, the marital pattern of resource allocation, monogamy vs. polygyny, labour market access, education, fertility, gender specific market failures in finance, power in the political decision making. The challenge in the future is to look at the issues from men's perspective as well. How is the gender inequality adversely affecting

men? What are the disadvantages and cultural and economic restrictions that men face? Those restrictions will be different from the ones women face but they may be even more severe in their ways. These restrictions and assumptions about men's roles are being questioned only recently in some societies. There can hardly be a road to real gender equality unless that road is leading to increased well-being for both men and women. From the policy point of view, it would be important to know to what extent progress is hindered by the societal and economic structures that could be changed by political decisions and to what extent the issue is in the more fundamental valuations and preferences of both genders. From the reviewed literature, it seems apparent that both matters. It further appears that the values are not exogenous to the economic aspects of life. Establishing economic structures and incentives that encourage equality are likely to affect values and customs and visa versa – both working for economic development and growth. It is evident that the causality runs also from economic development to greater gender equality as the economic constraint become less binding: it becomes possible e.g., to send both boys and girls to school.

TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK

GENDER EQUALITY AND SUSTAINABLE DEVELOPMENT

Briksha[1]

Gender equality is when people of all genders have equal rights, responsibilities and opportunities. Everyone is impacted by gender inequality - women, men, trans and gender diverse people, children and families. It impacts people of all ages and backgrounds. Gender equality is a human right. Everyone benefits from gender equality. Girls and boys see gender inequality of their homes and groups every day – in textbooks, in the media and among the adults who care for them. Dad and mom may assume unequal obligation for household work, with mothers bearing the brunt of caregiving and household chores. The majority of low-skilled and underpaid community health workers who attend to children also are girls, with confined opportunity for expert boom. And in schools, many women receive much less help than boys to pursue the research they select. This occurs for a selection of motives: The safety, hygiene and sanitation desires of women may be left out, barring them from frequently attending class. Discriminatory teaching practices and schooling substances also produce gender gaps in studying and ability development. As a result, almost 1 in 4 girls between a long time of 15 and 19 are neither hired nor in education or schooling – as compared to at least one in 10 boys.

On an international scale, achieving gender equality also calls for putting off dangerous practices in opposition to ladies and girls, which includes intercourse trafficking, sexual abuse wartime sexual violence, gender wage gap, and other oppression tactics.

Reasons for Gender Inequality

There are many reasons for gender inequality. Some of them are:

1. Uneven access to education

2. Lack of political representation

3. Racism

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4. Lack of employment opportunities

5. Job segregation

6. Poor medical care

7. Lack of religious freedom

8. Lack of bodily autonomy

9. Social mindset

Women's do not get even access to education due to which many girls don't able to complete their primary education resulting in less opportunities available to them. Even if women become educated there is discrimination in job segregation. It is believed that some certain jobs are well handled by men which resist open entry to open in jobs.

In politics also, we find more male leaders. However, to change the scenario some seats now are being reserved for women but still don't get the position they acquire for. Of all national parliaments at the beginning of 2019, only 24.3% of seats were filled by women This means certain issues like parental leave, childcare, gender equality, pensions and gender based are always neglected.

Racism is the most prominent factor of gender inequality. People tend to pay salaries to women according to their skin colour. Even during marriages, broom side always wanted a fair colour girl side-lining all her talents.

After marriage, many women lose autonomy on their bodies. Many of them didn't want to get pregnant but are forced to get. On a global scale, about 40% of pregnancies are not planned and while 50% of them do end in abortion, 38% result in births. These mothers often become financially dependent on another person, losing their freedom. It's not only differences in men and women but transgenders are highly affected by this. Transgender people regularly face transphobic harassment. Ultimately, one of the largest reasons that transgender people face inequality is due to a lack of public understanding of transgender people.

Consequences of Gender Inequality in Society

Violence

Violence, privilege, injustice and impunity are in detail connected. Violent behaviour is commonly appeared to be an imperative part of male behaviour and as a everyday feature of being a person. Violence is, in truth, culturally 'masculinised.' Gender-based violence is related

to systems and emotions of strength – the oppression of ladies and certain organizations of guys. Gender inequality perpetuates a subculture of violence. While girls are viewed as something much less, as individuals subjected to male authority, guys experience much less hesitation in the use of and degrading ladies for their very own pleasure as their satisfaction is deemed to be of extra significance.

Why equality is important and what change it can bring?

Equality is vital in any society or the world at large. When there's inequality, it would be difficult for a nation to progress. Equality means allowing every individual to realize and utilize their full potentials. It means allowing people to use their talents and live life to the fullest. Every individual must be treated with equal respect and allowed to do whatever they want. They should have the free will to speak and associate with anyone.

However, equality does not mean breaking the law. When there are rules and regulations in a society, the subjects need to obey them. Unluckily, culturally dominant norms of masculinity that inspire men to use violence restrict no longer most effective guys however also women's and women' alternatives, safety and behaviour.

In more equal countries, human beings are generally happier and healthier, there is less crime, more creativity and higher educational attainment. Equality breeds confidence, productivity and makes people more sociable. It also leads to economic progress.

For any society to progress economically, socially, educationally, technologically and health-wise, it must create room for equality to thrive. The quest to achieve an equal society should not be the government's fight alone. Citizens also need to play their part in ensuring that effort to create an equal society is encouraged.

Sustainable improvement encourages us to think about the way to enhance economies and societies without compromising the natural surroundings or ability of future generations to meet their needs. For any development attempt to be sustainable and effective, it must don't forget the rights of everyone, which includes those that don't normally have a voice in decision making. That is why gender equality is a crucial element in reaching sustainable development. It is far essential that we maintain to engage men and boys actively within the combat in opposition to gender-based totally discrimination and violence.

The consequences of not providing girls with same voices, choices, and possibilities affect not simply their lives, however the future of the planet. If we care about development, we must care approximately the effects our greenhouse-gasoline emissions are having around the arena. And

if we do now not take instant action, we are able to totally damage the natural structures on which life depends.

Ladies are amongst the ones maximum vulnerable to the effects of unsustainable practices and weather alternate, because they often have no independent earnings or land rights. In many nations, girls are responsible for the provision of water and meals for his or her households. And when the same old assets of these sources are disrupted, girls are compelled to travel farther and spend extra time operating for less return. Scarcity requires them to make tough picks like pulling children out of school or identifying which member of the family can afford to skip a meal. In many houses around the arena, ladies are at the coronary heart of the family's nexus of water, meals, and strength – and hence frequently understand first-hand situations and the problems. Women are the most convincing advocates for the solutions that they need, so they should be at the forefront of decision-making on sustainable development and climate-change mitigation

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A NEUROCOGNITIVE PERSPECTIVE ON TRANSGENDER'S MENTAL HEALTH

Ishita GOYAL[1]

The psychological distress caused by identifying with the sex opposite to the one assigned at birth is called as gender dysphoria. Although progress has been made to identify the needs and problems related to mental health of transgender people, they still face discrimination and other socio-cultural problems which harm their mental health. This review examines the mental health problems of trans people, compares it to cisgender people, examine the socio-environmental and individual risk factors which harm their mental and physical health and the neurobiological studies done to give them optimal care that they urgently need. Anxiety and depression are common mental disorders experienced during the transition and after, autistic traits have also been identified in some trans people, long with a high rate of suicidality and self-harm behaviours. Social acceptance, and post transition physical attractiveness also plays a major role. Neurobiological studies need more corroborative evidence to come to definite conclusions.

Introduction

When a person identifies with a sex different than the one assigned to them at birth, often a severe dysphoria is evoked, one especially exacerbated by the legal, social, family and relationship consequences. One of the prominent factors is also the social stigma faced by them in India. This leads to a variety of mental health problems, along with the diagnosis of Gender Dysphoria (DSM 5, 2013). To facilitate conversion or transition, Cross-Sex Hormone Treatment (CSHT) and gender-affirming surgery is used. According to Coleman and his colleagues (2012) it is a highly interdisciplinary field with a variety of health professionals, including endocrinologists, gynaecologists, urologists, surgeons, voice and communication specialists and therapists, dermatologists, and various providers of mental health services (psychiatrists, clinical psychologists, counsellors, etc.). Previously thought of as a mental

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condition, the terminology used has also been evolving to de-pathologize it in the recent years. The currently preferred terms are “transgender persons” or “trans persons”. The terms ‘cisgender persons” or “cis persons” is used to describe people who identify with the sex assigned at birth. The United Nation’s Sustainable Development Goal number 5 is focused on Gender Equality. Along with equality for women, we also must focus on the third gender, its upliftment, end of discrimination, access to proper care and health, including mental health. Transgenders in India face a variety of problem including assessment challenges, diagnostic challenges, refills, social stigma and harassment. However, according to Srinivasan & Chandrasekaran (2020), hope is there as the country is developing services to support their care and provide them the best care. The review is aimed at contributing to gender equality and reviewing the challenges faced in their lived experiences and in neurobiological studies, so that together we can devise implementations to help this community become equal.

A factor which hinders reliable research in this population is the sample bias which affects the true prevalence rates. These difficulties start with inclusion criteria, that is, has the person undergone surgery, is receiving CSHT, or been diagnosed gender dysphoria. There are also cases where they go unrecognised since some gender variant individuals do not experience dysphoria and hence never meet a psychologist. To counteract these limitations, researches have started exploring meta-analytic methods. Arcelus, Bouman, Van Den Noortgate, Claes, Witcomb & Fernandez-Aranda (2015) used meta-analysis and reported that the prevalence of transgender persons is around 4.6 per 100,000, with the prevalence being 6.8 for transgender women and 2.6 for transgender men. Apart from this, the prevalence of gender dysphoria has also been increasing in the past two decades. People are having more freedom to disclose their dysphoria, seek help due to the trans-affirmative approach or the part of psychologists and social activists.

Mental Health

Numerous cross-sectional transgender studies have focused on the psychological and psychiatric problems the people deal with. According to Heylens, Elaut, Kreukels, Paap, Cerwenka, Richter-Appelt, Cohen-Kettenis, Haraldsen, & De Cuypere (2014), 38% of transgender people, suffering from gender identity disorder, also experienced affective (27%) and anxiety disorders (17%). A lifetime prevalence of substance use disorders (16%), eating disorders (2%) and psychotic disorders (1%) was also seen. In a Swedish cohort study conducted by Dhejne, Lichtenstein, Boman, Johansson, Långström, & Landén (2011), transgender people were matched with cis gender people on various factors, and still reported

higher psychological problems. Although almost all studies report the worsening mental health of transgenders, we see a lot more inconsistencies in literature regarding sex specificity. Some studies report that trans women experience higher prevalence's of psychopathology than transmen (Claes, Bouman, Witcomb, Thurston, Fernandez-Aranda & Arcelus, 2015), another study reported the reverse (Haraldsen & Dahl, 2000). Apart from the above-mentioned disorders, attention has also been given to autistic spectrum disorders present in transgenders persons. Studies have shown a higher rate of parallel autistic traits in trans gender persons with gender dysphoria as compared to cisgender population in British adults and Dutch children (de Vries, Cohen-Kettenis, van Berckelaer-Onnes, & Doreleijers, 2010). The same study reported that transmen had higher autism quotient scores than cisgender people, but lower scores than patients with Asperger's Syndrome. The data strongly suggests that autistic traits are dependent on sexual orientation or sex.

Even though trans people do have a lower mental health than cis people, studies have reported a positive change in mental health associated with successful transition to identified gender. A longitudinal study by Colizzi, Costa, & Todarello (2014) documented that post two months of CSHT, transgender persons experienced a reduction in their symptoms of anxiety, depression, global severity and functional impairment. Another study by Fisher, Castellini, Ristori, Casale, Cassioli, Sensi, Fanni, Amato, Bettini, Mosconi. Dèttore, Ricca, & Maggi (2016) cross-sectionally and longitudinally analysed the effect of CSHT on mental health. Correctionally, they found that CSHT, increased depressive symptoms in trans men and not trans women as compared to trans people not receiving the treatment. In the longitudinal study, with the follow up of 3, 6, 12 and 24 months, CSHT had a positive association with psychopathology, depression, gender dysphoria and body uneasiness in both the genders.

Apart from psychopathology, a concerning factor remains the risk of suicidality in this population. Suicidality includes suicidal thoughts, suicide attempts, and non-suicidal injury like self-harm. These behaviours may reflect a maladaptive way to regulate one's emotion, or self-punishment in response to external or internal pressure and social stigma.

A surge in studies assessing the suicidality in trans people has emerged due to the high -risk behaviours and potential harm to self and others. The statistics show that the rates of lifetime time suicidality are in an alarming range of 30% to 81 % (Clements-Nolle, Marx, & Katz, 2006). The rates for non-suicidal injury are at an estimated 38% for the total population pre transition, with trans men more at risk than trans women. Suicidality and self-harm are prominent across the transgender lifespans as results from paediatric population suggest that children and

adolescents with gender dysphoria experience elevated reports of self-harm (Holt, Skagerberg & Dunsford, 2016.)

Post transition, suicidality and self -harm lessens, but it is still a cause for concern. Retrospective data on 1,331 trans persons who visited a university gender clinic, with a median follow-up of 18.5 years, indicated high mortality rates among trans women, with a total mortality of 51% above the general population average (Asscheman, Giltay, Megens, de Ronde, van Trotsenburg & Gooren, 2011).

Apart from physiological causes of death like heart and lung problems, neoplasm, HIV/AIDS, suicide was the most common reason (17 transwomen relative to one trans man). These results were seen in a Swedish cohort study by Dhejne, Lichtenstein, Boman, Johansson, Långström, & Landen (2011), who reported an incidence of 2.7 per 1000 person-years for death by suicide and 7.9 for suicide attempt. In U.S, the National Transgender Discrimination Survey, conducted by Hass and his colleagues (2011), reported an extremely high prevalence of 41% for suicide attempts among trans persons, which is more than double reported by the LGB (lesbian, gay, bisexual) community. This mandates that even post transition, trans persons should be presented at clinic and monitored longitudinally. Since ‘trans’ is now being treated as an identity, rather than a disorder, the clinician’s focus has

shifted on the interrelated psychological problems. It is recommended that mental health care providers and even social workers become familiar with the criteria of diagnosis, the complications which result, the socio-cultural factors, treatment process and post transition care. It is recommended that therapists specialise primarily in LGBT community due to the nature of the issues.

Socio-Environmental and Individual Factors

Trans persons are also affected by the social, legal, vocational and environmental factors of their surroundings. According to the European Union LGBT survey (2014), the life satisfaction among trans persons was similar to the general population, however, it was lower than that of non-trans people of the LGB community. Several instances of social problems faced by trans people like stigma, harassment and violence and maltreatment in both personal and professional lives were reported too. Within just a short period of 12 months, 46% of trans persons reported having been harassed or discriminated against at their workplace. These factors play a major role in contributing to their mental health problems and suicidality. A study by Liu, R. T., & Mustanski (2012) showed that LGBT victimisation and low social support had a strong

association to suicidal ideation while self-harm had a strong association to gender nonconformity and hopelessness.

Mental health of trans persons is also associated with individual factors like sexual orientation and physical appearance. Smith, van Goozen, Kuiper & Cohen-Kettenis (2005) gathered data from 187 trans persons post gender-affirming surgery and examined the role of sexual orientation on personality variables, physical appearance, onset of gender dysphoria (documented gender identity disorder), and psychopathology. Participant's physical appearance (facial hair, height, figure, nose, muscularity, speech, etc.) was rated in terms of how compatible this appearance was with the new (preferred) sex. These ratings showed that androphilic trans men compared with gynephilic trans women had a higher matching physical appearance. Moreover, androphilic trans women and gynephilic trans men, compared with gynephilic trans women and androphilic trans men, reported more gender identity disorder symptoms in childhood. Similarly, trans men also reported more gender identity disorder symptoms at early ages relative to trans women and applied for transition at an earlier age. These results may point to different underlying factors and motivations. Smith et al. suggest that whereas androphilic transwomen may have a strong aversion to their sex organs, motivating earlier transition gynephilic transwomen to have grown up as masculine boys and may also have entered marriage and fathered children, thus leading to later transition. Similarly, androphilic trans men reported more psychological problems than gynephilic trans men, suggesting that a combination of sexual attraction to a specific gender, physical appearance, and societal expectations may exert different effects on individuals with different sexual orientations or different age at onset of gender dysphoria (Nieder, Herff, Cerwenka, Preuss, Cohen-Kettenis, De Cuypere, Haraldsen & Richter-Appelt, 2011).

The results are ambiguous, however, Fisher et al. (2016) found that even when subjective gender dysphoria, depressive symptoms and psychopathology decreased with CSHT, the socio-legal factors increased especially for trans men. A need exists for more converging evidence, before definitive conclusions can be made. Along with the above mentioned social and environmental factors, recent work has examined the underlying neurobiology in transgender persons.

Structural Neuroanatomy and Resting State Activity

Numerous studies have been conducted but no clear neurobiological markers of being a trans person have been identified. The studies have used functional MRI (fMRI) and structural MRI to hunt for a neurobiological etiology in trans people. Most of them have examined whether the brains of trans people resemble the brains of those with sex assigned to birth, those of their gender identity, or are intermediate to either. The studies have reported mixed finding and are usually focused on the pre-treatment phase of transition. These studies have also been affected by various other factors like different regions of interest, as well as statistical power issues, with sample sizes ranging from single case studies to around 24 participants per group, with slightly higher samples for cisgender control groups (Smith, Junger, Derntl, & Habel, 2015).

Studies conducted on hormonally untreated trans person revealed that the gray matter volume (Luders, Sánchez, Gaser, Toga, Narr, Hamilton, & Vilain, 2009; Savic, & Arver, 2011) and the total brain volume (Savic, & Arver, 2011) were similar to trans persons relative to their sex assigned at birth. Other regions like the corpus callosum do not show any difference in trans persons before (Emory, Williams, Cole, Amparo & Meyer,1991) or after CSHT (Mueller, Landré, Wierckx & T'Sjoen, 2017). The shape of the corpus callosum is however, consistent with their gender identity (Yokota, Kawamura, & Kameya, 2005). Subcortical regions like putamen volume is larger in trans women relative to cisgender men (Luders et al., 2009).

To provide a neurostructural correlate of being a trans person, a histological study in 42 post-mortem brains reported that the size of the hypothalamic uncinate nucleus (INAH-3) in 10 trans women resembled that of cis gender women, reporting that it is consistent with their gender identity rather than the sex assigned at birth. Despite being given hormonal treatment, lack of testosterone can’t be the main causative factor as this anatomical result was absent in five non trans castrated men. These data highlight the importance of paying close attention to regionally specific, minute structures when assessing which brain areas conform

to gender identity rather than sex assigned at birth.

Few white matter studies agree on an intermediate phenotype for trans persons in sexually dimorphic fascicles yet disagree on the parameters tested and the precise order of group findings. Kranz, Hahn, Kaufmann, Küblböck, Hummer, Ganger, Seiger, Winkler, Swaab, Windischberger, Kasper, & Lanzenberger, 2014) conducted a study with 4 groups (hormonally untreated trans men and women and cis men and women) and reported widespread group differences in mean diffusivity. Cisgender women had the highest mean diffusivity values, followed by trans men, trans women and cis men. There were no differences reported in

fractional anisotropy. However, this latter result was contrasted and differences in fractional anisotropy between trans men and trans women were reported (Rametti, Carrillo, Gómez-Gil, Junque, Segovia, Gomez, & Guillamon, 2011; Rametti, Carrillo, Gómez-Gil, Junque, Zubiarre-Elorza, Segovia, Gomez, & Guillamon, 2011).

Very few but promising longitudinal studies of trans persons after transition have been reported. Hulshoff, Cohen-Kettenis, Van Haren, Peper, Brans, Cahn, Schnack, Gooren & Kahn (2006) confirmed the histological findings of trans women having a female sized hypothalamus, and that it decrease in the cohort with CSHT. Additionally, Kim, Kim & Jeong (2015) found that hypothalamus increase in trans men reporting that the plasticity and sensitivity of the hypothalamus to CSHT, makes it shift towards the identified sex. Zubiaurre-Elorza, Junque, Gómez-Gil, & Guillamon,. (2014) examined the cortical thickness after 6 months of CSHT and found that it increases with androgen treatment in trans men and decreases with estrogens and antiandrogens in trans women. Contradictly, some studies have reported reductions in third ventricle size in trans men with hormone treatment (Mueller et al., 2017; Holshoff Pol et al., 2006). An explanation for this has been given by Holshoff Pol et al., (2006) suggesting that the findings are related to volumetric changes in adjacent gray matter structures, which requires further confirmation and more research. The most serious caveats of structural MRI studies include a small number of transgender people and cisgender comparison subjects (Holshoff Pol et al., 2006), absence of cisgender comparison group, to establish baseline values for both cis men and women (Zubiaurre-Elorza et al., 2014), an absence of pre-treatment data (Mueller et al., 2017), or sperate publication of trans men and women which does not allow direct comparison. Clinical implications of early vs late age at onset of gender dysphoria and sexual orientations need future scrutiny (Nieder et al., 2011).

Along with understanding gray and white matter differences in trans persons, the researchers have also explored structural connectivity. Hahn, Kranz, Küblböck, Kaufmann, Ganger, Hummer, Seiger, Spies, Winkler, Kasper, Windischberger, Swaab, & Lanzenberger (2015) conducted a study with pre CSHT trans persons and reported decreased structural hemispheric connectivity ratios for trans persons relative to cis persons in subcortical brain areas. Mueller, Wierckx, Jackson, & T'Sjoen (2016) reported that post administration of androgen in trans men, its levels were associated with local resting-state activity in the frontal cortex and the cerebellum, which is also linked to the duration of CSHT. No such effects of estrogen were found in trans women.

The structural studies show that depending on the brain region focused on, a phenotype exists which although consistent with gender identity in trans persons, may shift with the CSHT towards the experienced gender. However, before we draw any conclusions, we need to explore the neurobiological locus of "being transgender", with more corroborative evidence utilizing larger, and better controlled studies. However, these studies have also had major implications on researching on the functional aspects of the brain.

Functional Neuroanatomy

Based on the earlier anatomical and histological findings, fMRI studies on the neurocognitive or affective processes have emerged, creating an intriguing line of work. Yokota et al., (2005) discovered female like hypothalamus and Zhou, Hofman, Gooren, & Swaab (1995) discovered bed nuclei of stria terminalis (BNST) in trans women, which made researchers investigate the functional implications of these discoveries. The hypothalamus and BNST are centrally connected with other limbic structures such as the amygdala and the hippocampus and occupy a central role in hormonal signalling in sex-differentiated behaviour. Studies set out to assess this impact in olfactory processing.

Males and females are sensitive to estratetraenol and androsadienone, respectively. These are steroid compounds with pheromone capability and activate the hypothalamus. Berglund, Lindström, Dhejne-Helmy & Savic (2008) discovered that when trans women encounter androstadienone, their activation of the hypothalamic network in similar to that of cis women and different from cis men. This finding was corroborated by Burke, Cohen-Kettenis, Veltman, Klink, & Bakker (2014), in a larger sample of either prepubertal or pubertal children and adolescents with and without gender dysphoria. The findings also revealed that that the sexually differentiated response of the hypothalamus was already present when comparing prepubertal cisgender boys with cisgender girls but that the difference in youths with gender dysphoria only began to emerge in adolescence and was consistent prepubertally with sex assigned at birth.

Other cognitive process which contributes more supraliminal to the perception of gender than olfaction includes voice and speech perceptions. Thus, studies have also focused on the perceived voice, pre and post transition. Testosterone treatment in trans men deepens the voice to approach the male vocal pitch. But in trans women, estrogen has no such effect and they usually require vocal surgery along with speech therapy. Indeed, speech therapists, speech-language pathologists, speech-voice clinicians may all contribute to helping a transgender person accomplish the pitch, intonation, speech rate, or phrasing patterns as well as the

nonverbal communication of their desired sex. Studies with fMRI in this field have explored how a male or a female voice is perceived in trans women. Junger, Habel, Bröhr, Neulen, Neuschaefer-Rube, Birkholz, Kohler, Schneider, Derntl, & Pauly (2014) examined voice gender perception of male and female voices with a sample of hormonally treated and untreated trans women, in a comparison to cis men and women. These male or female voices were presented "pure" or were modified and presented in semitone steps toward one or the other gender. Whereas cisgender men differed from cisgender women in their response times when identifying voices of the opposite sex, reaction times were in between for transgender women. Consistent with such a response pattern, when

voices were morphed toward the other sex, neural activation in the superior frontal gyrus in transwomen was more similar to that of cisgender women and less similar when compared to cisgender men.

Neurocognitive studies have also focused on the cognitive functions generally hypothesised to show "typical" sex differences in performance, and the extent to which CSHT shifts the performance towards the gender identity in trans persons. Cognitive tasks in the favour of men is mental rotation, a spatial cognitive task, and in the favour of women is language and verbal fluency tasks. Carrillo, Gómez-Gil, Rametti, Junque, Gomez, Karadi, Segovia & Guillamon (2010) conducted the largest cross-sectional study to date on mental rotation abilities in trans persons. Trans women who were hormonally treated (N=18) exhibited reduced parietal lobe activation, a region commonly active during mental rotation, relative to cisgender men but increased activation in the right orbital and dorsolateral prefrontal cortex relative to cisgender women. By contrast, no group effects were observed for trans men. Given the absence of pre-treatment data in that study, it is difficult to assess whether the observed effects resulted from the CSHT or existed prior to it. Schöning, Engelien, Bauer, Kugel, Kersting, Roestel, Zwitserlood, Pyka, Dannlowski, Lehmann, Heindel, Arolt, & Konrad (2010) explained it partially by documenting increase parietal cortex activation during mental rotation in cis men relative to both hormonally treated and untreated trans women. This suggests that transgender women are more similar to their gender identity in their neural response during mental rotation, an effect that may occur prior to hormonal treatment.

However, studies with tasks in which females have better performance, like verbal tasks, have shown mixed results. Soleman, Schagen, Veltman, Kreukels, Cohen-Kettenis, Lambalk, Wouters, & Delemarre-van de Waal (2013) took a sample of pre-treatment adolescents with

gender dysphoria and reported better behavioural performance in trans girls in a verbal fluency task (word production) as compared to the other three groups.

Yet, at the brain level, group differences revealed a larger activation in cisgender boys relative to cisgender girls in the Rolandic operculum, and brain activity in the transgender groups was at levels in between these groups. Sommer, Cohen-Kettenis, van Raalten, Veer, Ramsey, Gooren, Kahn & Ramsey (2008) examined two language based tasks (verb generation and categorial decision) in a study of CSHT (six transmen and eight trans women) and reported an increase in language activation in both transgender groups after treatment, an effect that was associated with posttreatment estradiol levels for both sexes. Taken together, unfortunately, findings from this line of work examining sex-typical and sex-atypical neurocognitive differences are inconclusive because of very small samples (Schöning et al., 2010; Sommer et al., 2008), effects that failed to reach statistical significance (Soleman et al., 2013), lack of pre-treatment data (Carrillo et al., 2010), or non-sex-specific hormonal effects (affecting both sexes) (Sommer et al., 2008).These studies provide preliminary evidence to build upon, but no conclusions can yet be drawn on the effect of CSHT on sex-typical cognitive performance or the presence of pre-treatment neurocognitive differences. Surprisingly, despite the high rates of affective disorders in trans persons, no published research to date has examined the neural correlates of emotional or affective responding in this population.

Limitations and Future Perspectives

We have seen in the review that many studies in trans people suffer from, methodological problems like very small sample sizes, ranging from 10 to 25 per group. Low statistical power is particularly problematic when the aim is to show the presence of an intermediate phenotype, which may make it difficult to show significant differences when results for the group of interest (trans persons) fall in between those of the control groups (Cisgender persons). Thus, better powered and multicentre studies are needed. Initiatives like European Network for the Investigation of Gender Incongruence (ENIGI initiative) have been taken to assess the differences among various European countries in gender dysphoria. Basic demographic characteristic like education level, age, and number of persons (trans men or trans women) presenting to the clinic, have already been shown to differ among European countries (Norway, Germany, Belgium, and the Netherlands) Kreukels, Haraldsen, De Cuypere, Richter-Appelt, Gijs, & Cohen-Kettenis (2012), suggesting the significance and implications of including such factors in future work. These differences may already account for the differences and mixed result reported in the literature, for example, whether psychopathology is higher in trans men

or transwomen. These initiatives need to overcome country specific limitations, including type of CSHT administered. Legal struggles can help by acknowledgment of transition status, and recruitment pool (i.e., only through referral, mental health centres, or focus and activist groups), to allow sample sizes large enough to assess critical factors related to mental health and care, including quality of life and satisfaction before and after transition.

Since treatment protocols and available care in specific countries have changed dramatically over the past few years, longitudinal research is urgently needed to assess the effects of CSHT on psychology during the transition process. Likewise, neurobiological work would see significant improvements in explanatory power during joint initiatives or pooling of samples.

More comparative work, especially between developed and underdeveloped countries is also needed to establish optimal procedures, and the effects of CSHT on the brain and behaviour require further confirmation and validation. The psychological after care should also be investigated and the resulting sociological experience of transition.

Conclusion

Since the beginning of the century, much progress has been made in charting the mental health needs of transgender persons alongside essential discoveries of underlying neurobiology and associated function. Available data suggest high rates of affective disorders that may decrease with treatment, although suicide risk remains a cause for concern. The currently increasing efforts to characterize the changes associated with transition to the preferred sex are promising but require larger-scaled collaborations for future validation and confirmation. We hope that such a research agenda will also contribute to a reduction in social stigma and an environment in which all persons receive optimal care regardless of sex or sexual orientation.

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GENDER EQUALITY

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Gender equality is when people of all genders have equal rights, responsibilities and opportunities. Everyone is affected by gender inequality - women, men, trans and gender diverse people, children and families. It impacts people of all ages and backgrounds.

We need gender equality urgently. Gender equality prevents violence against women and girls. It's essential for economic prosperity. Societies that value women and men as equal are safer and healthier. Gender equality is a human right. Everyone benefits from gender equality.

The word gender describes the socially constructed roles and responsibilities that societies consider appropriate for men and women. Gender equality means that men and women have equal power and equal opportunities for financial independence, education, and personal development. Women's empowerment is a critical aspect of achieving gender equality. It includes increasing a woman's sense of self-worth, her decision-making power, her access to opportunities and resources, her power and control over her own life inside and outside the home, and her ability to effect change. Yet gender issues are not focused on women alone, but on the relationship between men and women in society. The actions and attitudes of men and boys play an essential role in achieving gender equality.

Introduction

Education is a key area of focus. Although the world is making progress in achieving gender parity in education, girls still make up a higher percentage of out-of-school children than boys. Approximately one quarter of girls in the developing world do not attend school. Typically, families with limited means who cannot afford costs such as school fees, uniforms, and supplies for all of their children will prioritize education for their sons. Families may also rely on girls' labour for household chores, carrying water, and childcare, leaving limited time for schooling. But prioritizing girls' education provides perhizse the single highest return on investment in the

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developing world. An educated girl is more likely to postpone marriage, raise a smaller family, have healthier children, and send her own children to school. She has more opportunities to earn an income and to participate in political processes, and she is less likely to become infected with HIV.

The World Economic Forum recently ranked the United States as 19th in the world on its gender gap index. With women comprising less than one fifth of elected members of Congress, the report identifies political empowerment as the greatest gender equity issue for the United States. The U.S. ranked higher in economic empowerment, but women's earning power remains approximately 20% lower than men. Women in the United States have a very high ranking of educational attainment, though, with high levels of literacy and enrolment in primary, secondary, and university education. At present, there are more U.S. women attending college than men.

Globally, no country has fully attained gender equality. Scandinavian countries like Iceland, Norway, Finland, and Sweden lead the world in their progress toward closing the gender gap. In these countries, there is relatively equitable distribution of available income, resources, and opportunities for men and women. The greatest gender gaps are identified primarily in the Middle East, Africa, and South Asia. However, a number of countries in these regions, including Lesotho, South Africa, and Sri Lanka outrank the United States in gender equality.

Around the world, Peace Corps Volunteers are working with communities to address gender equality and empower women and girls. In 1974, Congress signed the Percy Amendment requiring Peace Corps Volunteers to actively integrate women into the economic, political, and social development of their countries. Many Peace Corps Volunteers implement the Camp GLOW program, or Girls Leading Our World, to help girls develop self-esteem and leadership skills. Recognizing that men and boys must be equal partners in achieving gender equality, Volunteers also teach leadership and life skills to boys through Teaching Our Boys Excellence (TOBE) camps. Peace Corps Volunteers promote gender equality and women's empowerment through health education, business development, and by raising awareness of women's rights and contributions to their communities.

Is Gender Discrimination Against the Law?

Gender discrimination is prohibited under almost every human rights treaty. This includes international laws providing for equal gender rights between men and women, as well as those specifically dedicated to the realization of women’s rights, such as the Convention on the

Elimination of Discrimination Against Women – considered the international bill of rights for women.

Federal, state and local laws protect individuals from gender discrimination and gender inequality in the United States. Additionally, it is recognized in both law and policy that promoting gender equality is critical to achieving foreign policy objectives for a more prosperous and peaceful world.

What are the Causes of Gender Inequality?

Gender prejudice and resulting gender discrimination begin in childhood. From the moment they're born, girls and boys face unequal gender norms regarding expectations and access to resources and opportunities, with lifelong consequences – in their homes, schools and communities.

For example, the world's boys are often encouraged to go to school and get an education to prepare for work, while girls carry heavy household responsibilities that keep them from school, increasing the odds of child marriage and pregnancy.

What are the Effects of Gender Inequality?

Despite worldwide progress, gender inequality persists. The COVID-19 pandemic has threatened to put years of hard-won progress at risk. Far too many girls, especially those from the poorest families, still face gender discrimination in education, child marriage and pregnancy, sexual violence and unrecognized domestic work. These are some types of gender inequality.

Gender Inequality Examples:

Gender inequality in girl's education. Even before the pandemic, girls were more likely than boys to never set foot in a classroom. Conflict, poverty and other forms of social disadvantage also magnify gender inequality in education. Girls living in countries affected by conflict, for example, are 2.5 times more likely to be out of school than boys. Some 9.7 million children were at risk of being forced out of school by the end of 2020, with girls facing an increased risk.

Child marriage. Child marriage is a form of gender-based violence and a result and driver of gender inequality and gender discrimination. Experts predict that the COVID-19 pandemic is set to reverse 25 years of progress, which saw child marriage rates decline. In fact, Save the

Children analysis revealed a further 2.5 million girls at risk of marriage by 2025 because of the pandemic—the greatest surge in child marriage rates in nearly three decades.

Gender-based violence. Gender-based violence occurs everywhere around the world across all economic and social groups. While both boys and girls are negatively impacted, girls are particularly at risk. An estimated 1 in 3 women globally have experienced physical or sexual violence in their lifetime, mostly at the hands of their partners. Types of violence may include: prenatal sex selection, female infanticide, neglect, female genital mutilation, rape, child marriage, forced prostitution, honour killing and dowry killing. Many of these gross violations of human rights have been used as weapons of war around the world. Refugee children are particularly vulnerable.

Child labour. There are currently 152 million children engaged in child labour around the world. Child labour makes it difficult for children to attend school or limits their attendance, putting them at risk of falling behind their peers. Boys and girls are affected differently by child labour and parents' decisions are often influenced by wider social norms about the different roles that they should play in the home and in society. Girls are much more likely to shoulder the responsibility for household chores while boys are more likely to engage in harmful work such as construction. Girls are usually pulled out of school earlier than boys and are more likely to face sexual exploitation and slavery.

What is the Importance of Gender Equality?

Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable future. Eradicating gender issues means a world where women and men, girls and boys all enjoy equal rights, resources, opportunities and protections.

Empowering girls from the start is proven to have lasting and compounding benefits over the course of their lives. When girls are supported to be active in civic and political spaces, in particular, they are empowered with the tools and skills they need to be drivers of positive change in their families and communities. Girls are the experts of their own experiences, priorities and needs, and are powerful catalysts for a world where gender equality flourishes.

What are the Effects of Gender Equality on Society?

When girls are empowered to lead their lives, speak their minds and determine their futures, everyone benefits. History suggests that when we fight gender oppression, societies are more stable, safe and prosperous, with happier, better educated citizens

Achieve Gender Equality and Empower all Women and Girls?

Empowering women and promoting gender equality is crucial to accelerating sustainable development. Ending all forms of discrimination against women and girls is not only a basic human right, but it also has a multiplier effect across all other development areas.

The Sustainable Development Goals (SDG) aim to build on these achievements to ensure that there is an end to discrimination against women and girls everywhere. There are still gross inequalities in access to paid employment in some regions, and significant gaps between men and women in the labour market. Sexual violence and exploitation, the unequal division of unpaid care and domestic work, and discrimination in public decision making, all remain huge barriers.

Ensuring universal access to sexual and reproductive health and affording women equal rights to economic resources such as land and property, are vital targets to realizing this goal. There are now more women in public office than ever before but encouraging more women leaders across all regions will help strengthen policies and legislation for greater gender equality.

10 Reasons Why Gender Equality is Important

Gender equality seems like a faraway dream these days. While progress has been made, the numbers from groups like UN Women tell a discouraging story. Over 2 billion women don't have the same employment options as men. At the current rate, it will take about a century to close the global pay gap. While human trafficking affects men and women, women and girls make up over 70% of the world's human trafficking victims. In the face of this data, gender equality needs to be a priority. Why? Here are 10 reasons why it's important:

1. It saves lives

Because of their lack of empowerment and resources in many places, women and girls face life-threatening risks. Natural disasters are one example. At the 2005 World Conference on Disaster Reduction, experts discussed how gender inequality plays a role in death and injury. Other data shows that climate change, which makes natural disasters more dangerous, puts women and girls in even more vulnerable positions. Bringing a gender perspective into discussions allows women to play a bigger role in their own protection.

2. It results in better healthcare

Research shows that in general, women receive worse medical care than men. There are many reasons for this, including lack of education and lower incomes. Sexism in the medical research

community also leads to worse care. Diseases that affect women more than men (such as chronic pain conditions) aren't as well-researched. They're often not taken as seriously by medical professionals. When women are equal in society, their health will be impacted positively.

3. It helps businesses

When women receive the same education and job opportunities as men, they can improve ana organization they join. Studies show that diversity of all types (gender, race, sexual identity, etc) increases an organization's productivity and innovation. One 2016 study from the University of California looked at big companies in the state with some women in the top leadership positions. They performed better than the companies with mostly men at the top.

4. It's good for the economy

Women's impact doesn't stop with individual companies and organizations. Studies show that increasing women's participation in the economy is good for the economy. In OECD countries, if the female employment rates were raised to match Sweden, it would lead to a GDP increase equivalent to $6 trillion. Gender pays gaps end up costing the economy.

5. Children are healthier

When women make their own reproductive choices, they provide better care for the children they do have. With income options equal to men, mothers can offer education, healthcare, and healthier food to their children. Studies also show that reduced infant mortality is linked to higher levels of education. Children raised in gender-equal environments will do better than those raised with inequality.

6. It leads to better legal protections

Under the law, women aren't well-protected from domestic sexual and economic violence. Both of these types of violence affect a woman's safety and freedom. Increasing women's legal rights keeps them safe and able to build productive happy lives.

7. It leads to better racial equality

Gender equality and race equality are closely linked. Within issues like the gender pay gap, race plays a big role. White and Asian women earn more than black, Hispanic, and native women. In the United States, black women face a higher risk of death from pregnancy-related causes. When gender equality considers race as a factor, it improves race equality at the same time.

8. It reduces poverty

Poverty rates are the highest among young girls. As boys and girls get older, the gender gap in poverty gets larger. This is likely because girls don't receive the same education and job opportunities as boys, and when girls marry, they often don't work. Gender inequality keeps women and their families trapped in cycles of poverty. When women receive better education, healthcare, and job opportunities, they can thrive. Investing in gender inequality is a sustainable, highly effective way to reduce poverty.

9. It reduces human trafficking

While men are also victims of human trafficking, women and girls make up the majority. They're more vulnerable and traffickers see them as easier targets. With better education and job options, women and girls don't end up in trafficking situations as often. Gender equality can also help strengthen a country, reducing poverty and instability. These fuel human trafficking.

10. It can lead to peace

Research shows that gender equality is linked to peace, even more so than a country's GDP or level of democracy. States with better gender equality are less likely to use military force. When a country addresses major areas of gender inequality like education and employment, it fosters peace.

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GENDER INEQUALITY AND ITS SITUATION IN TURKEY

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Gender inequality is a state of inequality that will be dealt with in many different dimensions. It can change from society to society and over time. Gender roles also show the status of women and men in society. As a result of the socialization of gender, women always remain between home and workload. While traditional gender roles impose responsibilities such as housework and childcare for women, they also prescribe jobs such as repair and garden care for men. Looking at the situation in Turkey, the labour force participation rate of women is increasing day by day, but it is still not at the desired level. Education is the most important factor in dealing with gender inequality. girls and boys need to be educated at an equal level. In this study, gender equality, the socialization of this situation, the situation in the countryside and in Turkey are tried to be explained.

Introduction

It can be stated that the reason for the emergence of the concept of gender inequality is not the genetic and biological characteristics of men and women. The concept of gender is associated with social class, patriarchy, politics and the mode of production in society, which cannot be explained by biological gender (Savcı, 1999). Gender has some differences even between societies. Historically both gender position and gender identity has been in constant change. In addition, not only determines the gender, but also specifies the unequal power relations between the genders (Berktay, 2000).

Gender means that the roles assigned to men and women depend on their gender (Bahar, 2011, pp. 127-130). While gender expresses the physical difference between men and women, gender

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shows the difference between "femininity" and "masculinity" roles (Durgun ve Gök, 2017). The concept of gender causes both men and women to undertake different social roles (Tokol & Alper, 2011). While women and men in the society try to implement their culturally placed roles, it actually creates a hierarchical structure. In this hierarchy, men are given the role of being the representative of authority and having power starting from childhood (Yavuz, 2016).

Women, on the other hand, are more in the background. This system, in which women are left in a secondary position, brings along some problems in terms of income and wealth sharing. Gender discrimination has led to the emergence of “inequality” in economic, political, cultural and social areas between men and women (Ridgeway, 2011, p.242).

Materials and Methods

This study consists of previous academic studies on this subject. Statistical values of some institutions and organizations were used. This information is evaluated and explained together.

Research Findings

Gender

Gender, "femininity" and "masculinity" categories; It refers to the behaviors, attitudes and social roles that are assumed to be related to these categories and determined by the sociocultural structure (Lucal, 1999; Powell and Greenhaus ,2010; Risman, 2004). Gender actually refers to a process in this comprehensive aspect. In this process, which is called "socialization", individuals learn about the expectations of the society from them and try to realize this from the moment of their birth until their death (Lucal, 1999; West and Zimmerman ,1987). These expectations vary from society to society, from culture to culture (Trommsdorff & Iwawaki, 1989).

Since gender is determined socially and culturally unlike biological gender, its content may change from society to society and over time (Risman, 2004). In this sense, gender not only describes the difference between men and women, but also indicates the unequal and unbalanced power relations between the genders (Giddens, 2000; Lorber, 1994; Lucal, 1999). Gender roles largely determine the status of women and men in society and their roles accordingly (Basow, 1992; Dökmen, 2014; Lindsey, 1990).

Gender Roles

Gender roles; The differences and relationships between women and men can be understood in an approach that sees them not as the product of their biology but of their socialization (Bhasin,

2003; Eccles et al., 1990; Giddens2000). Gender roles that differ from society to society according to time and place; It is shaped according to the culture inhabited (Trommsdorff and Iwawaki, 1989).

With the active participation of women in business life, the differentiated roles of men and women traditionally based on family structure seem to have given way to gender roles based on sharing (Beal, 1994). Rapid economic developments and conditions brought about a role and responsibility sharing in this direction. It can be said that the change observed in roles and responsibilities within the family lags behind the change observed in roles and responsibilities in working outside the home and earning money (Erkal & Çopur, 2013; İmamoğlu, 1991). It can be stated that the most important reason underlying this is still the stereotypical social roles of femininity and masculinity related to housework. For this reason, stereotypes regarding the sharing of household chores are more resistant than those related to the function of working outside the home and earning money (Erkal & Çopur, 2013; İmamoğlu 1991).

Socialization of gender

The socialization of gender refers to how individuals should behave depending on their gender and the different tasks they are expected to perform. Traditionally in advanced industrial societies most women spend their time doing housework; Most of the men spend in occupations outside the home (Bhasin, 2003; Eccles et al., 1990; Giddens, 2000; Lorber 1994). Although these roles have changed over time, the number of women working in paid jobs outside the home is still far behind the number of women doing housework at home.

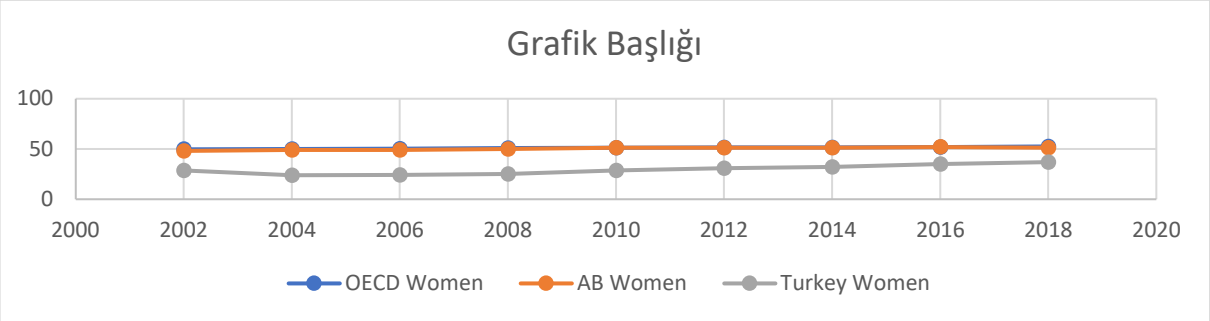
For example, in 2016 (TUIK, 2018), the rate of those who are 15 years old and over employed in Turkey is 46.3%, this rate is 65.1% for men; It is seen as 28% in women. In addition, the majority of women working in paid jobs outside the homework in jobs with lower wages and lower status than men. For example, when looking at OECD countries, the wage difference between men and women is the highest with 34.6% in Korea, while this rate is at the lowest level in Romania with 1.5%. In Turkey, this rate is 6.9% (OECD, 2018).

As a result of the socialization of gender and determination of appropriate roles, the working woman always has to carry the dilemma of home and work on her back during this process (Bhasin, 2003; Bingöl, 2014; Eccles et al. 1990; Giddens, 2000). In most of today's societies, jobs, roles and responsibilities in the family are still shared on a gender basis. In the context of traditional gender roles, men usually do jobs such as repairs and garden maintenance, and women are given roles such as cooking, washing dishes and cleaning the house, even if they

work outside the home for wages most of the time, they cannot be saved (Günay & Bener, 2011).

Although Turkey has made progress since 2000, it is still below the averages of the World and OECD countries as seen in Figure 1. In this graph, where the world percentage does not show a significant improvement, the steps to be taken to eliminate the difficulties women and girls have faced in terms of education, health and income since birth are underdeveloped. It can be said that it is more important in countries. However, the increase in the participation of women in the labor force is also important for developed countries. Because the on going economic growth in developed countries whose population growth rate is declining and aging rapidly may expose these countries to a labor shortage. In this case, increasing the participation of women in the labor force may alleviate the negative impact of the contraction in the labor market (Akbakay, 2019, p.301).

Figure 1. Percentage of Women in Total Workforce in the World



Sexist approaches negatively affect the working life and future goals of women. Today, there are many obstacles for women to enter the working life in many countries, including Turkey. The attitude of family members is often at the top of these obstacles. Many spouses have the perception that if the woman starts working life, housework and the concept of family will weaken. The attitude of women whose freedom is restricted against this perception causes them to remain in a secondary position. In many societies, especially among spouses, women are seen as a problem due to the social acceptance of the idea that the only person responsible for the maintenance of the house is a man. This situation causes women to receive lower wages in the labour market. Labour spent for household chores is not seen as economical (Koray, 2008, pp. 33-50).

It is seen in Table 1 that the employment rate of women who can read and have received primary, secondary and high school education in Turkey is about 1/3 compared to men. İt is

seen that the place of women in the labour sector is very weak, but the employment rate among women with higher education is relatively high. We can state that sexist approaches create inequalities such as lower education level, less labour force participation and lower income level for women (Şimşek, 2011, p. 120).

Table 1. Female Labor Force Participation Rate in Turkey by Education Level

	Women	Men
Illiterate	%15	%29
Can read and write, but never finish school	%20.8	%49.8
Primary school	%28.8	%66.1
Primary	%27	%81.3
Secondary school	%17.3	%51.4
High school	%25.7	%64.3
High education	%61	%78.4

Source: *www.tüik.gov.tr, 2018*

In Turkey, women workforce work in low-status and low-income jobs, agricultural fields, labour-intensive industries such as textile, food, tobacco, unpaid family worker or unregistered, which are attributed as "women's work" in the social understanding seems to be concentrated. Labour force participation rates are quite low compared to developed countries. One of the main reasons for the low female labour force participation rates in Turkey is the lack of adaptive factors in family and work life (Serel & Özdemir, 2017, p.132).

Due to sexist approaches, different perspectives arise even though women and men do the same or the same job. Namely, if it is a woman doing the job, it is an easy job or that job was done by chance. Therefore, it is not worth rewarding. If it is a man doing the job, that job is difficult

and requires effort and skill. Therefore, the work done by a man should definitely be rewarded (Hogg & Voughan, 2005, p. 390).

Gender Inequality in Rural Areas

Rural women produce more than half of the food in the world. In total, rural women do 54% of the work in the agricultural sector, 34.5% in the industry and 9% in the services sector (Lashgarara, 2011: 5536). But it can be said that local women are far behind the standards of a modern society in rural areas. Women are adversely affected by both traditional social stratification and gender inequalities whose roles / status are socially determined. This situation becomes even more pronounced for women living in rural areas (Gökyay, 2008: 38).

Although rural women are thought to play an important role in the agricultural economy, women should use their potential capacity and opportunities and increase their productivity, lack of information, not being able to organize, economic they are not at the desired level because they are dependent on men (Lashgarara, 2011: 5536). Such that women participate less in management and decision-making processes, benefit less from basic health and education services, have difficulty in accessing income sources, and use less technology than men. In rural areas, intensive household chores such as preparing winter food, bread making, carrying water, washing, supplying fuel and childcare increase the workload of women in rural areas (Fazlıoğlu, 2011).

With the increasing technology in agriculture, men leave women behind and come to the city for alternative income sources; women remain solely responsible for agricultural production. Although this does not mean more autonomy for women, rural women shoulder the entire burden of agricultural production. All these explanations; They point out that the continuation of agricultural production is ensured only by the more severe exploitation and subjugation of women (Kandiyoti, 1989).

Conclusion and Suggestions

Gender inequality shows that women and men are not equal in all societies and in all areas. It is observed that there is social inequality in terms of social, economic and political rights. Women are not equal to men in matters such as starting a business, running a business and land ownership. Unfortunately, women are behind men in matters such as education. Unfortunately, not all girls can obtain the right to education in rural areas. While most of the boys are provided with an education, girls are not given that chance. In the society we live in, every act of women is tried to be prevented by judgments such as shame and sin. The idea in the woman's mind

cannot turn the thought into reality. This prevents women from gaining a deserved status both in business life and in society. The woman cannot see the value she deserves.

In many countries, including Turkey, there are many obstacles for women to enter the business life. Therefore, women cannot participate in business life and only do housework. Women are engaged in many jobs in rural areas such as housework, child and elderly care, field work. However, unfortunately, the labour of the woman is not seen and she cannot get any wages or social security rights in return.

The most important problem is the education factor. For this, the patriarchal system must be destroyed. Equal education should be provided for girls and boys.

In order to prevent traditional gender discrimination between men and women, cooperation with the media should be made and this point of view should be refuted through the media. In fact, fundamentally, the established consciousness about the social role of women also needs to be changed.

It can be stated that gender perception is related to the level of consciousness. Therefore, in societies with no education and awareness, women are kept in the background and girls' right to read are ignored. The inability of a woman who does not have education to raise awareness of her child and question her situation in front of a man increases the number of victims of gender inequality day by day (Şahin & Bayhan, 2020, p. 72).

It is important to question what the social status of women in our society is and to determine the factors that determine the situation. Women need to be empowered politically. The most important transformation in women's political participation is civil organizations that developed after 1980. The limitation of women's representation in politics is associated with other forms of gender hierarchies. It is necessary to develop “Gender Mainstreaming” style strategies proposed to solve problems based on representation and other gender inequality. This strategy; It is a policy followed and encouraged by nations or supranational organizations and various non-governmental organizations in order to eliminate inequalities between genders (Şahin & Bayhan, 2020, p. 72).

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
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CHAPTER 6

GOAL-6: CLEAN WATER AND SANITATION

WORSHIPPING OUR RIVERS IN AN ECO-FRIENDLY WAY- A CASE STUDY OF INDIA

Rajnish Kumar DWIVEDI[1]

India is struggling to manage its solid waste in an environment friendly way. The Ministry of Environment, Forest and Climate Change (MoEFCC) estimates that only 75–80 percent of the total municipal waste gets collected and out of which only 22–28 percent is processed and treated. There exist various barriers to effective solid waste management in India such lack of management/maintenance, infrastructural gaps, poor technology, high population, logistics and transportation of waste, lack of awareness etc. One of the main categories of waste, which is often less talked is the Temple Waste. India being one of most religious country of the world generated a large amount of temple waste which is not properly managed and is mostly disposed into the water bodies. This temple waste consists of both useful and various harmful components, which pollute our sacred rivers and poses serious threat to humans as well as aquatic life. Managing temple waste especially in religious places situated on the banks of rivers are directly linked to Sustainable Development Goal 6, Clean water and Sanitation, defined by United Nations (Karishma Chaudhary, 2021). This paper highlights the issues and challenges

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of Temple waste management in India. This paper also proposes a solution for Closing the loop of Temple waste to save our holy rivers by using an exemplar.

Introduction

In India population is growing at the rate of 0.99% and it is estimated that by 2027, India will be the most populous country in the world (Worldometer, 2020). Due to rapid urbanization, industrialization and high population growth rate, municipal solid waste (MSW) is also rising day by day. MSW mainly contains of dry waste, wet waste and hazardous waste. In India, the volume of waste generated has been inicreasing rapidly over the last few years. According to the "Swachhata Sandesh Newsletter" by the MoHUA, as of January 2020, 147,613 metric tonnes (MT) of solid waste is generated per day in India. The 2014 report by the "Task Force on Waste to Energy," under the Planning Commission, estimates that urban India will generate 2,76,342 tonnes per day (TPD) of waste by 2021; 4,50,132 TPD by 2031; and 11,95,000 TPD by 2050. The per capita waste generation is 450 grams per day and has increased at a rate of 1.3 percent per annum. The amount of waste generation in 84,456 wards varies from 32 MT to 22,080 MT per day, as of January 2020 (CPHEEO, 2014).

One of the constituents of MSW is the Temple waste. India being one of the most religious country in the world offers flowers, incense, coconut etc. to God. In India, there are around 3.01 million that are places of worship, more than the number of schools and colleges which is around 2.1 million (Kishore, 2016). As a result, large amount of temple waste is generated in India.

Temple Waste in India

It was estimated that around 800 million tonnes of flowers are offered across the temples, mosques, gurudwaras and in other worshiping centres in India (Goswami, 2018). And approximately 8 lakhs of flower waste are dumped in the Indian rivers each year (Bhatia, 2017).

Temple wastes consist of various things such as flower & leaves, coconut & coconut coir, threads, fruits, honey, camphor and incense sticks, jaggery, milk, plastic (Packet, Plates and decoration etc), thermocol, clothes etc. All these things are dumped in rivers without segregating and treating.



Source – (Gulati, 2018) https://www.firstpost.com/tech/science/indian-help-us-green-wins-un-award-for-recyclingtemple-waste-empowering-women-5716391.html

The temple waste is considered sacred. Due to lack of awareness, lack of management/maintenance, infrastructural gaps, poor monitoring system for temple waste, peoples' beliefs, misleading myths etc, the temple waste is neither treated nor disposed properly and is mostly poured away in water bodies directly as a result the harmful pesticides and insecticides used to grow the flowers also get washed away in water thereby polluting the water body and hampering the fragile ecosystem (Bhatia, 2017).

While industrial runoff is often singularly blamed for the spike in pollution level in Ganga, floral waste hardly gets the blame. In fact, flower pollution is often overlooked while crafting policies towards cleaning the river. Floral waste, reportedly, accounts for 16 per cent of the total river pollutant. While rotting flowers affect the water quality, the pesticides that are used on them, leach into the waters and harms marine life (Goswami, 2018).

Harmful Impacts of Temple Waste

Temple waste consists of various harmful chemicals. The flowers contain arsenic, lead and cadmium from farm runoff. They are pumped full with pesticides and insecticides. Once in the Ganges, their thick residue dissolves to mix with chemicals and begin a rotting process that kills fish, suppresses the oxygen level, and produces compounds that reek of toxicity (Moore, 2017). This also affects human lives when it is consumed causing various health problems such as respirator disease, eye problems and skin rashes. According do WHO, almost 36% chemicals

used in flower plantations as highly toxic. The clothes which are thrown in water along with the temple waste have harmful dyes which cause problem to aquatic life as well as human life. Aquatic animals such as fishes and turtles get stuck into the clothes and threads and garlands. The temple waste is dumped on land creates land pollution. Birds eat it sometimes and the colouring dye and chemicals used in flowers harms them. Animals such as cow and dog eat plastic along with food and fruits of temple waste.

Therefore, temple waste needs immediate attention for clean water and sanitation for all species. The government should devise policies for proper management of Temple waste and measures should be taken to spread awareness about the consequences of improper waste disposal. There can be replicable temple waste management models like HELP US GREEN which should be promoted by the govt. The working model of Help Us Green is discussed.

Case Study - Help Us Green

'Help Us Green' is an Indian sustainable social enterprise model. It converts the waste from religious places into chemical free incense sticks, flora foam and vermicompost. The company started in the year 2015 in Kanpur by Ankit Agarwal (CEO) and Karan Rastogi and collects 2.4 tons of floral waste daily from temples and mosques in Uttar Pradesh, India.

The idea has been so innovative that even the packaging material used is a biodegradable paper embedded with the holy basil seeds. The thought behind this is people after using the product, instead of throwing away the packet can plant it in their surroundings (M, 2019). They follow these steps in converting temple waste to resources.

Impact of Help Us Green

Till date Help Us Green has recycled around 11,060 metric tonnes of temple-waste and prevented 110 metric tonnes chemical pesticide (>10ppm) to be washed away in water bodies. It has provided direct Livelihood with better wages as well as indirect Livelihoods to 365 people. Better income levels have resulted in improvement in standard of living of women workers and making them economically independent. The project has attracted interest across the country thus highlighting the issue of "temple flower disposal" (Help Us Green, 2021).

They collect waste from temple and bring it to their facility

↓

They segregate the flowers and remove other things

↓

They spray organic Bio-Cullum on flowers to remove chemical residue

↓

Then they wash flowers. The water is then used in vermicompost

↓

The remove petals from flowers and sun dry them

↓

Then they convert them into various product

↙ ↓ ↘

Incense Stick Vermicompost Flora foam

Source: (Phool.com, 2021), https://cdn.shopify.com/s/files/1/0017/0639/3644/files/infographics_with_phool_logo-01.png?v=1586808351

Recommendations and Conclusion

It is recommended that the government should lay special emphasis on Temple waste management and promote establishments like Help Us Green to save water bodies as well as to convert waste to resources. Spreading awareness about temple waste is necessary to reduce the impact of this type of waste. It is challenging to prohibit people from offering flowers to God

due to religious sentiments, hence, more focus should be laid to covert this waste into some useful products such as incense stick, vermicompost (black gold) etc. These initiatives can reduce the significant pollution from the rivers and promote Circular Economy. This will not only protect our nature but will protect aquatic life. It will also contribute to green jobs creation and providing decent working conditions to people and hence a better life to people. When rivers are clean, less resources are consumed to make water fit for drinking. Clean water bodies are vital to lessen the occurrence of water borne diseases and a healthy environment.

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CHAPTER 7

GOAL-7: AFFORDABLE AND CLEAN ENERGY

INFLUENCE OF BEHAVIOUR, GOVERNANCE, RISK AND TAX INCENTIVES ON INTENTION TO INVEST IN RENEWABLE ENERGY: A PROPOSED FRAMEWORK

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Renewable energy is vital to the achievement of the United Nations' sustainable development goal of making assess to modern, clean and affordable electricity to all. Nigeria is among countries with abundant renewable energy resources but under-utilized, making the country to suffer serious electricity gap. The purpose of this paper is to present a conceptual framework on the determinants of intention to invest in renewable energy by conventional energy stakeholders in Nigeria, upon extending the Theory of Planned Behaviour (TPB) model to incorporate governance and investment factors. Data collection instrument would be questionnaire and SPSS and SmartPLS are the intended statistical tools of analysis for the study. It is anticipated that this proposed comprehensive framework if validated will give a better understanding of the phenomenon, therefore, will make available insights to policy makers and investors as well as the academia.

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Introduction

International Energy Agency (IEA) defined renewable energy as energy derived from natural processes that are replenished at a faster rate than they are consumed (IEA, 2018). Considering the importance of electricity for socioeconomic activities and the climate challenges caused by fossil fuels used in generating this electricity, the United Nations (UN) is vehemently clamoring for the adequate utilization of renewable energy sources for electricity generation. This call is serving two purposes, one is to bridge the current global electricity gap and secondly is to mitigate the climate challenges posed by gas emissions (IRENA, 2015).

Renewable energies are infinite, clean and are consistently competitive to the conventional sources of energy. They differ from traditional sources mainly in their heterogeneity, plentifulness, and potentiality for use anywhere on the universe, still, more vitally, they hardly generate greenhouse gas emissions resulting to climate change nor polluting emissions. Moreover, their prices are declining, while the prevailing price trend for fossils is in the reverse direction in spite of their current volatility (IRENA, 2018).

The research area, which is Nigeria, the largest African country in terms of population with almost 200 million people has an electricity gap of 175,000MW, with 120 million people living without access to electricity (Shell, 2019). The country majorly generates its electricity from conventional sources (IRENA, 2018), this is, despite abundant renewable energy resources, such as hydro, solar, wind, biomass and geothermal (Amuta, Wara, Agbetuyi & Matthew, 2018). Therefore, urgent, and drastic measures need to be taken to address the prevailing lack of electricity in the country through adequate inclusion of renewables into the current energy mix (World Bank, 2019; Gerretsen, 2018).

In order to achieve the dual targets of bridging the electricity gap and climate goals, ample private investment is extremely required (Rodrigue, 2018). Thus, prompting investments into renewable energy demands adequate understanding of investors' intentions (Schmidt, 2013). Investors' intention has over time predicted through behavioural factors using the Theory of Planned Behaviour (TPB) (East, 1993). Nevertheless, the champion of the theory makes it open for the incorporation of any predictor variable that can additionally describe intention (Ajzen, 1991).

Based on the TPB argument of incorporating additional variables to further describe intention the current study will extend the theory by incorporating governance factors (voice and accountability, political stability and absence of violence/terrorism, government effectiveness,

regulatory quality, rule of law, and control of corruption) and investment factors (perceived risk and tax incentives) to develop a comprehensive framework that will measure investment intention into renewable energy.

Intention to Invest in Renewable Energy

According to Ajzen (1991), intention is the desire of a person to carry out a particular act. While in the view of Venkatesh, Morris, Davis and Davis (2003) intentions are an individuals' emotional likelihood that he/she will perform a particular behaviour. Intention as an indication of an individuals' possibility to execute a certain behaviour (Yadav & Pathak, 2017) are the sole prime determinant of behaviour conceptually and empirically (Krueger & Carsrud, 1993). Intention formation is rooted on attitudes regarding the considered behaviour which reflects beliefs and perception (Ajzen & Fishbein, 1975, 1980). Additionally, previous researchers are of the opinion that intention is closely related to behaviour (Ajzen, 1991, 2002, 2005). On the other hand, investment intention describes the desire to select particular investment over the other, it also means the planned choices made by investors concerning "when", "where" and "how" capital will be dedicated into financial products and or instruments of distinct nature to create more income or value appreciation (Sindhu & Kumar, 2014).

Behavioural Factors and Intention to Invest in Renewable Energy

Theory of Planned Behaviour (TPB) has been identified as the generally applied theory in studying human intention and subsequent behaviours. Human behaviour and behavioural intention concerning particular behaviour are explained by one's attitude towards that behaviour, the subjective norms resulting from social and societal influence as well as the perceived behavioural control which exerted based on intrinsic confidence and resources available to the individuals (Ajzen, 1991).

Attitude, subjective norm, and perceived behavioural control were posited by TPB to indirectly effect behaviour due to their influence on intention (Ajzen, 2002), as a result, Robert East pioneered the deployment of TPB model to examine the electricity sector investment intention in the United Kingdom more than 20 years ago and his findings reveal the relevance of the model (East, 1993). In addition, empirical researches carried in the renewable energy using the TPB model such as, (Alam, Hashim, Rashid, Omar, Ahsan, & Ismail, 2014; Liu, Wang & Mol, 2013; Schmidt, Blum, & Wakeling, 2013), all support the predictive powers of the model to explain human intentions and subsequent behaviour. However, despite lot of studies regarding behavioural intention in many disciplines including investments, such is lacking within

intention to invest in renewable energy in Nigeria. Hence, the following propositions are postulated

Proposition 1: *Attitude is associated with intention to invest in renewable energy.*

Proposition 2: *Subjective norms are associated with intention to invest in renewable energy.*

Proposition 3: *Perceived behavioural control is associated with intention to invest in renewable energy.*

Governance Factors and Intention to Invest in Renewable Energy

According to the World Bank, governance reflects the way and manner country's authority has been carried out. This involves the procedure of government selection, monitoring, and replacement; the ability of government to make and implement good policies effectively; and respect for the state and the citizens as well as recognizing the institutions that control both social and economic engagements among all (World Bank, 2006). The World Bank developed six public governance dimensions termed as world governance indicators (WGI) to assess government performance among nations (Kaufmann et al., 2009), based on a scale of -2.5 and 2.5 (Kaufmann et al., 2010). Furthermore, these governance dimensions are key determinants of private investments (Su & Bui, 2017).

According to Kaufmann et al., (2009), the six public governance quality indicators are; *voice and accountability*, representing the perception of the level to which citizens of a nation can take part in deciding their government, including elections, freedom of speech, association, and media. *Political stability and absence of violence/terrorism,* covering the perception of political violence and other politically motivated crisis, as well as possibility of terrorism in a country. *Government effectiveness* highlighting the perception of the soundness of both public service and the civil service as well as the level of their autonomy from political interference, the soundness of policy formulation and implementation, and the sincerity of government dedication to such policies. *Regulatory quality*, covering the perception of the capacity of the government to formulate and execute good policies and regulations that ensure and enhance private sector participation. *Rule of law*, representing the perception of the level to which citizens have trust and follow the laws of the land, specifically, the soundness of contract agreement, property ownership, the law enforcement agents, and the courts of law, as well as the tendency of crime and violence in a nation. *Control of corruption* covers the perceptions of the level to which government position is used for personal benefit, comprising both minor and major types of corruption, as well as the "control" of the state affairs by the well-to-do and

personal interest. Therefore, the performance of a government based on these indicators posits that, the more positive, the higher the degree of governance in a country. Nonetheless, Nigeria is among countries with low governance, performing below average based on the indicators (World Bank, 2019).

Moreover, most of the literature regarding governance quality within the investment domain are majorly in the context of foreign direct investment (FDI). Empirical studies conducted to date have made available handy insights into the influence of public governance quality on FDI (see for example, Nazim, 2018; Wei, 2018; Kunsch, 2014; Quazi, 2014). In general, the literature established evidence linking governance quality and investment. However, the dynamic interaction between governance quality and investment intention of individuals has not received adequate attention. This study intends to fill this literature gap by extending governance quality literature to look at its impact on domestic private investment, as evidence of such is currently lacking. Based on the above argument, it is anticipated that the higher the governance quality in all the six governance dimensions, the stronger the intention to invest in renewable energy. Hence, the following propositions are postulated.

Proposition 4: *Voice and accountability is associated with intention to invest in renewable energy.*

Proposition 5: *Political stability and absence of violence/terrorism* is *associated with intention to invest in renewable energy.*

Proposition 6: *Government effectiveness is associated with intention to invest in renewable energy.*

Proposition 7: *Regulatory quality is associated with intention to invest in renewable energy.*

Proposition 8: *Rule of law is associated with intention to invest in renewable energy.*

Proposition 9: *Control of corruption is associated with intention to invest in renewable energy.*

Investment Factors (Risk and Tax Incentives) and Intention to Invest in Renewable Energy

Perceived risk is the view of financial asset risk by investors, considering their experience and concern. It is the belief of rationality or otherwise held by a person, a group or a society about the possibility of risk to occur and its effect (Sindhu & Kumar, 2014). This affects intention into capital investments. However, in the general field of finance, attitude toward risk was used to measure risk perception by investors (Kahneman & Tversky, 1979; Mayfield et al., 2008).

Studies conducted to date have provided handy insights about the influence of perceived risk on intention to invest (see for example, Trang, 2017; Vuk, 2017; Abdeldayem, 2015; Wang, 2014; Ali, 2011).

In general, the literature established the association of perceived risk and intention to invest. However, the dynamic correlation between perceived risk and investment intention of individuals has not received adequate attention. Therefore, this study aims to extend perceived risk literature by looking at its effect on intention to invest in renewable energy, as evidence of such is currently lacking. Based on the above argument, this study anticipates that perceived risk could influence intention to invest in renewable energy. Therefore, the following proposition is postulated.

Proposition 10: *Perceived risk is associated with intention to invest in renewable energy.*

Tax incentives are a source of encouragement for new capital investments (Bonucchi, Ferrari, Tomasini, & Tsenova, 2015). It explains the number of government reliefs and allowances granted to attract investors into a particular investment or maintain existing investors in an investment fold. Empirical research to date have provided important insights about the influence of tax incentives on intention to invest (see, for example, Bonucchi et al., 2015; Munyanyi & Chiromba, 2015; Babatunde, 2012; Parys & James, 2010; Tung & Cho, 2000).

Overall, the literature established the association of tax incentives and intention to invest. Nevertheless, the vital interaction between tax incentives and intention of individuals to invest has not received sufficient attention. Thus, this study focuses to extend tax incentives literature by looking at its effect on intention to invest in renewable energy, as evidence of such is currently lacking. Based on the above argument, this study anticipates that tax incentives could influence intention to invest in renewable energy. Thus, the following proposition is postulated.

Proposition 11: *Tax incentives are associated with intention to invest in renewable energy.*

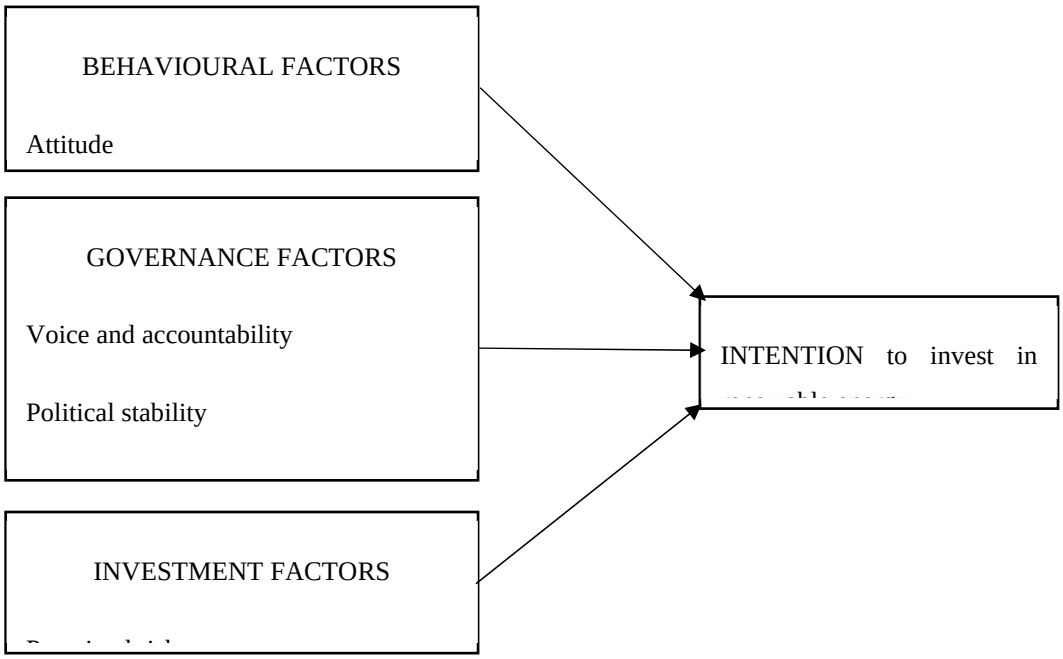
Framework

A lot of empirical studies was conducted using the TPB model in various areas, such as, Islamic micro-finance (see for example, Albashir, Zainuddin, & Panigrahi, 2018; Maulana, Razak, Adeyemi, 2018). Takaful (see for example, Sapovadia, 2017; Husin, Ab Rahman, 2016; Muhammad, 2016). Online purchase behaviour (see for example, Chen, 2009; Hansen, 2008). Taxation (see for example, Sudiartana & Mendra, 2018; Shaharuddin, Palil, Ramli, & Maelah, 2012). E-payments (see for example, Husnil, 2016; Ting, Yacob, Liew, & Lau, 2016). E-filing

(see for example, Tallaha, Shukor, & Hassan, 2014; Ramayah, Yusoff, Jamaludin, & Ibrahim, 2009).

Additionally, in the area of investment, the model is not only been used but also extended to incorporate additional variables to further describe intention to invest. For instance, Das (2019), extend the model to incorporate financial knowledge and personality traits to study individuals' intention to invest in the Indian capital market. Ali (2011), incorporated perceived risk, perceived returns and perceived trust into the model in a study he conducted in Australia to understand intention to invest in the stock market among individuals. Furthermore, East (1993), extended the model to include past experience in his effort to understand individuals' intention to invest in the electricity sector in the United Kingdom.

However, in the context of intention to invest in renewable energy, evidence of deploying and extending the model to incorporate governance factors (voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption) and investment factors (perceived risk and tax incentives) is currently lacking, thus, the current study is timely. Figure 1 shows the proposed theoretical framework.



Proposed Theoretical Framework

Proposed Methodology

Survey questionnaire will be the instrument of data collection to be administered to the targeted respondents, who are key conventional energy stakeholders from energy related Ministries, Agencies and Electricity Distribution Companies. Seven Likert scale rating will be used and measurement items will be adopted from previous studies. Unit of analysis is individual and SPSS and SmartPLS will be the statistical tools to be used to analyse the data.

Conclusion

This paper has proposed a comprehensive framework to determine the intention of conventional energy stakeholders to invest in renewable energy by extending the TPB model to incorporate governance and investment factors as depicted in Figure 1. If the proposed theoretical framework is validated, it is anticipated that the outcome will provide meaningful insights to policy makers and investors and will contribute to the general body of knowledge.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
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EXAMINING THE MAIN AREAS OF ENVIRONMENTAL AWARENESS, SUSTAINABILITY AND CLEAN ENERGY

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Abstract

The relevance of sustainability, renewable, clean and affordable energy has become indisputable in recent decades. Efforts to invest in clean energy have been reinforced by both EU and local regulations. However, we need to understand that sustainability is a very complex system with many indicators. Therefore, it is also necessary to address the problems that threaten sustainability and the main objectives that need to be set in order to solve them, first partially and then fully. In order to contribute to solving problems as individuals, we need to do our fair share as well. This representative primary research investigates the local population living in the micro-region of Gyöngyös which can be found in the Northern Hungary region, focusing on their general knowledge about renewable energy sources, whether they use them in their everyday life and, if so, what financial resources they use to implement them.

Keywords: Renewable Energy Investments, Sustainability, Sustainable Development Goals

Introduction

What is happening in the world shows how renewable energy, environmentally conscious lifestyle and sustainability are playing an increasing role in our lives. Not only the renewable energy usability itself but the topic of sustainability development has become one of the most important issues in environmental policy. Both European Union and national requirements are becoming more and more demanding in terms of future targets. When we focus on sustainability, we need to think in long term and keep attention to the basic conditions.

It follows from the above that sustainable development can only be achieved by reconciling a wide range of economic, social and scientific considerations and objectives. However, this

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raises the question of whether sustainability can be measured, and if so, by what indicators and how precisely. There are several methods and indicators for the general measurement of sustainability and for the measurement of the use of natural resource and the ecological impact of a product. Some of these are related to the traditional measurement systems of economic and social development. On the other hand, others are based on their rejection and exceeding.

The most common indicators used to measure full or partial sustainability can be:

1) traditional indicators of economic and social development: GDP, HDI, GNI, GINI;

2) sustainability indicators on environmental pressure: ecological and thematic footprints;

3) alternative indicators of development and well-being: ISEW, GPI, GNH, HPI[1].

One of the above mentioned condition is the world population growth, which is the biggest trend-making factor. In practice this means 65 to 80 million more people annually (Max et al., 2017), exceeding 8 billion by 2024, and 9 billion by 2037[2]. Even if there are several countries that have decreasing populations (e.g. Ukraine, Romania, Hungary, Portugal, Bulgaria, Serbia, Croatia, Georgia), carefully paying attention to the circumstances, this kind of rapid growth raises a number of issues, related to globalisation, urbanisation, environmental sustainability and demand for food products including animal feed which arises from increasing meat consumption (Philip, 2017). This moving production to the most competitive regions causes the food trade to become more liberalized and concentrated (Magda, 2012).

However, we also face other problems affecting human life on a daily basis, such as extreme poverty, increasing pollution of clean water and fresh air, malnutrition and starvation (Klaus von Grebmer et al., 2018). As an example, one of the development goals – which were adopted by the 55th General Assembly of the United Nations (FAO) on 6th September, 2000 – was to reduce poverty by 50% by 2015. The targets set could not be met, as more than 1 billion people still live in extreme poverty (20% of the world's population lives on less than 1 dollar a day); 700 million people are malnourished; 120 million children have no chance of getting an education and more than 20% of the world's population does not have access to clean drinking water (Fróna, 2020). Even greater problem can be that these mentioned issues will be increasing

[1] Traditional indicators of economic and social development and their critique are discussed in the book of Baranyai & Csernus (2018): Sustainable development and the role of the state.

[2] http://nepesseg.population.city/world/ – Downloaded: 24th May 2021

further in the future. From Table 1 we can see that the biggest problem occurs in the case of less and the least developed countries, where this increase is higher than the avarage cases (Magda et al., 2015).

Table 1. World population change between 1950 and 2050

	1950	**2000**	**2003**	**2050**
Total (million)	2519	6071	6301	8919
Developed countries	813	1194	1203	1220
Less developed countries	1706	4877	5098	7639
Least developed countries	200	668	718	1675

Source: *Magda, R. – Bozsik, N. – Erdélyi, T. (2015): Sustainable green innovation, pp. 8-9.*

Note: 1) Less developed countries: each African, Asian country exclusive of Japan, Latin-America and Caribbean region. 2) Developed countries: each European countries, North-America, Australia, New-Zealand and Japan.

In the case of some estimates and predictions, around 80% chance of a food shock that reduces global food production by about 10% and about 10% chance of total food production loss, which can happen within this century (Bailey et al., 2015, Denkenberger et al., 2017). In fact, looking further into the issue, it becomes apparent that these are combined with a number of serious environmental changes including the declining soil fertility, desertification, forest depletion, unsustainable rates of water usage, air pollution, the disappearance of animal habitats, the meltic of Artic ice and many more mentionable case.

Therefore, it is clear that existing sustainability challenges, such as the ever-increasing demand for energy and the ecosystem changes associated with climate change, also influence peoples' behaviour and attitudes towards environmental awareness and sustainability (Tatjana et al, 2020). Therefore, the question rightly arises, how can we contribute to taking these challenges in a positive direction?

The 2030 Climate and Energy Framework of the European Union

Answering the question is not a simple task because as mentioned above, sustainability factors are a very complex issue. First of all, a good starting point if we take into account the energy framework of EU. But before we examine the EU's climate and energy framework for 2030, it is also worth mentioning the main key objectives of the 2020 package.

The 2020 package was a set of laws passed to ensure the EU meets its climate and energy targets for the year 2020. The package were set the following key targets: 20% cut in greenhouse gas emissions (from 1990 levels), the 20% of EU energy should be from renewable energy sources and 20% improvement in energy efficiency. These targets were set by EU leaders in 2007 and enacted in legislation in 2009. The EU was taking action in several areas to meet the targets[3]. It is clear, therefore, that the 2020 package already included significant expectations for the regulation of environmental sustainability and the development of environmental aspects.

Further developing the previous 2020 package, the 2030 climate and energy framework includes EU-wide targets and policy objectives for the period from 2021 to 2030. As part of the European Green Deal[4], the Commission proposed in September 2020 to raise the 2030 greenhouse gas emission reduction target, including emissions and removals, to at least 55% compared to 1990. It looked at the actions required across all sectors, including increased energy efficiency and renewable energy, and started the process of making detailed legislative proposals by July 2021 to implement and achieve the increased ambition. This will enable the EU to move towards a climate-neutral economy and implement its commitments under the Paris Agreement by updating its Nationally Determined Contribution.

Key targets for 2030 are the following: at least 40% cut in greenhouse gas emissions (from 1990 levels); at least 32% share for renewable energy; and at least 32.5% improvement in energy efficiency. All three pieces of climate legislation will now be updated with a view to

[3] European Union (2020): 2020 climate and energy package, https://ec.europa.eu/clima/policies/strategies/2020_en – Downloaded: 25th May 2021

[4] The *'European Grean Deal'* provides an action plan to boost the efficient use of resources by moving to a clean, circular economy; restore biodiversity and cut pollution. The plan outlines investments needed and financing tools available. It explains how to ensure a just and inclusive transition, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en – Downloaded: 25th May 2021.

implement the proposed at least 55% net greenhouse gas emissions reduction target. The Commission will come forward with the proposals by July 2021[5].

The EU aims to be climate-neutral by 2050 – an economy with net-zero greenhouse gas emissions. This objective is at the heart of the European Green Deal and in line with the EU's commitment to global climate action under the Paris Agreement. The transition to a climate-neutral society is both an urgent challenge and an opportunity to build a better future for all. All parts of society and economic sectors will play a role – from the power sector to industry, mobility, buildings, agriculture and forestry. The EU can lead the way by investing into realistic technological solutions, empowering citizens and aligning action in key areas such as industrial policy, finance and research, while ensuring social fairness for a just transition. The Commission set out its vision for a climate-neutral EU in November 2018, covering nearly all EU policies and is in line with the Paris Agreement objective to keep the global temperature increase to well below 2°C and pursue efforts to keep it to 1.5°C as possible[6].

Sustainable Development Goals of the European Union

It may now become more visible that the future goal of the EU is clear on these challenges. The political and economic influence of the EU, which includes twenty-seven Member States, is indisputably decisive for the international developments of the 21st century. This calls for a clear, practical and, above all, effective response from the EU to the challenges of the complex issue of sustainability, including the recently declared *'EU climate action policy – Responding to the global emergency'*[7].

Sustainability encompasses the environmental, social and economic subsystems, and is essentially about achieving a balance between economic development, environmental protection and social and human factors, while taking responsibility for future generations (Baranyai & Csernus, 2018). Sustainable development issues have already been addressed in

[5] European Comission (2021): Climate action - 2030 climate and energy framework, https://ec.europa.eu/clima/policies/strategies/2030_en – Downloaded: 25th May 2021.

[6] European Comission (2021): 2050 long-term strategy of European Union, (https://ec.europa.eu/clima/policies/strategies/2050_en - Downloaded: 25th May 2021.

[7] European Parliament (2021): European Union climate action policy, https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_STU(2021)689378 – Downloaded: 25th May 2021

previous years in various strategy documents, in action programmes at EU and national level, and in EU environmental and other policy legislation. While the EU has never been unconcerned about the challenges of sustainability - as evidenced, for example, by its report on the *'Environmental health risks of air pollution'*[8] - it is clear that not all Community initiatives have been success stories, and that the environment as a complex phenomenon is a very broad regulatory area with a thousand links to the economy and social security (Horváth, 2020).

„The EU and the United Nations are natural partners in the efforts to shape a safer and better world for all. To that end, the EU supports effective multilateralism and a rules-based international order with the UN at its core. As a major negotiating success of the EU, the Sustainable Development Goals (SDGs) are a useful vehicle to project globally the EU's values and objectives, and provide a shared framework, useful for international partnerships" – says the European Comission in the 2030 Agenda for sustainable development. Worth mentioning that this Agenda is a plan of action for people, planet and prosperity, which also seeks to strengthen universal peace in larger freedom. In addition one of the most interest of the EU's is to play a leading role in the implementation of the 2030 Agenda globally through its external action[9].

In September 2015, at the United Nations General Assembly, countries around the world signed up to the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (Figure 1). The 2030 Agenda, together with the Paris Agreement on Climate Change, are the solution to a better world and the global framework for international cooperation on sustainable development and its economic, social, environmental and governance dimensions. The importance of consistently progressing towards the SDGs and engaging with partner countries and civil society as well as the Union's representation at high-level international forum, including the United Nations on Sustainable Development, which is crucial to advance the EU's commitment to sustainable development[10].

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[8] European Court of Auditors (2021): Air pollution – Our health still insufficiently protected, https://op.europa.eu/webpub/eca/special-reports/air-quality-23-2018/en/ – Downloaded: 25th May 2021

[9] European Comission: Sustainable Development Goals (2021),

https://ec.europa.eu/info/strategy/international-strategies/sustainable-development-goals/eu-and-united-nations-common-goals-sustainable-future_en – Downloaded: 25th May 2021

[10] United Nations (2021): Transforming our world – The 2030 Agenda for Sustainable Development,

Figure 1. The 17 main elements of Sustainable Development Goals, 2021



Source: https://sdgs.un.org/goals - Downloaded: 25th May 2021

The 17 Sustainable Development Goals and 169 targets demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what those could not achieve. They seek to realise the human rights of all, achieve gender equality and the empowerment of all women. They are integrated, indivisible and balancing the three dimensions of sustainable development: more specifically the economic, social and environmental dimensions[11].

The Goal 7 of SDGs focuses on to ensure access to affordable, reliable, sustainable and modern energy for all. Briefly highlighting the most important parts, the Agenda aims to achieve the following points: by 2030, ensure universal access to affordable, reliable and modern energy services; increase substantially the share of renewable energy in the global energy mix; double the global rate of improvement in energy efficiency; enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy sources, energy efficiency, advanced and cleaner fossil-fuel technology, investment promotion in energy

https://sdgs.un.org/2030agenda – Downloaded: 24th May 2021

[11] United Nations (2021): Transforming our world, the 2030 Agenda for Sustainable Development, https://sdgs.un.org/2030agenda - Downloaded: 24th May 2021

infrastructure and clean energy technology; and the last one is to develop infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support (Nurunnabi et al., 2020).

By now, a significant amount of international and national research is dealing with the rates of renewable energy use, as well as the opinion of the population in the case of environmental protection, environmental awareness and sustainability.

In relation to the ambitions set out by the EU, the problem I have raised is also that polluting and irresponsible energy-wasting behaviour will lead to the depletion of natural resources in the long term. For this reason, alternative energy sources must increasingly be the focus of attention, rather than fossil energy sources.

The methods, sapling technique, main circumstances, location and the hypotheses of the research are described in the Material and Method chapter.

Material and Method

During my research, my main initial goal was to assess and examine the potential of green and renewable energy use and application in the Northern Hungary region, such as electricity generation, fuel use (biodiesel, bioethanol), geothermal heat (thermal water), passive and active solar energy (solar collector systems), hydropower (hydroelectric power plants, water turbines), and wind energy (wind power, wind turbines).

I have combined this with the topics of environmental protection, attitudes to environmental lifestyles and environmental sustainability. After starting the research - thanks to the results obtained - I narrowed down the research area to the latter topic, and geographically to Heves County and then to the micro-region of Gyöngyös, because this gave me the opportunity to conduct representative primary research.

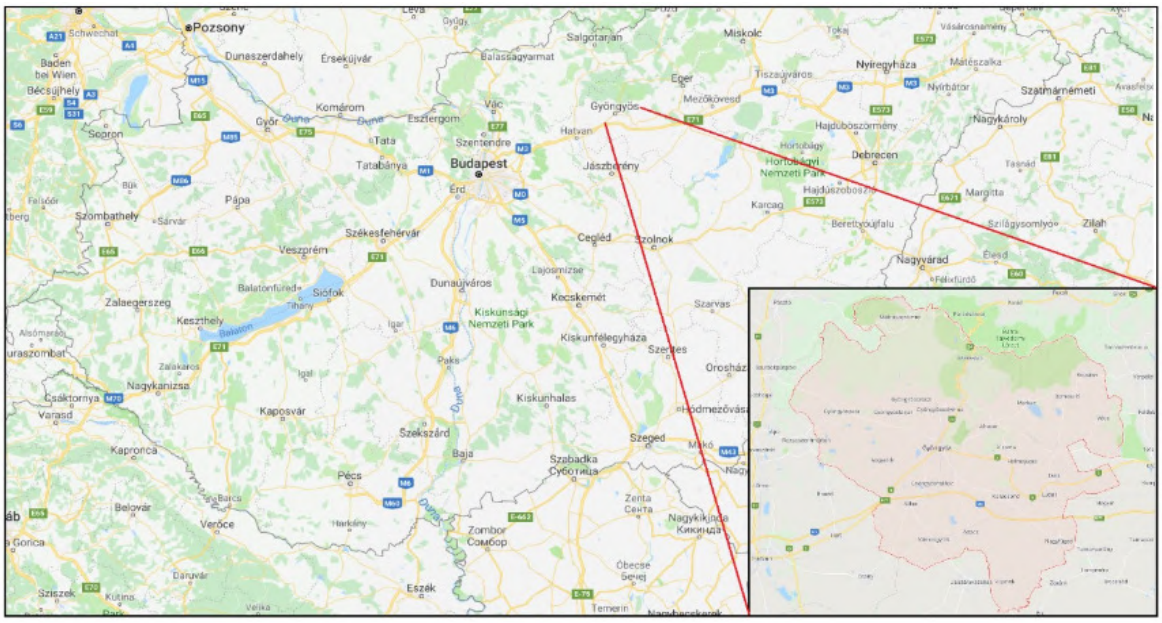
The micro-region of Gyöngyös, with an area of 751 km^2, is located in the Heves County area of the North-Hungary region (Figure 2). Out of the 25 settlements in the micro-region, the nearest is about 76 km far from Budapest.

Two towns, Gyöngyös and Gyöngyöspata, are located in the micro-region of Gyöngyös, while the other 23 settlements are registered as villages. According to 2018 data, the population of the micro-region is 69,833 which decreased by an average of 600 persons annually from 2011 to 2016, and then reduced by 135 persons annually by 2018, but the population of the micro-region continues to fall.

In 2005, the population was 77,249 but mainly due to the capital's labour drain, this number has decreased to about 69,833 in 2018 (TeIR, 2020). By the end of 2016, there was a positive change, as new factory buildings were built and other major companies (e.g. Apollo Tyres, Procter & Gamble) started their activities.

Since 2005, one of the biggest unresolved problems of the micro-region is its inability to compete with the wages of similar jobs in the capital and its agglomeration. As a result, a significant proportion of the active workers in the micro-region spend up to 2-3 or more hours a day commuting (100-160 km) rather than strengthening the labour market at micro-region level (Kassai and Ritter, 2011).

Figure 2. Location of the micro-region of Gyöngyös



Source: Own editing based on Google Maps, 2020

In the questionnaire I used a stratified random sampling technique, based on gender and age. I examined the distribution of gender and age proportions at the level of settlements and then carried out the sampling on the basis of these distributions.

I surveyed local inhabitants in all 25 settlements in the micro-region of Gyöngyös, in relation to their share in the total population of the region, using a questionnaire designed for them from late 2019 to early 2020, with the focus on the following topics:

- their general knowledge of renewable energy, their residential use, their investments, and the amount of energy saved per month;

- the amounts invested in renewable energies, the payback period and the purpose of the investments;

- methods to reduce efficient energy consumption and environmental impact.

Since my whole research consists of three major parts (1. primary, secondary and university students in the micro-region; 2. local governments, and 3. local population), in this article I will only focus on the main results of the population survey.

On the basis of my own practical experience and preliminary research, I seek to confirm/reject the following hypotheses:

H1: The knowledge of the population living in the examined area about renewable energy and the use of renewable energy sources is low.

H2: Within the examined population, the investments of renewable energy users are mostly accomplished by their own financial resources.

H3: The average monthly savings from renewable energy investments of the examined local population is less than HUF 25,000 (EUR 70).

The main results related to the hypotheses and GOAL 7 are presented in the Results and Discussion chapter.

Results and Discussion

In order to be representative, I surveyed the population of the 25 settlements in proportion to the total population of the micro-region. The population questionnaire was completed by 468 respondents, of which 10 could not be evaluated due to incorrect completion or lack of interest,

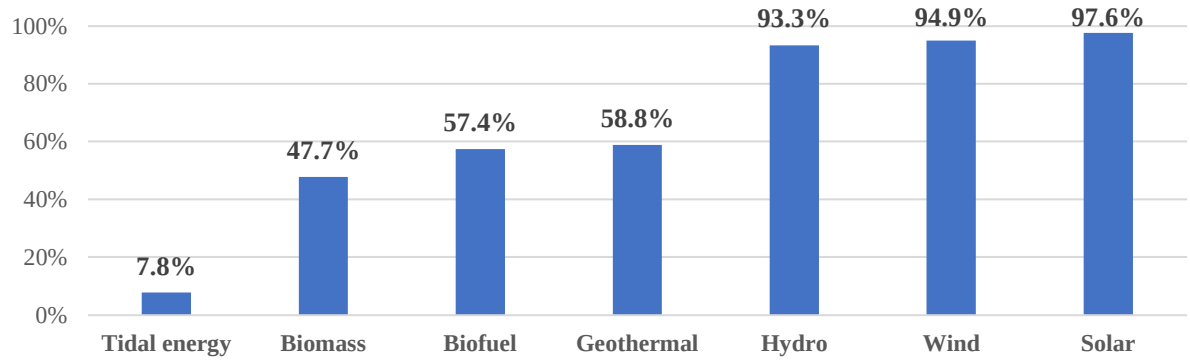
resulting in a final response rate of 458[12] respondents, of which 51% were female and 49% male.

As first question, I used an open but simple question, asking what renewable energy means to the respondents. According to the answers given by the survey residents, the term of ’renewable source’ means the following to them:

- natural resources, renewable energy (non-fossil energy) such as solar, hydro, wind and geothermal energy, i.e. all resources that do not run out;
- it also means to them as key terms which are related to environmental protection, environmental policy, environmentally conscious living that constantly present in their lives;
- in concrete terms, they also understand it to mean energy resources that are available in unlimited quantities in nature, that are continuously available through natural processes, that do not pollute/destroy the environment and that are renewable;
- and finally, it also means energy saving and improvement in life quality to them.

I was also curious about which types of renewable energy are known, especially to the meaning of renewable resources. The option of tidal energy also included in addition to the six response options, which was defined afterwards because 7.8% of respondents identified it as a category of 'other' (Figure 3).

Figure 3. Distribution of the surveyed population by the renewable energy sources they know (%)



Source: Own research and editing, 2020

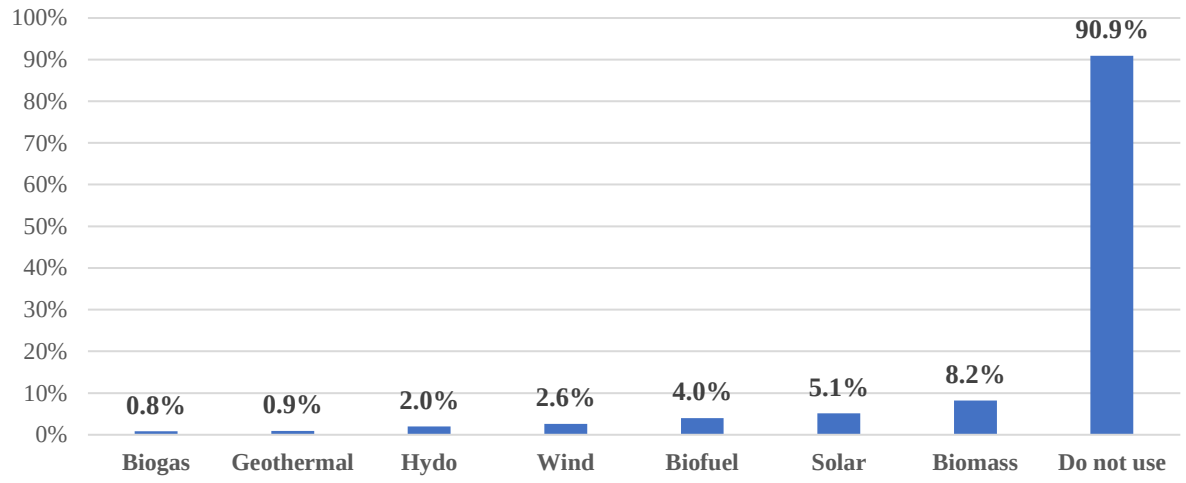
Note: More than one answer could be marked!

[12] Where the range of respondents is incomplete (e.g. whether they have made an investment in renewable energy), the item number is shown separately in the results.

The results clearly show that overall knowledge of biomass (47.7%), biofuels (57.4%) and geothermal energy (58.8%) is significantly lower than for hydro energy (93.3%), wind energy (94.9%) and solar energy (97.6%). In the questionnaire survey, residents of Abasár, Detk, Gyöngyös, Gyöngyössolymos, Nagyréde, Pálosvörösmart and Visonta had a more comprehensive knowledge of renewable energy, while in the other settlements they had much less general knowledge.

The third question in the residential questionnaire was about personal use of renewable energy, which restuls can be seen on Figure 4.

Figure 4. Distribution of the surveyed population by renewable energy use (%)



Source: Own research and editing, 2020

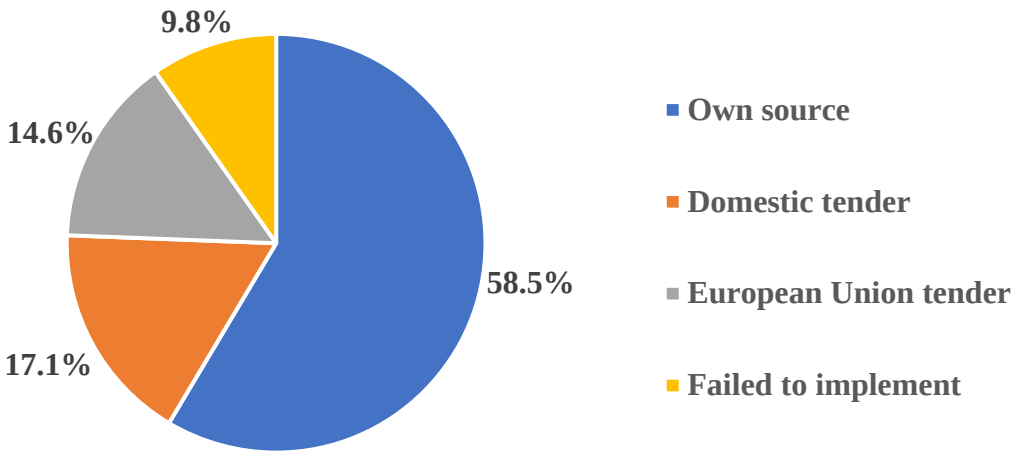
Note: More than one answer could be marked!

The results show that a very small proportion of the population uses only some form of renewable energy. Only 5.1% use some form of solar energy (typically solar panels), the most well-known energy source. The 2.6% use of wind energy is less surprising, as wind energy (e.g. wind turbines) is not used in Hungary as a whole due to less favourable weather conditions. As the vast majority (90.9%) do not use any form of renewable energy, for the following questions I will present the answers of those who do use some form of renewable energy.

For residents who use renewable energy sources, I used an open question to investigate the sources of the investments. Based on the responses received, I identified four different sources of applications (Figure 5), with a total distribution of 100%, as each respondent had typically

participated in only one application or had made one renewable energy investment by the time the research was conducted.

Figure 5. Distribution of the investments of the examined population in renewable energy sources, in terms of financing (%)



Source: Own research and editing, 2020, n=41

Most of them - around 58.5% - made investments in renewable energy from their own resources. In addition, 17.1% of the respondents had successfully applied for and won a national (domestic) tender (TÁMOP[13], KEHOP[14]) and 14.6% had implemented a European Union tender[15]. In terms of results, 9.8% had applied for a renewable energy investment but failed to implement the application due to rejection or failure to meet the conditions set out in the application.

It is understood that the results are also influenced by factors such as the energy source, the amount of energy used and the technology used, but I was not able to go into the details of this in this research, but it is an objective of my future research.

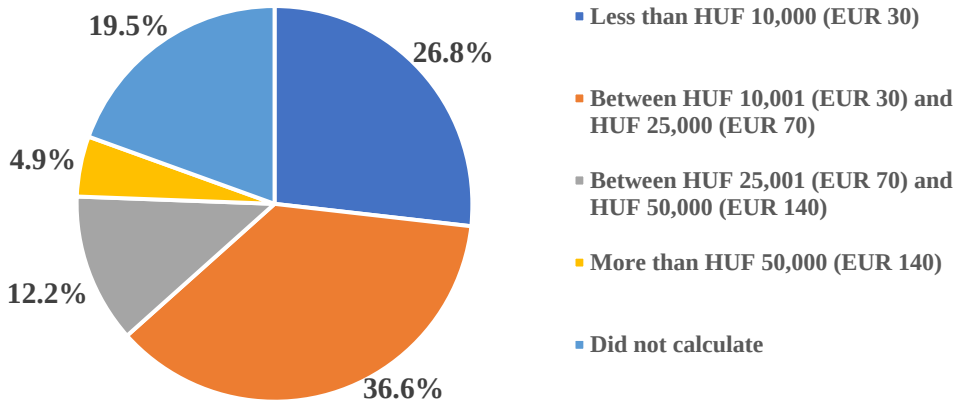
[13] The ’Társadalmi Megújulás Operatív Program’ abbreviation is ’TÁMOP’, which can be translated to Social Renewal Operational Programme.

[14] The ’Környezeti és Energiahatékonysági Operatív Program” abbreviation is ’KEHOP’, which can be translated to Environment and Energy Efficiency Operational Programme.

[15] In the case of the European Union Programmes, the following can be mentioned from a research perspective: Customs Control Equipment Instrument (CCEI), Creative Europe (CREA), Customs Programme (CUST), Programme for the Environment and Climate Action (LIFE), Promotion of Agricultural Products (AGRIP).

Figure 6 shows the monthly average energy savings achieved by the investments compared to the previous consumption expenses of the population under study.

Figure 6. Distribution of average monthly savings (in HUF) from renewable energy investments in the responding households (%)



Source: Own research and editing, 2020, n=41

About 26.8% of the average monthly savings are less than HUF 10,000 (less than EUR 30[16]). For most of the respondents (36.6%), the savings are between HUF 10,001 and HUF 25,000 (between EUR 30 and EUR 70). Savings higher than this were much less common. 12.2% of respondents have savings of between HUF 25,001 and HUF 50,000 (between EUR 70 and EUR 140) and far fewer (4.9%) have average monthly savings of more than HUF 50,000 (more than EUR 140). 19.5% of those who did not deal with the difference in savings or did not calculate it.

Conclusions

Increasing the promotion of sustainability and the use of renewable and clean energies are among the visionary goals. The article highlighted that although sustainability is measurable and has a number of indicators, it is still a very meaningful and complex issue.

[16] Based on EUR / HUF exchange rate as of 25th May 2021.

Solving this area is also one of the EU's objectives, one phase of which was the implementation of the key targets of the 2020 package, and will pursued further in the 2030 climate and energy framework. It is visible that the future goal of the EU is clear on these challenges, therefore the Sustainable Development Goals are a useful vehicle to project globally the EU's values and objectives, and provide a shared framework. Goal 7 focuses on the importance of affordable and clean energy topic. For me, this is important because my own research and related findings seek to find answers to the questions that arise in this area.

Only a part of my representative research is presented in this article, but these results answer the three hypotheses I have formulated. After summarising the research results and comparing the hypotheses, the following conclusions can be drawn.

The H1 – The knowledge of the population living in the examined area about renewable energy and the use of renewable energy sources is low – is linked to the first and second questions of the questionnaire, the results of which show that the local residents interviewed are mostly only aware of solar, wind and hydro energy as renewable energy sources. Only about half of the respondents have knowledge about biomass, geothermal energy, biofuels, and less than 8% know the meaning of tidal energy. The results show that this hypothesis has been confirmed.

The results of Figure 5 are the most relevant to test the H2 – Within the examined population, the investments of renewable energy users are mostly accomplished by their own financial resources. The results show that 58.5% of the local residents surveyed are indeed using their own financial resources for their renewable energy investments. Only 31.7% of them have implemented renewable energy projects with domestic or EU funding (mostly KEHOP, TÁMOP, CREA, LIFE or AGRIP). Therefore, based on the results, I consider this hypothesis to be confirmed as well.

The results in Figure 6 help to test H3 – The average monthly savings from renewable energy investments of the examined local population is less than HUF 25,000 (EUR 70). The results of the survey question show that 26.8% of the respondents save less than HUF 10,000 (EUR 30) per month and 36.6% save between HUF 10,001 and HUF 25,000 (between EUR 30 and EUR 70) per month. Adding these two categories together, a total of 63.4% of respondents can actually save less than HUF 25,000 (EUR 70) per month, confirming this hypothesis.

The results of the research are certainly relevant, as they represent a general picture not only of the local population's attitude towards renewable, affordable and clean energy sources, but also

of whether they plan to develop or invest in them in the future. Therefore, it is clear that further research in this direction is strongly recommended.

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CHAPTER 8

GOAL-8: DECENT WORK AND ECONOMIC GROWTH

A STUDY ON THE ROLE OF INDIAN STOCK MARKET IN FOSTERING IN SUSTAINABLE DEVELOPMENT & ECONOMIC GROWTH

Arti CHAUHAN[1]

SDG 8 Promote prolongs inclusive and economic development, complete and efficient and decent occupation for all. To accomplish these goals and further encourage growth, there is a need to understand how the financial market bridges the gap between those who have the excess of money with those in need of money, which ultimately leads to economic flow. This paper focuses on how the financial institution sets a way out for monetary growth and standard work. Economic growth is one of the fundamental precepts of SDG 8. Working on factors how the financial institution, vitally focusing on the stock market, is leading changes in the three following domains: Economical, Ecological & social issue. This study considers the Qualitative and Quantitative techniques for analysing problems. An inside-out research is made to know the informal variables affect domains to achieve the sustained target. To study informal economy concerning small and medium enterprises, green finance, by Considering market exchange & by using grounded theory and descriptive parametric statistical techniques.

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Introduction

The well-evolved and steadily handled financial market plays a vital role in the growth and efficiency of a country. It helps in the efficient direct rise of savings and investments in the economy, accelerating the conglomeration of capital and contribution in the production of goods and services. The financial market addresses corporate, manufacturers, and the governmental unit approach to capital. The prospect of a financial market is to set values for international trade, gain capital, and avert liquidity and risk. One of the essential elements of a well-functioning financial system is the stock market. Indeed, rapid practical trade by Goldsmith (1969), Mckinnon (1973), & shaw (1973) considerable evidence that progressive financial policies correlated positively with growth.

Indian market capitalization accounts for 76.8% last year and 76.8% in 2019 of its nominal GDP. In FY21, investor capital on the Bombay stock exchange has surpassed the entire GDP of India at current prices, probably making stock market investors richer than the world's sixth-largest economy. India's aspirations to become a US$ 5-trillion economy by 2024 are probable on the steady growth of its Gross Domestic Product (GDP). To this, possibly the most fearful challenge is climate change. While India has adopted several fiscal and policy measures to address this challenge, increasing green investments at this scale will need a more intensive focus of India's financial system towards green sectors (UNEP Inquiry, 2015).

The second section which Indian financial system should look over is small and medium enterprises as the growth in the quantity of dedicated SME platforms and associated services

suggests a global effort to support the potential of this portion of the economy. The tentative explanation for the link between the financial economy and the real economy is that financial market development promotes economic development by fostering capital mobilization and allowing risk-sharing and risk transfer. However, researchers are still investigating to empirically confine how stock exchanges and other financial intermediaries impact economic development. Some strands of research have advised that markets intensify capital collection (see Bencivenga and Smith, 1991) while others focus on the impact on productivity (Levine and Zevros, 1998), more effective resource allocation (Rajan and Zingales, 1998), and greater competition and change (Hsu, Tian, and Zu, 2014)20.

Statement of Problem

First, an inadequate understanding outside the financial sector and specific policies of what exchanges do and how they donate to valuable economic and societal outcomes. Second, while the academic literature agrees that there is a positive link between well-functioning financial markets and economic development, there is no blueprint to support this sector in promoting sustainable growth by focusing on a decisively labeled segment like small and medium enterprises and green finance.

Given the potential of exchanges in contributing to economic development, it is essential to enhance the understanding of exchanges and how they administer and work against creating environments that assure the development of well-functioning exchanges. Thus, this paper covers many of the significant economic aspects of the link between sustainable growth and the financial market.

Objectives

1) To examine various roles of financial system that leads to economic development.

2) To examine how Indian stock exchange promotes sustainable development aligning with green finance.

3) To study how Indian stock market is functioning with the SMEs in India for sustainable development.

Conceptual Framework and Data Interpretation

Sustainable Development is generally described as being set up on three equally important pillars:

Pillar 1: Social Development: To have a sustainable prospective, the needs of people must be found equally.

Pillar 2: Ecological Protection: Sustainable human motion protects the Earth’s environment to make sure it does not harm future generations.

Pillar 3: Economic progression: People around the world grade the best standard of living that is sustainable.

Stock exchanges can hand out in two main structures: The first is assisting good governance in Business act and the second is stimulating investment in sustainable development. Good governance in the twenty-first century measures good action on environmental, social. And corporate governance problems, which many investors relate to as 'ESG' subject. Policy creators, investors, and clients increasingly demand it. Stock exchanges have a substantial role to play in this area. They have traditionally been accountable for serving to form well-regulated markets with transparent, well-controlled companies. And today, stock exchanges are helping companies adopt best practices on ESG issues and adopt green finance. With the proper policies in place, exchanges can play a significant role in fostering economic advancement and innovation have well-operational exchanges fit for a motive.

This paper sets the standard for eventual workaround policies and activity to augment the development supplement of stock exchanges. Thus, the objective outlines the two important segment factors, i.e., economic growth and ecological development. The growth of small-medium enterprises (SMEs) is an essential element in the overall development of the economy. And benchmark indexes in India promoting sustainable development by adopting various initiatives and tools to promote improved environmental, social, and governance disclosure and performance among issuers. This includes involvement in developing new ESG-themed financial products and information services such as green bonds and ESG indices.

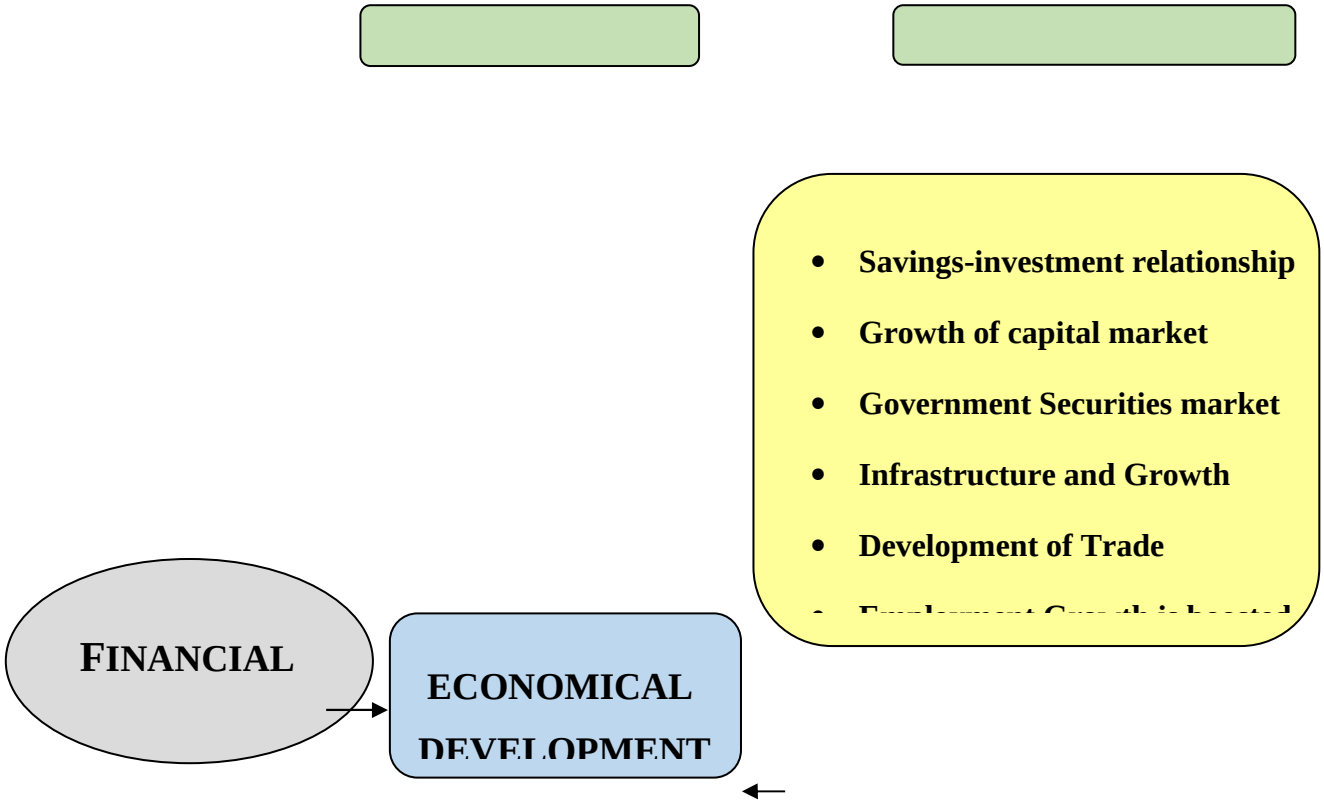
But why stock exchange platform is to be further assisted in this study to ascertain various objectives to attain sustainable development goal on decent work and economic growth & the reason is as follows:

Framework 1

The very first of the study involve identifying and determining various roles of financial system which derives economic development.

Research tool: the examination was scale poll that incorporated the incidental to sorts of scales and questions. Likert scale (Strongly Agree/Agree/Disagree/Strongly Disagree). For analysis of the information, SPSS was utilized. Correlation analysis was used to refine information.

Sample size: Stratified random sample from the population wherein sample size is 100 & people devised into strata of knowing about financial market or professional market expert.



(Fig: 1)

Framework 1illustrate, dependent variable & independent variables related to objective one. Dependent variable showcases how financial system is connected to economic development. Independent variables like Savings-investment relationship, Growth of capital market, Government Securities market, Infrastructure and Growth, Development of Trade, Employment Growth is boosted, Venture Capital, Balanced growth, fiscal discipline, attracting foreign capital, Economic Integration, Political stability, Uniform interest rates, Technology development are the main factors of financial structure that contributes is economy development.

- **FACTOR ANALYSIS OUTPUT 1**

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.584

Bartlett's Test of Sphericity	Approx. Chi-Square	272.040	**(Fig: 1.I)**
	df	91	
	Sig.	.000	

The Fig 1.I **KMO is .584** which is above the minimum requirement and represents the sample is adequate. Even bartlett's test of sphericity **sig. level is .000** which rejects null hypothesis and render there's correlation with the variables.

Communalities

	Initial	Extraction
Politicalstability	1.000	.731
Growthofcapitalmarket	1.000	.715
GovernmentSecuritiesmarket	1.000	.391
InfrastructureandGrowth	1.000	.670
EmploymentGrowthisboosted	1.000	.813
DevelopmentofTrade	1.000	.407
VentureCapital	1.000	.673
Balancedgrowth	1.000	.748
EconomicIntegration	1.000	.731
Attractingforeigncapital	1.000	.751
Fiscaldisciplineandcontrolofeconomy	1.000	.813
Savingsinvestmentrelationship	1.000	.705

Uniforminterestrates	1.000	.506
Technologydevelopment	1.000	.832

Extraction Method: Principal Component Analysis.

(Fig: 1.II)

Fig: 1.II showcases communalities which render how much variance the variable share with other variables. One means that a common factor explains the variance. Since the above fig looking for a relatively high number here, this is a good result.

Total Variance Explained

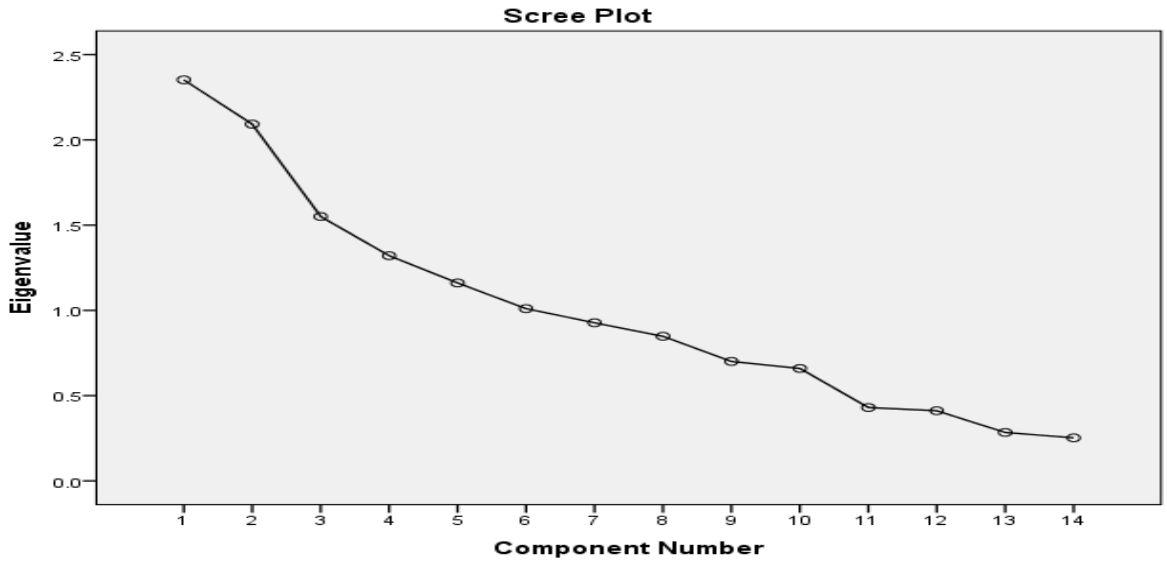
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.352	16.802	16.802	2.352	16.802	16.802	2.279	16.277	16.277
2	2.092	14.943	31.745	2.092	14.943	31.745	1.904	13.601	29.878
3	1.550	11.075	42.820	1.550	11.075	42.820	1.635	11.682	41.560
4	1.321	9.433	52.253	1.321	9.433	52.253	1.290	9.211	50.770
5	1.161	8.290	60.544	1.161	8.290	60.544	1.281	9.149	59.919
6	1.010	7.215	67.759	1.010	7.215	67.759	1.098	7.839	67.759
7	.927	6.623	74.381						
8	.848	6.058	80.439						
9	.701	5.005	85.445						

10	.659	4.710	90.155						
11	.431	3.075	93.230						
12	.411	2.939	96.168						
13	.284	2.029	98.197						
14	.252	1.803	100.000						

Extraction Method: Principal Component Analysis.

(Fig: 1.III)

Fig: 1.III Total Variance Explained, which defines fourteen components or variables collapsed under six variables, and solution providing, is up to 67.759. There are six variables with an Eigenvalue greater than 1 & other factors that have an Eigenvalue less than one does not have enough total variance explained to represent a unique factor.



(Fig: 1.IV)

Fig: 1.IV shows a screen plot graph with the Eigenvalue greater than 1. The first six factors are greater than one, same as the above table. From the seventh factor on, you can see that line is almost flat. Meaning each successive factor is accounting for a smaller amount of the total variance.

Component Matrix[a]

	Component					
	1	2	3	4	5	6
EmploymentGrowthisboosted	.830					
EconomicIntegration	.769					
Savingsinvestmentrelationship	.745					
Fiscaldisciplineandcontrolofeconomy		.713				
Technologydevelopment		.704				
DevelopmentofTrade						
Balancedgrowth			.562			
Politicalstability						
GovernmentSecuritiesmarket						
VentureCapital				.650		
InfrastructureandGrowth						
Growthofcapitalmarket					.691	
Uniforminterestrates						
Attractingforeigncapital						.765

Extraction Method: Principal Component Analysis. a. 6 components extracted. **(Fig: 1.V)**

Fig: 1.V shows the component matrix factor, which has non-overlapping variables. In case to known, the final variables with factor loading more than 0.55 indicate the factor extracts sufficient variance from the variables. In the case to know important variables of financial exchanges that contribute to economic development are depicted in factors 1 to 6 of a matrix. Factor one which constitute employment growth, economic integration & saving investment is vital components of financial structure which leads to economic development. Factor two compose fiscal control and technology development and third, fourth, fifth & sixth factors comprise balance growth, venture capital, growth of capital market & attracting foreign capital.

FACTOR ANALYSIS WITH PEARSON CORRELATON

Correlations

		ECONOMICDEVELOP	EmploymentGrowthisboosted	EconomicIntegration	Savingsinvestment	Fiscaldisciplineandcontrol	Technologydevelopment	Balancedgrowth	Venture Capital	Growthofcapitalmarket	Attractingforeigncapital
ECONOMYDEVLOP	Pearson Correlation	1	.653**	.629**	.558**	.352**	.418**	.266**	.296**	.277**	.345**
	Sig. (1-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	100	100	100	100	100	100	100	100	100	100

(Fig: 1A)

Table 1.A reveals that the employment growth ($r = .653, p<0.5$), economic integration($r = .629, p<0.5$), saving investment($r = .558, p<0.5$), fiscal discipline($r = .352, p<0.5$), technology development ($r = .418, p<0.5$), balance growth($r = .266, p<0.5$) , venture capital($r = .296, p<0.5$) , capital growth($r = .277, p<0.5$), attracting foreign capital($r = .345, p<0.5$) has a significant positive correlation with economic development.

Correlations

		ECONOMYDEVLOP	EmploymentGrowthisboosted	EconomicIntegration	Savingsinvestmentrelationship	Fiscaldisciplineandcontrolofeconomy	Technologydevelopment
ECONOMYDEVLOP	Pearson Correlation	1	.722**	.698**	.681**	.540**	.476**
	Sig. (1-tailed)		.000	.000	.000	.000	.000
	N	100	100	100	100	100	100
EmploymentGrowthisboosted	Pearson Correlation	.722**	1	.687**	.639**	.012	-.087
	Sig. (1-tailed)	.000		.000	.000	.000	.000
	N	100	100	100	100	100	100
EconomicIntegration	Pearson Correlation	.698**	.687**	1	.535**	.030	-.049
	Sig. (1-tailed)	.000	.000		.000	.000	.000
	N	100	100	100	100	100	100
Savingsinvestmentrelationship	Pearson Correlation	.681**	.639**	.535**	1	-.015	-.058
	Sig. (1-tailed)	.000	.000	.000		.000	.000
	N	100	100	100	100	100	100

Fiscaldisciplineandcontrolofeconomy	Pearson Correlation	.540**	.012	.030	-.015	1	.670**
	Sig. (1-tailed)	.000	.000	.000	.000		.000
	N	100	100	100	100	100	100
Technologydevelopment	Pearson Correlation	.476**	-.087	-.049	-.058	.670**	1
	Sig. (1-tailed)	.000	.000	.000	.000	.000	
	N	100	100	100	100	100	100

. Correlation is significant at the 0.01 level (1-tailed). **(Fig: 1B)

Table 1.B depicts correlation with financial roles and economy growth with factor one & two as they are more significantly related than other Eigen factors output. It reveals that the employment growth have strong correlation with economic development ($r=.722, p<0.5$) and economic integration ($r = .698, p<0.5$), saving investment ($r = .681, p<0.5$) & Fiscal discipline ($r = .540, p<0.5$) is moderately related to economic expansion & technology development

($r = .476, p<0.5$) is weakly correlated to economic development.

- **Hypothesis**: Financial system factors such as Employment growth, Economic integration, saving investment, Fiscal discipline, Technology development positively affects Economy growth.

- **Interpretation**:

1. Employment growth, Economic integration, saving investment, Fiscal discipline &Technology development have a significant effect on Economy growth (p<0.5).

2. Thus, we accept the hypothesis that Economy growth is positively affected by financial system factors such as Employment growth, Economic integration, saving investment, Fiscal discipline &Technology development.

Framework 2

This particular research framework focuses on second objective, mobilizing and enhancing development impact on green finance coordination with sustainable economic development in relation with Indian stock exchange NSE & BSE. Green finance is an transpire conception in the field of finance.

As Sustainable Stock exchange provides global platform where in investors, companies, regulators, policy makers and relevant international organization come together to enhance performance and issue on ESC (Environmental, Social, Corporate governance) and encourages sustainable investment and UN Sustainable development growth. Indian exchanges also contributing to that mission.

Rising economic growth rate narrow poverty, induce employment which in progress leads to high quality of living. But traditional technique of achieving notable growth figure exploits the natural environment and lead climate changes which drain the ability of meeting the future generation demands. So growth with feasibility has become crucial. Vast amount of funds are needed to finance the modification and mitigation policies of climate reform. India has embraced the 17 sustainable development goals and raised the Intended Nationally Determined contribution (INDC) in Paris agreement, and to attain those objectives and aim massive amount of investment is needed.

The analysis involve identifying and determining ESG investing scenario the India, future of ESG investing in India and indentifying various constraints of green finance.

Research tool: secondary data is used to attain objective.

a) Green finance via ESG investing scenario the India

India, in its 'Intended Nationally Determined Contribution' for the period 2021-2030, has inserted the following targets and reason out why India should converge on green finance:

- India is piled the fifth most unresisting nation to the impact of climate change with 2.5-4.5% of its GDP at risk yearly. As a result, India has the oath to reduce the carbon intensity Of its GDP by 33-35% by 2030 from its 2005 levels, but to attain this aim, India needs

  to arranged a total of $2.5 trillion over 2016-30 (MoECC, 2015). However, climate-linked

Investments from public and secret origin last confined. A forthcoming study by (CPI, 2020)

Discovers that India is enlisting less than 25% of the investment required to reach this target

- Preliminary surveys indicate that India would need around USD 206 billion (at 2014-15 prices) between 2015 and 2030 for executing adoption actions in agriculture, forestry, fisheries infrastructure, water resources, and ecosystems.
- Asian Development Bank Research on exacting the costs of climate change adaptation in South Asia shows that approximate adaptation cost for India in the energy sector singly would roughly be about USD 7.7 billion in 2030.
- Estimations by National Institution for Transforming India (NITI) Aayog designate that the mitigation activities for moderate low carbon expansion would cost around USD 834 billion till 2030 at 2011 prices.
- While this will develop, a preliminary measure suggests that at the least, USD 2.Five trillion (at 2014-2015 fees) might be required for meeting India's weather turning moves by 2030.

As per the report of the WG dated June 1, 2020, SSE is a place where securities or other funding structures are “listed” and a set of procedures that act as a filter. Selecting-in only those entities that are creating measurable social impact and reporting such implications. Further, the SSE shall be a separate segment under the existing stock exchanges. Thus, an SSE provides the infrastructure for listing and disclosure of information of listed social enterprises.

Such a framework has been implemented in various countries, and an analysis of the same can be set forth in the Indian stock market as follows:

STATE	NSE	BSE
Domestic market capitalization	2,379,901 million US$	2,373,884 million US$
SSE Partner	Yes	Yes

Guidance on ESG Reporting	Since 2014, NSE has involved with listed companies to assure compliance with business management reporting. Corporate Governance: An Emerging framework.	*BSE signed MOU with GRI for creating realization amongst companies and investors concerning ESG Disclosures. *BSE – Carbon Disclosure project (CDP) similar. * CDP India is sincerely in touch with Top 200 (BSE-200 constituents) companies to stir them to outline non financial data. * BSE being a listed corporation and one the Top 500 Companies will be classify Business Responsibility Reporting quartely.
Offers ESG related training	**NSE offers a Training Workshop on Business Responsibility Reporting (BRR), which the Centre provides for Institutional Partnerships and Corporate.. *Capacity development attempt in corporation with NSE Academy Ltd; the roll out of an E-Tool for BRR; updating of the National Voluntary instruction & organizing the annual India Business Responsibility Conclave,	BSE is arranging workshops for corporate and investors with worldwide as well as Indian partners to provide trading in the area of ESG.
Market covered by sustainability-related index	Nifty100 ESG Index. Nifty100 Enhanced ESG Index.	S&P BSE CARBONEX, S&P BSE 100 ESG

	S&P ESG India Index.	S&P BSE GREENEX
Sustainability bond listing segment	*Creating awareness on green bond issuance by ambient SEBI guidelines on green bonds to the existing unlisted as well as upcoming affair. *Informing issuers about the SEBI guidelines for assorting their bonds as green bonds; and meeting with arrangers and merchant bankers to discuss imminent green bond issuance and how the exchange can be of support to them. *A round table event on "Green Bond as a new origin of funding" was organized on April 28, 2016 at NSE premises in alliance with Climate Bonds Initiative, FICCI, GII, UNEP Inquiry and USAID.	The Bombay Stock Exchange (**BSE**)'s international arm, India International Exchange (India INX), announced in 2019 its absolute green listing and trading platform called Global Securities Market (GSM).
Regulatory model	The responsibility of the Securities and Exchange Board of India (SEBI) is to protect the interests of investors and regulate the securities market. The National Stock Exchange of India appears to have regulatory authority ltd to stock exchange membership and ltd market surveillance.	Strong Exchange Self-Regulatory Organization (SRO) Model. the exchange can install its own listing requirements, such as the requirement for company's of a certain size to disclose a CSR report, and it possesses its own market and member regulation responsibilities

Source: *sseinitiative.org* **(Fig: 2)**

b) Future of ESG investing in India: A next hotspot!

Among the various new objects that the Covid crisis has brought to the lead, ESG investing is firmly gaining ground. Given how ESG investing quickly gains resistance in the Indian market, we could very well be poised to emerge as the next big player in the ESG aspect. The following outlines total returns and price returns during ten-year periods for two Indian benchmark indices and their thematic and sustainable strategy index.

Nifty 50: The index signifies the weighted average prices of 50 of the most prominent Indian companies listed on the National Stock Exchange (NSE).

NIFTY100 ESG: The Index is designed to follow the vision of companies within the NIFTY 100 index based on the Environmental, Social, and Governance (ESG) score. The weight of each element in the index is tilted based on the ESG score allocated to the company, i.e., the fundamental weight is derived from its free-float market capitalization and ESG score.

Nifty100 ESG Sector Leaders: The Index points to track the performance of picked companies within each sector of the Nifty 100. That have scored well on management of ESG risk and do not have involvement in any significant controversies. The index provides ~75% coverage of Free Float Market capitalization of eligible stocks within each sector of Nifty 100. The weights of the stocks are based on their free-float market capitalization directed to a stock cap of 10%.

NIFTY100 Enhanced ESG Index: The is designed to emulate the performance of corporations within the NIFTY 100 index based on the Environmental, Social, and Governance (ESG) score. Organizations should have a normalized ESG score of at least 50% to form part of this index. The weight of each segment in the index is turned based on the ESG score assigned to the company, i.e., the component weight is derived from its free-float market capitalization and ESG composition.

S&P BSE Sensex: The S&P BSE SENSEX is India's most hunted bellwether index. It is designed to measure the 30 most important, most liquid, and financially sound organizations across key divisions of the Indian economy listed at BSE Ltd.

S&P BSE 100 ESG Index: The S&P BSE 100 ESG Index is designed to measure securities that meet sustainability investing criteria while sustaining a risk and performance profile related to the S&P BSE 100.

S&P BSE Carbonex: The first index of its kind in India, tracks the fulfillment of the companies within the S&P BSE 100 index based on their commitment to mitigating risks arising from climate change. The index was created to address market demand for a complicated approach to portfolio management incorporating climate change risk and opportunity.

S&P BSE Greenex: The is designed to contain the performance of the top 25 "green" corporations in terms of greenhouse gas (GHG) emissions, market cap, and liquidity.

INDEX	RETURNS						ANNUALIZED RETURNS(%)							
	TOTAL RETURNS			PRICE RETURNS			TOTAL RETURNS				PRICE RETURNS			
	1 MTH	3 MTH	YTD	1 MTH	3 MTH	YTD	1 YR	3 YR	5 YR	10 YR	1 YR	3 YR	5 YR	10 YR
S&P BSE Sensex	-1.45	5.57	2.35	-1.47	5.39	2.16	46.26	12.87	15.17	11.36	44.68	11.53	13.76	9.81
S&P BSE 100 ESG Index	**0.35**	**9.16**	**7.69**	**0.32**	**9**	**7.5**	**56.1**	**13.78**	**16.35**	**N/A**	**54.7**	**12.57**	**14.97**	**N/A**
S&P BSE Carbonex	**0.29**	**8.06**	**6.2**	**-0.31**	**7.77**	**5.89**	**52.68**	**11.28**	**14.8**	**11.29**	**50.84**	**9.87**	**13.3**	**9.86**
S&P BSE Greenex	N/A	N/A	N/A	**1.16**	**9.2**	**10.1**	N/A	N/A	N/A	N/A	**57.9**	**9.89**	**10.85**	**8.93**

SOURCE: www.asiaindex.co.in **(Fig 2.A)**

Fig 2.A illustrates total returns and price returns of Sensex and BSE sustainable index monthly, quartley, and yearly basis. As depicted S&P Bse ESG, Carbonex, Greenex have generated more returns than Sensex.

INDEX	ANNUALIZED RETURNS(%)							
	TOTAL RETURNS				PRICE RETURNS			
	QTD	YTD	1 YR	5 YR	QTD	YTD	1 YR	5 YR
NIFTY 50	-0.36	4.93	49.89	14.72	-0.41	4.64	48.39	13.26
NIFTY 100 ESG	**0.09**	**5.89**	**52.46**	**14.91**	**0.17**	**6.17**	**54.08**	**16.3**
NIFTY 100 ESG Sector Leaders	-0.54	3.58	45.17	13.82	-0.53	3.74	46.75	15.38
NIFTY 100 Enhanced ESG	**-0.12**	**5.59**	**52.38**	**14.76**	**-0.04**	**5.87**	**54.03**	**16.16**

SOURCE: www1.nseindia.com **(Fig 2.B)**

Fig 2.B illustrates total returns and price returns of Nifty and NSE sustainable index monthly, quartley, and yearly basis. As depicted NSE 100 ESG & NSE 100 Enhanced ESG have generated more returns than Nifty.

The above particulars show how Indian investors are rapidly adopting new themes and strategies that provide sufficient evidence that the sustainable index is the next big player in the Indian market. Investors in the retail segment are increasingly aware of the ethical side of investing, especially after the pandemic altered the world as we knew it. And the figures add up, too, because, in times considering the lows seen in March 2020, ESG funds have given returns as high as 46 percent.

Over the past several months, the Indian market has seen the launch of quite a few ESG funds, like the SBI Magnum Equity ESG Fund, the Quantum India ESG Equity Fund, and the Axis ESG Equity Fund. These schemes focus on investing in corporations that adhere to particular ESG criteria.

This year is demonstrating to be unusually good for ESG investing in the Indian economic landscape. Most of the upmost ESG funds in the exchange have scored up to 27% assets under management within the front quarter of FY21. The SBI Magnum Equity ESG Fund has jumped

40 percent since March 23, 2020, while the Quantum India ESG Equity roused by 38 percent over the same period.

The subsequent products in the equity & mutual fund market highlight the future of sustainable investing in India appear bright and full potential. The winds of change have brought in promising prospects, and as ESG investing picks up with greater vigor in financial markets, investors, brands, and the society as a whole stand to benefit.

We are sure to see a grown focus from the enterprise leaders to regulate themselves with the ESG mandate, not only as a feel-good part but from a business sustainability outlook.

We will see added and more research houses come out with ESG scores for organizations, which could be a decision-making parameter for institutional and retail investors.

c) Constraints for sustainable investment

- **Regulatory structure & state policy**: An unpredictable policy creates uncertainties concerning the risk and returns of the projects. The private sector does not need to invest when there is uncertainty regarding the plans of the Government. A stable plan environment provides guidance, assurance and encourages the investors for long-term green sustainable investment.

- **Acknowledgment of environmental accomplishment**: Socially accountable investors want to invest in green firms, but the lack of information regarding the environmental performance of the companies makes green finance difficult. Thus, Disclosure and reporting about the environmental performance of the firms are vital for green financing.

- **Lower Profitability of Green corporation:** Private sector is more tending to invest in polluting industries because of low cost and high return in it than green industries. Further, green investments are long-term in nature which makes them less attractive for investment.

- **Structure for measuring Green Industries' potential**: There is no precise mechanism to extract commercially viable green projects. Investors need to invest in those schemes which are commercially viable. Conventional projects look more feasible than green projects because of less association of positive and negative externalities in measuring the viability of the projects.

- **Less Awareness among Consumers for Green Products:** Private sector will provide green products only when there is a good market for them. Because of the high cost and lack of awareness about the value of green products, people hardly buy green products.

- **Limited Awareness among Investors about Green Finance:** Besides low profitability, low awareness among investors about the importance of green finance is also a significant constraint. Also, investment in energy efficiency technology, solar energy, etc., is an estimated cost, not an investment.

- **Less availability of green financial products:** Limited number of green financial products is also a significant obstacle to green finance development.

Framework 3

Small and medium-sized enterprises (SMEs) form a large dimension of corporations and employers. Globally, although SMEs are essential contributors to jobs and the growth of economies, they face significant constraints, including a lack of a path to finance. Given the importance of SMEs to economies, many multilateral institutions, governments, policymakers, and private sectors across expanded and developing markets are focused on directing the SME financing gap.

This has added a greater weight on the potential role of capital markets and stock exchanges in distinct. SME markets promote and support SME listings by facilitating entrance to capital and rendering an environment that fosters SMEs to thrive.

The grounded theory technique is used to deeply understand the SME sector scenario from the stock market perspective.

Grounded Theory

Based on the activity of symbolic relation and initially developed by Glaser and Strauss. Grounded theory studies the process of being interacted and produces theories to explain human manner.

- **Research tool** to know the real problem associated with SMEs in relation to the Indian market. A semi-structured interview with approximately 30 market professionals is conducted. Professionals related to the same industry and sharing their outlook,

experiences, and suggestions related to their point of view. Approaches that participants conveyed to a grounded theory of SMEs.

- **Sample size:** Stratified random sample from the population wherein sample size is 30 & people devised into strata of knowledge about the financial market or professional market expert.

A Grounded theory of SME

Through systematically analyzing the interview transcripts, the study has produced a grounded theory of SME's effectiveness and performance in the stock market and how its sustainably contributing to the economic aspects in India. Based on data collected, it founds that the SMEs concepts can be understood in five aspects-

1. **Economy & stock market relation:** The total contribution of SMEs to GDP is 37.54. It also accounts for 45% of total industrial production, 40% of total export. The manufacturing segment of SMEs contributes to 7.09% of GDP & also contributes to 30.50% of services; thus, its acts as a pillar of the economy. But when it's come to the Indian stock market, only 1-2% of people have awareness about the stock market after having the world's largest population. Thus, lack of understanding and knowledge about markets and SMEs' unorganized pattern does not allow them to hit markets effectively.

2. **Performance of SMEs-** BSE SME IPO INDEX Price returns are way less than BSE IPO INDEX Price returns because SMEs are in their initial stages. Having schemes and projects for their development, but the way to properly roadmap & implementations is still lacking. People prefer only known companies, not unknown SMEs Company. Even rules and regulations related to the taxation part are high, which creates difficulty for them while setting out their loans and liabilities.

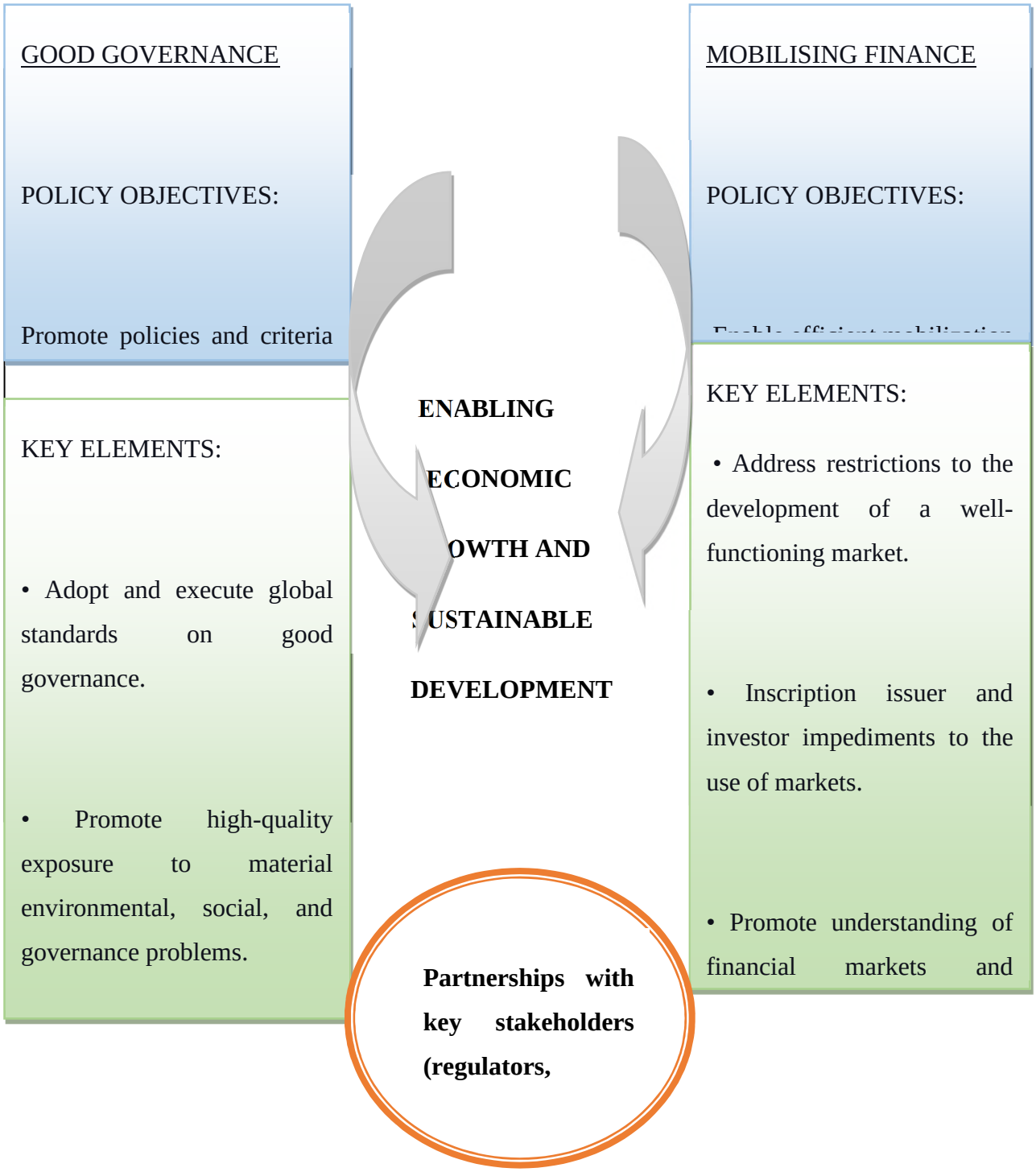
3. **Outlook –** Investor or Investee not completely into SMEs due to riskiness of this sector. Lack of liquidity and volumes because of less awareness towards SMEs market. As a retail investor minimum investment amount to invest in SMEs IPO is very high compared to standard companies' IPO. They only get recognition when they get shifted to the main board but the cost to attain that position is increased as the minimum application value required is ₹100,000. And minimum promoter's contribution shall be 20%, which will be locked in for three years.

4. **Challenges:** Lack of infrastructure and technology reform. Wages are less, which leads to a decrease in disposable income, which is affecting money flow in the economy. Inadequate access and non-availability of the market platform and issues are getting proper business credits affecting SME's positive moments.

5. **Factors affecting positive moments -** Current budgets tax exemptions in budget 2021; forming new incubators centre which is focusing on education and enhancing their skill part leading a positive movement towards them. Technology upgrading, particularly for this sector. Government policies like 'Make in India' with the vision of exporting 75% contribution by SMEs are whooping positively. To encourage equity culture among SMEs, Indian exchanges are taking proactive measures to organize webinars, collaborate with state government and other professional associations, resulting in more than 60 SMEs expected to tap equity fund for supporting their business in this pandemic period.

Findings

This report provides an overview of some of how stock exchanges can, and do, contribute to economic growth and sustainable development. It has focused on two prominent roles of exchanges: mobilizing resources to facilitate sustainable economic growth and development and fostering good governance. The mobilization of finance is fundamental to what exchanges do, and well-functioning exchanges can provide economic growth and development. There are also opportunities to build on this financing capacity to enhance SME access to finance and enable capital mobilization to direct significant long-term sustainability challenges.



(Fig:3)

Key elements of a framework to maximize the growth and sustainable development benefits of exchanges are visualized in figure 3. These elements enable growth and sustainable development and secure the creation of healthy, sustainable, transparent, and comprehensive markets that maximize the interests while minimizing potential negative influences. Achieving

these goals requires the joint effort of exchanges, regulators, policymakers, and exchange mediators.

Conclusion

The attainment of sustainable development goal 8 helps move further towards the achievement of various other goals and their indicators. Although the Government of India has reaped multiple steps for sustainable growth, the private division assistance for sustainability is nascent. Because of the limited public finance, private finance has immense importance in sustainable development.

Even in this pandemic period where industries, cooperation, and social life are affected, the Indian financial system has embarked on attaining the SDG goal 8 decent work and economic growth. Focusing on sustainable green finance in terms of ESG and financial inclusion program for the small and medium enterprise section carries a whole load of employment generation and still needs to be supported to rigger in an organized form.To further attain the underline goal, India needs to focus on two aspects undervalued financial system and policy screening.

The market for green finance-related stocks is anticipated to proceed to see rapid growth in the coming years. Sustainability stock exchange identifies four targets relevant to stock exchange internally: Decent work and economic growth (SDG 8); Responsible consumption and production (SDG 12); Climate action (SDG 13), Gender equality (SDG 5). It hopes to contribute to other SDGs such as Sustainable Energy (SDG 7) and sustainable communities (SDG 11).

Small and Medium enterprises are crucial for meeting SDG8 and other SDGs like SDG 10 on equality, SDG 16 on institutions, and SDG 17 on partnerships. They contribute a significant portion of total private sector objects in both improved and developing nations. When the informal division is included, they consider 9 out of 10 jobs in developing nations. They are typically the primary revenue source for the poorest community sections, particularly in rural areas, and tend to operate a more significant workforce part in vulnerable areas.

Thus, the implementation strategy for SDG 8 focuses on phases: core analysis on concerns and sustain the implementation to attain targets; examine the goals and indicators & engaging researchers and policymakers in resulting up indicators.

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Decent Work and Economic Growth

Alka[1]

Abstract

SDG 8 asks for "long-term, inclusive, and sustainable economic growth, full and productive employment, and decent work for all." While emphasizing the importance of workers' rights for all, it also underlines certain fundamental contradictions. In both the formal and informal sectors, the number of working women has increased significantly. However, no further gender shift in the performance of social reproductive work has occurred. I argue in this paper that SDG 8's focus on decent work and economic growth is insufficient, and that by 2030, productive employment and decent labour for all men and women must consider the value and costs of social reproduction.

Keywords: - SDG, MDG, GDP, SME

Introduction

India has begun the process of achieving SDG 8: Decent Work and Economic Growth for All. Make in India, Startup India, Skill India, and Digital India are all based on the premise of providing job possibilities for the country's youth. The government is putting a lot of effort into fostering a favourable trade and economic environment. This was reflected in the World Bank's 2016-17 Ease of Doing Business Report. According to the report, starting a business now takes only 29 days. All of these activities show that the country is committed to meeting the goals set forth, and it is doing so through a two-pronged strategy of growth and employment.

India must concentrate on two things in order to achieve the outlined objectives: urbanization and manufacturing. Innovation is also critical to all of it, particularly in our educational system. It's also

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important to recognize that the SDGs are interrelated. Several additional SDGs and their indicators must be examined and attained in order to achieve the indicators of one SDG.

This brief study will highlight various initiatives and best practices that are being implemented around the country in order to achieve the goal of universal growth and employment. It will also discuss the various problems that people face in various fields and how they can be addressed.

Growth

One of the major concepts of SDG 8 is economic growth. India has been rising at a 7.5 percent annual rate. The goal, though, is to grow at a rate of 9-10 percent per year. India's growth has been fueled by the services sector, which accounts for 62 percent of the country's GDP. In countries with a high per capita income and a small population, relying solely on the services sector for growth is possible. However, in China, Japan, and South Korea, manufacturing processes are critical to economic growth and, as a result, job development. India must concentrate on this.

As previously said, India need a population that is healthy, well-nourished, educated, and more equitable in order to achieve growth. India is a young country, and having a young and vibrant workforce has several advantages. However, one cannot take advantage of the social demography of a country where 72 percent of the population is under the age of 32 if concerns such as stunting remain unsolved. To address this issue, the NITI Aayog is developing a dynamic platform that will provide data on a variety of indices.

Industrialization: As previously said, the manufacturing sector is critical to the country's economic growth and industrialization process. It is also necessary for the generation of jobs. Unfortunately, manufacturing accounts for the smallest portion of GDP in India, even among Asia Pacific countries. Many reasons contributed to the country's industrial sector's downfall. Strategic intervention is required to increase the manufacturing sector's growth to at least 9%. Industrial policy must be revitalized, and East Asian countries should serve as models.

Other initiatives that India desperately needs are infrastructure support, innovation, and skill development. India can also exploit FDI's potential to attract more domestic investment by pushing it toward export orientation or import substitution, so that it merely crowds in rather than crowds out. Another strategy to attract the correct kind of investment is through proactive

targeting. As a result, reviving industrial strategy for strategic import substitution through these measures could be beneficial to India in attaining the country's SDG ambition.

Interested Facts

- In Haryana, large-scale sectors such as the car industry, which is already one of the state's main industries, are being prioritised. The Maruti Suzuki facility in Haryana was built in conjunction with Japan; nonetheless, the state's automobiles are shipped not just to Japan but also to Europe.
- Andhra Pradesh has initiated a Made in Andhra Pradesh product campaign, with the goal of having more than 500 products on the market by 2020. The state is also implementing lab processes, such as vision labs, and has partnered with the Malaysian government on the Pemandu lab process, which began with education and retail transformation laboratories.

Productivity of labour and resources in the industrial sector

- Getting rid of transaction costs in company.
- Investing in people is a good idea.
- Material efficiency - In addition to energy efficiency, materials efficiency is necessary in general. The emphasis must be on recycling, and India must reduce its reliance on fresh materials, as it does presently.
- Technologies that is both new and efficient.

Agriculture: Agriculture is an important sector that requires attention in order for the country's economy to thrive. Despite the fact that agriculture accounts just 13% of GDP, agriculture nevertheless employs about 50% of the people. Agriculture's expansion can help accomplish the goal of inclusive growth. Another point to consider is whether agricultural expansion leads to overexploitation and loss of natural resources, as has been the case in states such as Haryana, Tamil Nadu, and Punjab. As a result, agricultural development must be both inclusive and long-term.

Special Focus on Women & Agriculture

SDG 5, on gender equality, is inextricably linked to several other SDGs, and it is critical to discuss SDG 8 with gender in mind. One of the variables used by the multidimensional poverty index to identify the poor is a lack of assets. Even in well-off households, it has been observed that women do not always have access to immovable property or agricultural land. In India, 60% of women rely on agriculture for their living.

The issue is that women farmers do not have access to agricultural land, assets, or infrastructure that could help them enhance productivity. And knowing the data on women's access to land is critical for monitoring the SDGs. However, the data is lacking, which makes monitoring and achieving numerous SDGs challenging.

Forest conservation is also important because it provides humans with food and nutrition. Women and children handle the majority of the gathering effort. Women's participation in forest conservation institutions and committees can also increase conservation outcomes.

Things to do:-

- Increase public access to private property resources.
- Transferring public land - Both men and women are given shared titles, although implementation must be checked. In addition, subsidised housing and loans can be made available to vulnerable women in cities, not only the impoverished.
- Access to agricultural should be supported with access to inputs, technology credit, and markets, and more cooperatives are being formed to help with this.

Small and Medium Enterprises **(SME's):** SME is critical for India's economic growth because it accounts for about 95% of all industrial units in the country and generates more than 40% of the country's industrial output. It employs roughly 45 percent of the workforce in the manufacturing sector and accounts for roughly half of all direct and indirect manufactured exports. Financial gaps, adequate, timely, and cost-effective credit availability, access to equity, risk capital, and financing innovation are all difficulties that SMEs face. Infrastructure, marketing, obtaining raw materials, creating products, and providing quality services are all difficulties in the non-financial industry.

Employment

Informal Sector

In India's economy, the informal sector employs over 92 percent of the population. However, the informal economy is larger than the informal sector since it includes unincorporated businesses as well as people who work in the formal sector but on a contract basis. As a result, they do not receive the needed social security, and the two combine to produce the informal economy.

Solutions for consideration to improve the situations prevalent in labour market:

- The focus of the growth strategy should be on employment. According to manufacturing policy, 100 million jobs will be generated by 2022. Make in India, the Mudra initiative, and other relevant instances are also relevant. The concentration is on industries that require a lot of labour.
- There is a requirement for workers to develop their abilities. According to NSSO statistics from 2011-2012, around 10% of the Indian labour force has some kind of training, with 2% having formal training and 8% having informal training that is passed down from generation to generation. By 2022, the goal is to train 500 million people.
- A slew of initiatives have been implemented to strengthen labour market administration. Shram Suvidha is a unified web platform that allows for online registration, self- certification, and web-based inspections. A system for identifying unorganized labour must also be implemented.
- Skilling is a multi-faceted project that begins with community mobilization and a thorough understanding of their needs and ambitions. The next phase is to develop their capabilities by giving them with channels, clients, and connections, as well as financing. Lifelong employability is the goal that must be pursued in order to achieve this.
- Apprenticeship in the informal sector - Investment is being made in the formal sector, and steps must be done to replicate this in the informal sector.
- Make trade certification a requirement.
- Invest in skill training in the informal sector with funds.

Skill Development initiative Examples from different parts of the country:

- Collaboration amongst departments for a concerted mechanism to provide jobs for all qualified people by 2030. In Assam, a baseline survey of high-value-added and labour-intensive industries is being conducted.

- A succession of labour reforms has been implemented in order to ensure decent work. By opening a single online window and putting everything online, user service reforms. Inspection changes have been implemented in line with this by ensuring that everything is computer generated and that the inspection report can be easily retrieved.

Conclusion

Under the banner of "transforming our world," the SDGs have laid out a broad and lofty agenda. While many have praised the participatory process as a significant improvement over the top- down approach of the Millennium Development Goals (which were regarded as being pushed on impoverished countries by powerful global actors), the SDGs have also been criticized harshly. My goal in writing this paper was to highlight the gendered disparities in the SDGs by focusing on SDG 8. Gender, I've argued, is a critical lens for understanding, strategizing for, and implementing development goals and targets.

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CHAPTER 9

GOAL-9: INDUSTRY, INNOVATION AND INFRASTRUCTURE

A STUDY ON SUSTAINABLE DEVELOPMENT AND ITS NEED

Preeti PAL[1]

Sustainable development was defined in 1987 by the World Commission on Environment and Development as: "Development that meets the needs of the present generations without compromising the ability of future generations to leet their own needs." The main objective of this paper is to educate and aware about sustainable development as nowadays it is of great need not to harm nature for name's sake of progress/growth and development.

Introduction

Sustainable development is a way of organising human needs, wants (society) so that future generations do not compromised. It focuses on improving quality and standard of life. COMMISSION ON SUSTAINABLE DEVELOPMENT (CSD), January 1994 at Oslo recommended to measure and change consumption and production pattern for purpose of

A. Conserve energy and renewable sources of energy
B. Reduce wastage of water
C. Reduce environmental harmful substances in product
D. Produce eco-friendly products.
E. Maximise reduce and recycling of waste products.

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Definitions of Sustainable Development

A) "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." - World Commission on Environment and Development (1987), Also called the Brundtland Report.

B)"When human beings strive for enhanced life conditions without diminishing the meaning of life itself – namely our children's future – we call this development sustainable." - 3Mfuture (2005)

C) "Sustainable development is often thought to have three components: environment, society, and economy. The well-being of these three areas is intertwined, not separate."

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D) Other Authors, however, are more precise with the term sustainable. For instance, UNESCO promotes international resource development that is socially desirable, economically viable, culturally appropriate and ecologically sustainable.

Pillars of Sustainable Development

1.Economy. 2. Equity. 3. Ecology

Features of sustainable development

1. Economic growth but with protection of natural resources (forests, air, water, minerals and fuels).

2. Form stable relationship between human activities and natural world

3. People share each other to protect our mother earth

4. Term economic and social development in such ways that does not exhaust our country's natural resources.

5. Participatory democracy is prerequisite for achieving sustainable development goals.

Global Objectives of Sustainable Development

Sustainable development doesn't mean sustained growth but it means a line in drawn between growth and nature. It tries to maintain a balance in between human activities and natural resources.

Sustainable Development

The new global sustainable development goals were adopted by 2015 all over the world. These helps us to achieve economic, social as well as environmental sustainable development and valid till 2030.

The objectives are universal – they apply to both high-income and low-income countries. According to UN estimates, the cost of financing the development goals amounts to nearly about $4 500 billion a year, which is thirty times more than the total annual aid in the world. This means that in order to accomplish the goals by 2030, everyone must take responsibility – states, institutions, private companies, the international community and civil society organisations.

1. Eradicate poverty from everywhere.
2. Eradicate hunger that means no one sleep without food. (SUBSTANTABLE AGRICULTURE)
3. Ensure healthy lifestyle and promote wellbeing.
4. Quality education to all
5. Discrimination on the basis of gender is reduced. Empowering girl and women position in society.
6. Provide clean and safe drinking water and ensure proper sanitation facilities.
7. Ensure proper and affordable lightning or modern energy to everyone.
8. Promote continuous, inclusive and sustainable growth, full and productive employment and decent work for everyone.
9. Build resilience infrastructure and promote inclusive and sustainable growth in industries, promote creativity and innovative
10. Reduce all kinds of partial behaviour to other country or within the country.
11. Make cities and human settlements inclusive, safe, resilient and sustainable.
12. Ensure sustainable consumption and production patterns.
13. Take urgent action to combat climate change and its impacts
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Findings

Sustainable development is an effective step to push economy to grow but there are lots of things required to fulfil this 17 SDG. Many things are not yet fulfilled, due to Covid pandemic lots of poverty, hunger, difficulties in education have taken place as well as unemployment prevalent in society. We are moving towards technologies for this proper training and knowledge requires.

Conclusion

Sustainable development is broad term that covers all aspects from human consumption and production to environmental protection. It covers agriculture, rural, urban, industrial development without affecting natural resources.

According to Mahatma Gandhi Ji “Nature Possesses Everything to Satisfy the Needs of Everyone but Not Their Greed”.

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CHAPTER 10

GOAL-10: REDUCED INEQUALITIES

ANALYSIS ON THE SUSTAINABLE DEVELOPMENT GOAL OF REDUCED INEQUALITIES

Heena[1]

Income and wealth inequality are rising in most countries around the world today. Recognizing that this challenge has become a universal issue, the United Nation agreed in 2015 to 17 sustainable developments, as a part of a global agenda to transform society. Specially, SDG target commits countries to 'reduce inequalities within and among countries.

Introduction

Widening income inequality is the defining challenge of our time. In advanced economics, the gap between the rich and poor is at its highest level in decades. Inequality trends have been more mixed in emerging markets and developing countries (EMDCsl), with some countries experiencing declining inequality, but pervasive inequities in access to education, health care, and finance remain. Not surprisingly then, the extent of inequality. Its drivers, and what to do about it have become some of the most hotly debated issues by policymakers and research alike.

Goals in Action

To reduce inequalities, we have to take action. Everyone can help to make sure that we meet the global goals.

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The Targets

Use these can targets to create action to reduce inequalities.

Reduce income inequalities

By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average.

Promote universal social, economic and political inclusion

By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

Ensure equal opportunities and end discrimination

Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.

Improved regulation of global financial markets and institutions

Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations.

Enhanced representation for developing countries in financial institutions

Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions.

Responsible and well-managed migration policies

Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.

Reduce transaction costs for migrant remittances

By 2030, reduce to less than 3 percent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 percent.

Conclusion

Technological change and migration have strong positive effects on the overall economy, economic policy measures have to ensure that the potential loser of losers of these changes are

compensated for their losses and given their share of the additionally created wealth. In the past, however, policymakers did not give enough attention to this issue.

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POVERTY AND INEQUALITY: THE GLOBAL CONTEXT

İrem TÜYSÜZ[1]

There have been two stages of globalization in the world since the 1800s. Today, the process of globalization continues with the claim that it will increase the welfare of all countries that comply with its rules. There are also academic studies that advocate the opposite while reducing poverty in the world. On the other hand, it is observed that income distribution in developing countries does not improve and income inequality is increasing. In this study, the concept of globalization, two globalization waves in the world and the effects of this process in terms of reducing poverty and income inequality are examined. In this study, the problem of poverty, which is one of the problems of humanity, is emphasized, as well as the economic and social inequalities and the problems caused by the global processes. The causes of poverty, poverty types, women's poverty, poverty in the literature, the concept of a welfare state that is weakened by global companies' orientation to the world system, and the working poor, a new version of poverty, have been tried to be based on numerical data. Ways to combat poverty, global and local inequalities; Analyzes of organizations such as the United Nations, the World Bank and the International Monetary Fund have examined the work they do through microcredit, economic support and the promotion of Social State practices. As a result, struggling with poverty and inequalities; It is necessary to adopt a shared paradigm, moving away from the competitive mentality that encompasses all humanity.

Introduction

Globalization, with its positive and negative consequences on the economies of the country, is one of the most discussed concepts in the field of economics today. This concept, which expresses the free movement of goods, services, capital, information and technology, is in a sense the application of neoliberal economics in the world. In the 1980s and 1990s, international economic integration gradually accelerated and the countries of the world adopted more effective production, investment and trade costs by removing the borders. Globalization is not

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only a system of economy based on a profit-seeking market economy, but also a major change project involving political and socio-cultural areas. However, since the developing countries participating in this process are at different stages of economic development, the benefits provided for each economy and the risks involved are different. Since the 1980s, many developing countries have entered the process of realizing the determined reforms and increased their income, but globalization has also had negative consequences on these economies, up to crises.

There are serious economic and social gaps between industrialized countries and developing and underdeveloped countries. It is not enough for underdeveloped and developing economies to achieve economic growth only. Alkıma includes not only the increase of total production and per capita income, but also the transformation of the economic and social structure in societies, the increase in the weight of the industrial sector, knowledge and technology in production and trade while achieving sustainable growth, and the improvement of living standards and quality in countries. Although income inequality between countries has existed for 200 years, it has increased significantly since the 1980s. Moreover, income inequality between developed and less developed countries does not seem to be on the way to recovery. Total outward opening by removing restrictions has exposed the fragile internal dynamics of developing and less developed countries to the impact of destructive forces. Access to global markets is a powerful factor for development, but the success of development is possible with selective and gradual integration into world markets. The dominant view today is that the positive impact of globalization on growth is well above its costs and that developing countries must remove all obstacles to integrate their economies into business and financial flows.

Looking at the growth rates in the world, between 1985-95 East Asia grew more than 7%, South African countries decreased -1.1%, Far East and North African countries decreased -3%. Between 1985 and 1995, India grew by 3.2% and China by 8.3%. The high growth in these countries, which already have very high populations, has raised the average and it is possible to say that more than half of the world is growing more than 2% in this way. According to the World Bank report, the growth rate in industrialized countries was 1.5% in 2003 and is expected to increase to 2.5% in 2004. These figures are 4% and 4.9% for developing countries.

In a group of developing countries, although much higher growth rates are recorded than in industrialized countries, living standards are observed to decrease. With increasing growth, average real incomes are also rising, but no positive development is observed in segments in

absolute poverty. The high rate of population growth in these countries is a serious obstacle to catching up with developed countries.

Under these conditions, inequality and poverty, which became more evident in the world in the 1990s, revealed that the positive and negative consequences of globalization should be reevaluated. The effects of free capital and goods movements on poverty and income inequality in the world have been an important subject of study for economists. In the second part of this study, the meaning of globalization and the characteristics of two globalization waves that took place in the world in the 19th and 20th centuries are explained. In the third chapter, the phenomenon of impoverishment and the effect of liberalism on poverty are examined, in the fourth chapter, income inequality in the world is discussed at both domestic and international levels, and a literature review including examples of studies on these issues is included. In the light of the studies examined in the last section, an evaluation has been made on the effects of globalization.

Globalization's Impact on The World

Globalization is basically a process of removing obstacles to the free movement of trade and capital. It’s becoming the dominant economic policy in the world has been made possible by technological advances, the spread of information processing and communication technologies and thus the reduction of transaction costs. With the dissolution of the socialist bloc, when the free-market economy remained the sole dominant system in production and distribution, globalization became stronger and spread to the world. During this period, most of the developing Oban countries have opened their economies to global markets by making changes in their current policies. In the new order, it is aimed for the countries of the world to reach a higher level of prosperity by increasing international competition and more efficient distribution of resources.

Santerelli and Figini Find it Early to Make Generalizations about the Results, Stating that Little is Known about Globalization for Many Reasons.

l) They stated that there are serious measurement and definition deficiencies regarding the concepts of globalization, inequality and poverty. In this case, the results of empirical analysis are not completely reliable.

2) They pointed out that globalization as applied today has only 20 years of history in the economic development process and this experience is not enough to make generalizations.

3) They stated that a priori assumptions and ideological factors became a part of the globalization debate and caused non-objective and biased interpretations.

It is accepted that the first globalization process in the world started following the industrial revolution and continued until the First World War. After the period between the two world wars, the development policies aimed at the welfare state were implemented with the independence of the colonies. It has come to the present day starting from the years.

The hypothesis of Kuznets18, which points out that as income increases, income distribution will deteriorate, is not supported by many academicians today. According to Kuznets' hypothesis, at low-income levels at the beginning of development, income distribution is relatively fair. Then income inequality begins to increase as income increases. As income per capita approaches the level of industrialized countries, income distribution will improve and inequality will decrease. There are many supporters of Kuznets 'relationship as weak and opposed (eg Deininger and Squire). In one view, governments assume that the validity of Kuznets' 'natural laws' is inevitable in order not to take the necessary measures to improve the income distribution20. Income inequality in the world is considered in two dimensions: first is the inequality between countries, which indicates the difference between the income levels of countries, and the other is income inequality between different regions within the country, which is an expression of the distortion of income distribution in a country. Although it is theoretically advocated that it will come close, discussions continue in practice.

Globalization accepts the neo-liberal proposition, which suggests that globalization will ensure efficient allocation of resources and that countries that fulfill the conditions will achieve rapid growth and development, and socio-economic problems will gradually disappear. Trade and capital flows, the application of standard rules between countries, the globalization of production, distribution and marketing have connected countries more than ever before, but in the 1990s the issue of inequality and poverty, which became more evident in the world, became increasingly controversial. Globalization has resulted in developed countries getting more shares from goods and capital flows and global income, both as source and target countries. The most obvious defining feature of integration is the single price law, that is, the equalization of the prices of goods and factors of production between countries. In this process, efficient resource allocation takes place in the economy and benefits are gained from the spread of technology. Theoretically, disparities between countries do not prevent these benefits. On the contrary, integration under a single price law (ie integration of goods and capital markets without the free movement of labor globally) means the equalization of production factor prices

and consequently living standards around the world34. If we look at developing countries in terms of single price law, the wholesale consumer price level is directly proportional to the real per capita income. For example, the price level in the US is 2.5 to 5 times higher than in many poor countries. The difference in price levels is affected by the structure of prices. The relative price of services is much higher in rich countries than in poor countries, whereas the prices of food items are much higher in poor countries than in rich countries. Studies show that the increasing globalization does not accelerate the convergence of prices between industrialized and underdeveloped countries, and that countries' income and price structures, which are already different, are diverging further. In this case, we cannot say that the single price law is valid. In terms of income distribution, inequalities do not seem to be on the way to improvement.35 The pro-globalization view evaluates poverty and income inequality according to different scales. While the fact that a large part of the world is facing extreme poverty is considered to be a definite bad situation, it is controversial whether inequality poses a threat to economic development. Free goods and capital movements increase growth, as calculated in the studies carried out, and this increase is perceived as poverty reduction. However, it is a fact that poverty does not decrease in the world. Globalization has negative effects such as negative effects on income distribution, creating income uncertainty and threatening the established living standard.

What Is Poverty and What Is Its Problems

Poverty is not a problem of todays or just underdeveloped countries or societies, it is a very comprehensive and multi-faceted problem that also concerns societies with a centuries-old history and considered as developed. Poverty is not only an economic problem; It emerges as a problem with different dimensions such as cultural, legal, political and ethnic. For this reason, efforts to define poverty are often insufficient when all dimensions are not taken into account. United Nations Development Program (UNDP) poverty; He emphasizes that the concept of poverty cannot be limited only to the economic dimension by defining life-long health as a creative life, an average standard of living, being deprived of opportunities necessary for human development such as freedom, self-confidence and dignity (Marshall, 1999: 825; Duyan et al., 2008: 174). According to the data released by the Türk-İşİ Union in April 2017; The hunger limit, which is the monthly food expenditure amount that a family of four needs to make for a healthy, balanced and sufficient diet, is 1.518,00 TL, Clothing, housing (rent, electricity, water, fuel), transportation, education, health and so on, together with food expenditure. The poverty line, which is the total amount of other monthly expenses required to be made for needs, was

4.944.63 TL. In our country, where traditional solidarity relations are thought to protect the individual against various life risks, including poverty, the fight against poverty has not been on the agenda for a long time. In the institutional sense, the responsibility of the state was maintained in the form of state care and temporary aids, and combating poverty was among the side functions of some institutions such as the Red Crescent Association and Social Services Child Protection Agency in the form of helping the poor at certain times. One of the main criticisms of poverty alleviation programs in our country is that these programs are not considered as a part of long-term economic and social policies, but rather limited to social assistance for those who are deemed to be in a disadvantaged position. Evaluations and observations regarding the practices create the impression that these aids are made within the framework of daily decisions determined based on certain social and personal relations, not according to a detailed program based on the poverty profile (Gündoğan, 2008). The Organization for Economic Cooperation and Development (OECD), of which Turkey is a member, announced that the income inequality in most of the member countries has reached the highest rate in the last 30 years. With a 28.5% poverty rate, Turkey “surpassed 34 OECD countries”. In Turkey, the share of the poorest 10% from income is only 2.1%. The share of the richest 10% from income is exactly 31.7%. While this rate is 40.9% in Chile and 36.7% in Mexico, Turkey is among the three worst countries along with these two countries. In Turkey, the difference in income between the richest 10% and the poorest 10% is 15.2 times. The fourth country with the highest income inequality was the USA, and the fifth was Israel. The countries with the fairest distribution of income in the society were again Northern European countries, as in previous years. Denmark tops the list. Slovenia, Slovakia and Norway follow it. On the other hand, in Turkey, where youth unemployment reaches 20%, young people are the most affected by poverty and inequality in income distribution. Accordingly, Turkey's youth relative income poverty rate is the poorest country among all OECD countries. While the poverty rate of young people aged 0-17 is 28.5%, Turkey's closest rival is Mexico with 25.8%. The OECD average is 8 points below Turkey, 20.4%. With a relative income poverty rate of 16.2% in the 18-25 age group, Turkey ranks 10th, and as the age gets older, the position of Turkey increases (Sputnik, 2017). In the graphic below, published by the OECD, it is seen that Turkey is the second last country among sixteen countries selected from the world in terms of income inequality.

In general, an improvement in income distribution is observed in Turkey from 1963 to the present. It is possible to see this situation with the Gini coefficient, which measures the National

Income Distribution in the country. In the measurements made, the Gini coefficient, which was 0.5 in 1973, decreased to 0.43 in 1987 (ie there was an improvement in personal income distribution), and in 2010 the Gini coefficient decreased to 0.38 (TurkStat, 2010). However, despite all these improvements, it is not possible to say that the income distribution in Turkey is still at the desired levels (Taşand Özcan, 2012: 6). Poverty is a very broad issue with many dimensions and definitions. Researchers working on poverty have mentioned many types of poverty. Accordingly, it is observed that the definitions, concepts and theories about poverty vary considerably. The diversity of the concepts related to poverty, whose definitions are given below, also show that poverty is a multi-dimensional concept.

In addition to poverty, the concepts in the literature about poverty and their contents consist of the following (Erdem, 2003: 29-30):

Absolute Poverty: Lack of minimum income and expenditure level that household or individuals need to survive biologically.

Relative poverty: Whether or not to have the minimum standard of living in the current society.

The Poverty Line: Below a level that does not allow families to provide the necessary needs for a livelihood.

Primary Poverty: Inadequate family income to meet basic needs of family members such as food, clothing and shelter.

Secondary Poverty: The total income of the family is sufficient to meet the basic needs of family members such as food, clothing and shelter; insufficient to meet other activities such as entertainment and education.

Subjective Poverty: Lack of income for a person or household to provide the level of satisfaction they see fit for themselves.

Income Poverty: Inability to obtain sufficient income to meet the basic needs required by the minimum standard of living.

Ultra-Poverty: Although all of the income is spent, only 80% of the calories taken as basis in the absolute poverty criterion can be met.

Chronic Poverty: If the ultra-poverty situation lasts more than five years, the conclusion that there will be no improvement in the negative situation.

The Working Poor: Low-educated and unskilled people working in the lower echelons of the public and private sectors and in the marginal sectors.

Urban Poor: The concept used to describe the housing problems and social exclusion experienced in cities.

Housing Poverty: The concept used to emphasize the housing problem experienced throughout the country.

Human poverty: The concept used to determine whether the citizens of a country have the means to live humanely within the framework of certain criteria.

Causes of Poverty

Due to the multi-dimensional feature of the concept of poverty, it is seen that the causes of poverty have a structure that includes many factors. Among the causes of poverty; wars, discrimination based on race and gender, structural adjustment programs implemented by international organizations such as the International Monetary Fund (IMF) and the World Bank in underdeveloped countries, the reduction of public expenditures and the obstacle of the development of productive forces can be counted. Wars emerge as one of the most important factors leading to poverty, especially malnutrition problems for children. Nutritional problems observed in recent years and reaching the dimensions of famine are mostly associated with civil wars between countries or within countries. In a study conducted by Dreze and Gazdar (1992: 926) on Iraq during the Gulf War, the effects of wars on poverty are clearly revealed. Just before the Gulf War, as a result of the combination of the economic sanctions imposed by the United Nations with the famine and destruction caused by the war, employment and incomes fell significantly, while prices, especially food goods, increased significantly. During the 1990-1991 period, basic food prices increased 15-20 times. In addition to basic services such as health and education, the damage to the sewerage and water networks caused a significant disruption to these services. It has been observed that the majority of civilian deaths, especially infants, were caused by malnutrition and lack of clean water. It would not be wrong to say the same problems for Syria, where a civil war is taking place today.

Discriminatory practices between women and men in the economic and social spheres stemming from a gendered understanding also have an important place among the factors affecting poverty, especially in terms of women's poverty.

It will be useful to refer to the data of the United Nations on gender inequality in order to see the progress of gender discrimination.

When we look at the representation of women in the parliament, their participation in the labor force and their schooling rates; It is seen that there are significant inequalities in favor of the United States of America (USA) and European countries, and against other countries. In addition to this global inequality, it is seen that local inequalities are quite evident within the countries. For example, it is seen that the representation rate of women in the parliament in Turkey is only 9.1%, and the rate of participation in the labor force and education is far behind that of men. In all developed, developing or underdeveloped countries, it is seen that there are significant differences between women and men in terms of representation in the parliament, to the detriment of women.

Structural adjustment programs implemented by the World Bank and IMF, known as the Bretton Woods institutions, in more underdeveloped and developing countries also emerge as one of the important factors leading to poverty. The regulations made in favor of global companies in these countries destroyed the domestic economies of those countries. Barriers to money and commodity movements have been removed, land and state ownership have been taken over by international capital. The debt burden of developing countries has increased steadily despite various re-scheduling and restructuring efforts put forward by credit institutions since the early 1980s. Although these practices were shown to be some efforts made in favor of the countries to which the loans were given, they ensured the payment of the interests of the debts to the IMF and caused the debt of developing countries to grow (Chossudovsky, 1999: 47).

Global companies are companies that produce goods or market services in more than one country. These companies are giant international enterprises that have factories and activities outside the country where their headquarters are located and whose operations spread all over the world. These international companies are many companies known all over the world such as Coca Cola, Toyota, General Motor, Pepsi, Sony, Mitsubishi, Kodak and many more. These companies are responsible for a significant part of the trade all over the world, they act as intermediaries in the spread of new technologies around the world and they are major players in the international financial markets. The turnover of some of these companies is higher than the gross domestic product (GDP) of many countries. A comparison of the turnovers of some international companies and the GDP of some countries is made in the table below.

Combating Poverty

Just like poverty itself, the fight against poverty is a very complicated area that includes many factors. The fight against poverty is a complex that includes many elements such as the political structure dominant in a society and the political parties, associations, foundations and all other non-governmental organizations, their relations with each other, bureaucracy-political relations and international organizations, as well as economic factors. is the problem. The issue of combating poverty; It can be handled in three aspects as changing existing policies by re-evaluating them, rebuilding them through a radical change in the current socioeconomic structure and fundamental social reforms (Atherton, 1992: 197). Anti-poverty policies; protect the poor against unexpected adversities through short, medium and long term policies, preventive measures that provide cash, credit and food aid when they encounter such problems, and the power and possibilities of households in a longer time; It can be examined in two groups as developmental policies aiming to increase opportunities in areas such as employment, education and health and to expand ownership (Drakakis-Smith, 1996: 695). In the adaptation process that started as a result of the agreements signed with IMF, Turkey and similar countries in the early 1980s, it tended to see the poverty problem as an internal problem of the countries. International organizations such as the World Bank and the IMF have remained insensitive to the problem of poverty for a long time, hoping that poverty will disappear spontaneously in the neoliberal economic system. However, these organizations, which saw that the poverty problem was not solved by itself, had to put the fight against poverty on their agenda since the early 1990s. The World Bank and IMF have initiated important initiatives to increase poverty reduction measures since this date. These organizations felt the need to support the negative effects of the packages and programs they proposed to the underdeveloped countries and the measures taken by the relevant countries to eliminate these effects. In addition, the World Bank established a vice president responsible for human development and poverty alleviation in 1993, and the share of those including the social sector requirement in structural adjustment loans increased from 5% in 1984-1986 to 30% in 1990-1992 (IMF, 2000: 385).) can be considered as the clues that there was a change of attitude regarding the poverty problem in the 1990s. It is seen that the strategies of combating poverty, which the World Bank put into circulation together with the IMF, consist of three pillars that are emphasized in the definition of poverty above and complement each other. The first of these legs; It creates new opportunities for poor people in areas such as employment, credit, roads, electricity, markets where they can sell their products, potable water and health. Secondly, Increasing and

strengthening the participation of the poor in political processes and local decision-making mechanisms, eliminating the social and institutional obstacles arising from patriarchal gender understanding, ethnicity and social status, and increasing the effectiveness of the public administration, legal and social service system and ensuring that it becomes accountable. The third and last stage is; Increasing the security of the poor against negative developments such as economic crises, natural disasters, health problems, disability and exposure to personal violence, and improving the opportunities of the poor by reducing these risks (Şenses, 2006: 43).

Global and Local Inequality

Just as we talk about poor and rich people, we can also talk about rich and poor countries and societies. Wealth and poverty are two concepts that emphasize the more economic dimension of inequality. In addition to economic inequality, it is possible to talk about many gender, ethnic, religious, political and cultural inequalities. However, global and local economic inequalities around the world are emphasized here. Economic inequality may have existed in every period, but the economic and technological developments that emerged after industrialization increased and made inequalities more visible, especially in favor of industrialized countries. One of the most important ways to reach information on economic inequality between countries is to know the GDP, which is the sum of the goods and services produced in that country within a year, within the scope of the economic activities of those countries registered within the country within a year. The debate about wealth and inequality is very old, just like the problem of inequality itself. Especially after the industrial revolution, it has been the subject of scientific discussions in the context of the relations between capital and labor. In the 1950s, it was hotly discussed in European countries, especially in Germany. Inequality in wealth distribution has become one of the basic elements of social market economy policy in this country. Scientists and politicians, workers 'and employers' organizations, governments, political parties, churches, and many other circles have pondered the correction of inequalities in income distribution and the welfare of the large masses. The debates on this subject are shaped according to the worldview, economic and social thoughts of those concerned (Dilik, 1976: 7).

Especially in developing countries, it is seen that the gap between the rich and poor sections of the society is quite high. In various developing countries, it is observed that as the average income per capita rises, the inequality in income distribution also grows. For example, in Latin American countries, the richest 20% gets 65% of the national income, the richest 5% of the

population gains 33% of the income and the richest 1% gets 17%. On the other hand, the poor half of the population has only 13% of the income. In the relatively developed countries of Africa, 93% of the population obtains only 55% of the national income (Amin, 1991: 333).

The World Bank divided the countries in the world into three groups in terms of their economic development: high-income countries, middle-income countries and low-income countries. High-income countries are mostly composed of the countries that first participated in the industrialization process that started in England in the second half of the eighteenth century and spread to the whole of Europe and the USA in a short time. According to the data of the World Bank, high-income countries constitute 15% of the world population, while they have 79% of the wealth in the world. Citizens of high-income countries enjoy high housing, water and nutritional conditions and many other high comforts. Middle-income countries are oil-rich countries, especially some East and South Asian countries, some North and South American countries, countries that emerged with the dissolution of the Soviet Union and Eastern European countries. Most of these countries started to industrialize in a late period compared to developed countries, and consequently, they could not industrialize and enrich as much as developed countries. The last group includes low-income countries. Many African countries, some countries in East and South Asia are in this category. Approximately 40% of the world's population lives in low-income countries. Low-income countries can only realize 3% of the total production in the world. In these countries, it is seen that fertility rates are quite high compared to developed countries and the population growth is three times faster. Rapid population growth constantly increases global inequality against low-income countries (Giddens, 2012: 436-437). It is seen that there are serious problems in health and education in poor countries. People living in low-income countries also lack preventive health services. Malnutrition is a major global source of clean water, poor health and disease. According to the United Nations World Food Program, there are approximately 830 million people in the world facing the problem of hunger and 95% of these people live in developing countries. It will be useful to look at the table below to see the extent of global inequality between low-, middle- and high-income countries in a more concrete way. It is seen that the situation in Turkey in terms of inequality is not very different from the world and we do not encounter a very pleasant view. When an evaluation is made in terms of Gini3 values used in the assessment of income distribution inequality, in the mid-2000s, inequality in income distribution in Turkey

Conclusion

As it is tried to be emphasized throughout the entire article, poverty and inequality are not a problem of a society or a period, but a problem of almost every period and of almost all societies without distinguishing between the poor and the rich. Of course, it is not possible to talk about solving such widespread and comprehensive problems in the short term and in an absolute sense. However, the fact that it is difficult to solve the problems of poverty and inequality in absolute terms does not eliminate the necessity and importance of dealing with these problems. Because while poverty is a factor that offends human dignity, prevents one from having an average standard of living and deprives them of the opportunities necessary for human development; Inequality stands as an important obstacle for different segments of society to live together in peace and tolerance, which fosters hostile feelings amongst the social segments. It is indispensable for both the state and non-governmental organizations to combat poverty and inequality, protect human dignity and ensure social peace. In our country, where there is no holistic strategy in combating poverty, an institutional monitoring mechanism that measures the effectiveness of financial and in-kind aids provided by central administration institutions, local administrations and various non-governmental organizations should be established. The importance of lowering the unemployment rate in the fight against poverty cannot be denied. In the fight against poverty, it is necessary to develop policies regarding the solution of employment problems for all individuals living in the society. However, giving priority to employment policies, especially for women, will increase the chances of success in combating poverty. The fight against poverty should be based on a short-, medium- and long-term strategy; instead of an approach that reduces this struggle only to monetary income; An approach that evaluates poverty with its moral, social, political and cultural aspects and develops policies in this context should be adopted. In addition to all this, we should not overlook the necessity of a paradigm change regarding the world. In the words of psychologist Erich Fromm (2003); abandoning the "owning" paradigm of passion for profit, greed and passion, which emerges as obtaining everything and subordinating them; The fight against poverty and inequality should be considered as an alternative that should be taken into consideration in the long run, and transitioning to a world view based on 'being', which can be defined as the idea of a middle way away from extremes, freedom from the captivity of matter and being free from superficial images and grasping the truth behind them.

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CHAPTER 11

GOAL-11: SUSTAINABLE CITIES AND COMMUNITIES

ECOTOURISM AND SUSTAINABLE DEVELOPMENT OF LOCAL COMMUNITIES: AN ANALYSIS ON THE APPLICATION OF SDG 11 IN ATHIRAPALLY TOURIST VILLAGE OF KERALA

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Athira PAUL[2]
Ahammed SHAREEF[3]

Tourism development without sustainability is not even imaginable in the present world. The main points which are to be taken into consideration is the benefit of tourism for the local population of the region. For sustainable tourism development to be successful the people living in the area should also take up an active role. This paper investigated sustainable tourism development in Athirapally panchayat in the Thrissur district of Kerala and how involvement of locals are incorporated in the basic concept of sustainable tourism development. This investigation was accomplished by reviewing literature and drawing conclusions from it. Telephonic interviews were used to collect data. The study finds out that tourism development has accelerated the sustainable development of Athirapally. The study suggested that tourism development would be most effective with sustainable management of tourist centers. The inclusive development and integrated approach for achieving SDG 11.

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Introduction

The present-day tourism industry without sustainable and ecotourism management and development is pointless. Conventional mass tourism without giving any importance to environment and development is now widely being replaced by the ecotourism methods so that sustainability and tourism can both be developed hand in hand. Sustainable tourism development would not just imply the development of the tourist destination, but it has strong moorings in equitable, sustainable and community-based efforts for improving the living standards of local host communities living in the areas close to the tourist destination (Vinodan *et al* 2011). Ecotourism serves as the main source of income for various developing countries. It contributes greatly to the GDP of various tourism-oriented nations. Ecotourism is the ecologically sustainable tourism industry looking forward to contributing to management and conservation of ecologically and culturally fragile areas by strengthening the management capacity of all the involved stakeholders (Kangas *et al* 1995). Sustainability of all dimensions are taken care of in eco-tourism i.e., environmental, economic, socio-cultural, and political fixing criteria for the purpose of monitoring the project success and its evaluation. (Christ *et al.* 2003). In this development, the local population becomes the centre of resource appropriation and sharing of benefits. The involvement of locals from the base planning management onwards would ensure the sustainable and inclusive development

As noticed from the empirical evidence, most of the nature bound tourist destinations, are located in the virgin settings and mountainous regions where indigenous communities reside. Tourism activities in these regions should be a source of income for them also (James *et al* 2011). There are certain regions where these are the only regions for the indigenous communities to exploit and enjoy the exclusive resources. Studies show that 15-20% of the income forum tourism industry are accounted for from mountain resources (Ritchie 1998). The cultural values and festivals of the indigenous communities are also manifested for tourism purposes.

There are various ways in which ecotourism affects the environment. Generally speaking, the impacts begin from the various infrastructures built up to promote tourism to the recreational activities the tourists engage themselves in. Even hiking and camping in adventurous pursuits

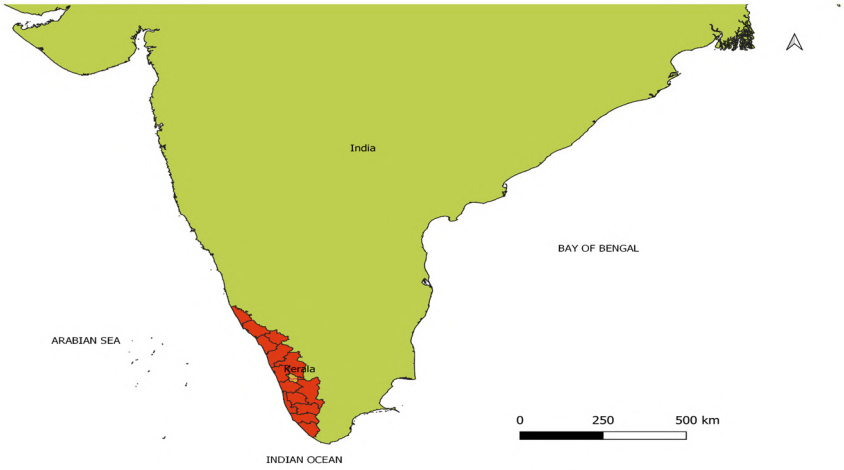
can have negative impacts. It may be more visible in the remote and wilderness areas (David 2004)

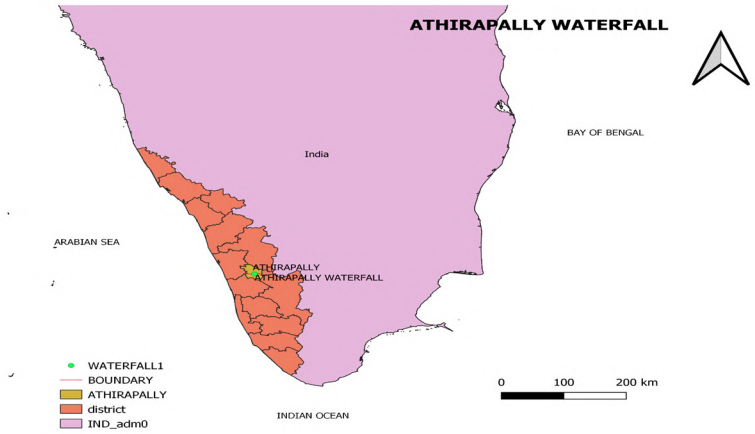
Methodology of the Study

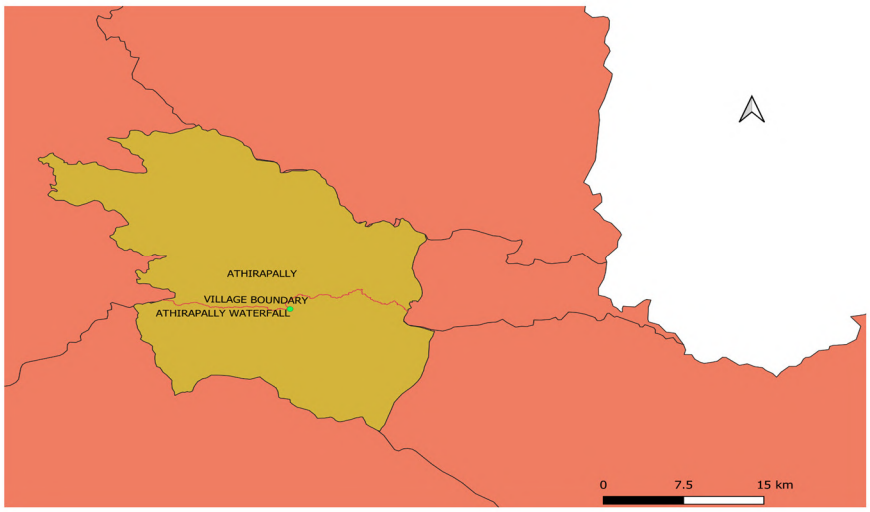
The purpose of this paper is to evaluate the development of sustainable communities and cities through ecotourism development in the Athirapally village of Thrissur district of Kerala, the southernmost state of the Indian subcontinent. The study had the following hypothesis:(a) tourism development has benefited the local communities especially as a source of income and employment. (b)tourism development improved the infrastructure of the whole village. The study is primarily based on primary sources of data and reading and reviewing the existing literature. Telephonic interviews were used to collect data since the pandemic has severely affected the study area. A total of 52 people were called and data was collected. The people were from other dimensions of sustainability are also briefly explained since sustainable development is always area specific and interlinked.

Study Area

Athirapally waterfall also known as Niagara of India. It lies on the boundary between Ayyampuzha and Pariyaram Village, Athirapally panchayath and chalakudi Thalys of Thrissur District on Chalakudy river. Exact location is 10.285 and 76.568 Chalakudy river starts from Western Ghats of Anamalai hills and flows through peringalkuthu reservoir, vazhachal and Athirapally. It is the largest waterfall in Kerala. Which stand tall at 80 feet. Average flow rate of Chalakudy river is 52 m^3/s (1836 cu f/s) Most of the region surrounded by our study area are thick forest North Pariyaram village, East Sholayar reserve forest, South ayyampuzha, west Chalakudy . Focused on the waterfall tourism Economically settled properties by government and other private sectors are Athirapally tourism information centre’s ,Athirapally police station aids, Villas, Indian oil, Villas, Samroha resort Athirapally and a new water park Silverstrome.





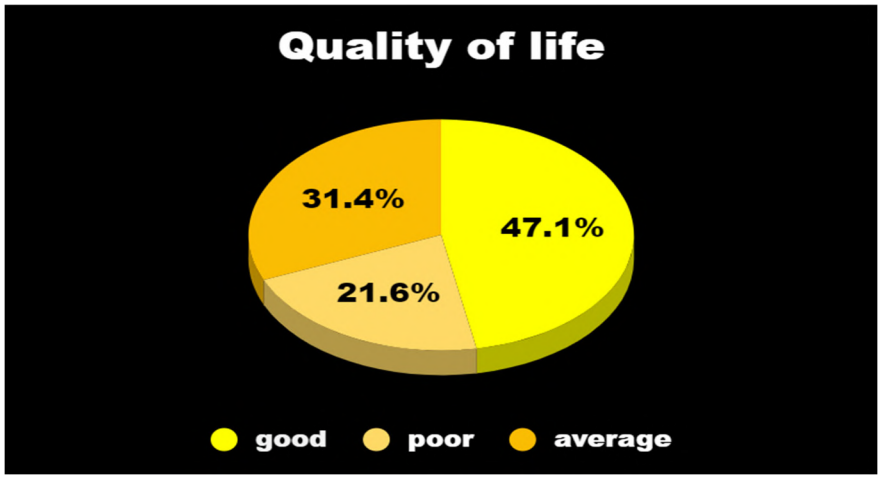


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Findings And Suggestions

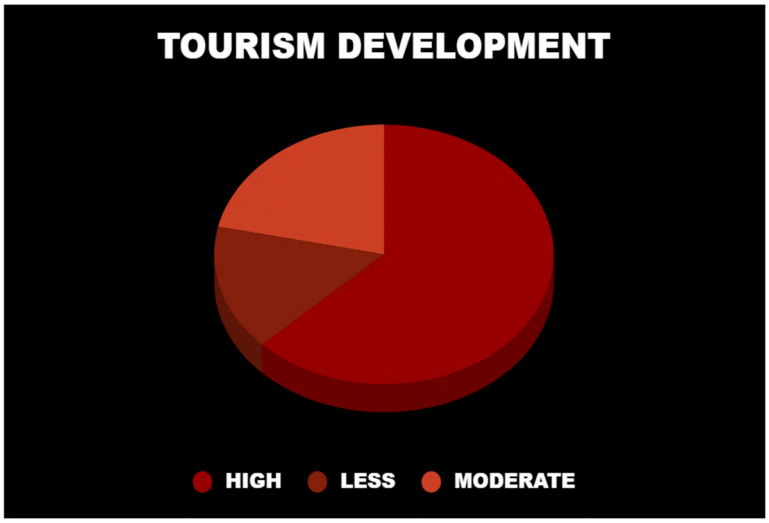
Kerala, being rich in biodiversity, has a significant potential in the area of ecotourism. God's own country has served as a very good host to tourists over years. Tourism is an important factor in a nation's economy, but we cannot neglect the negative impacts of tourism which include degradation of biodiversity. Taking this into account, ecotourism has become a trend in the past few years. There is so much literature which supports the fact that ecotourism promotes sustainable development. In this study we are focusing on the development of the local community in Athirapilly by ecotourism. From the data collected from respondents we came to the following findings:

1. Currently the majority of respondents has a good quality of life and they admit that tourism in Athirapilly has greatly influenced their living standard. (fig.1)



(fig.1)

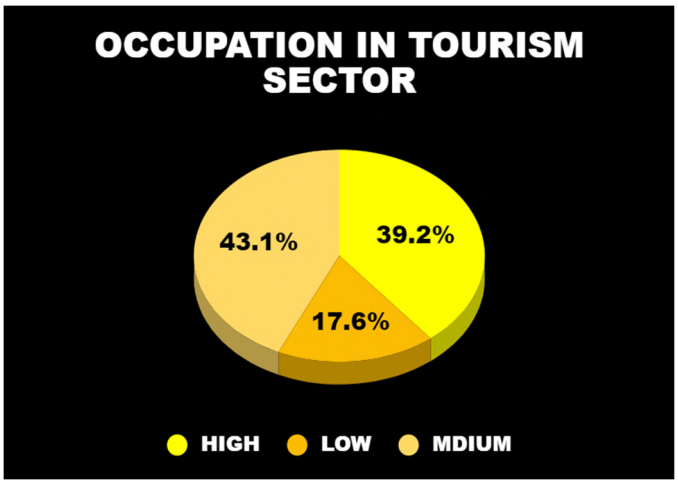
2. Basic needs like food, transportation, medical need and education are of good quality and availability of these are also high. For the development of tourism, the Government put great effort into keeping everything in high standard. (fig.2)



(fig.2)

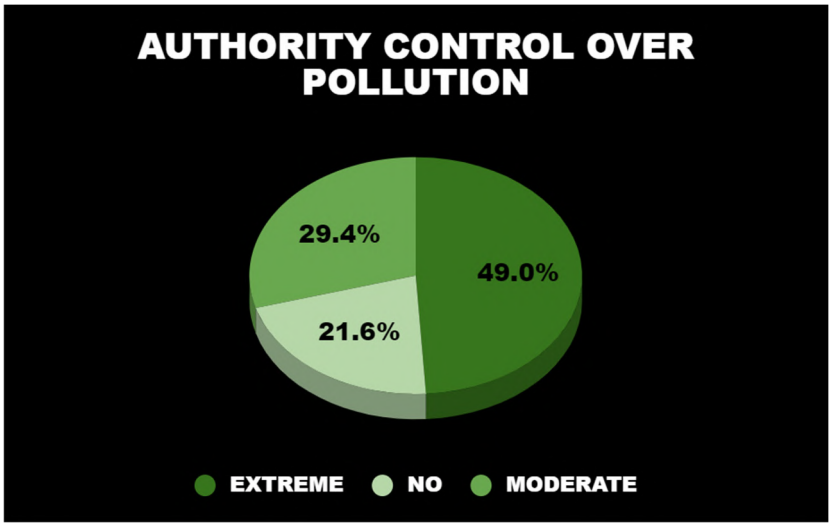
3. Development works like better road connectivity, hospitals facilities and recreational centres like theme parks are in Athirapilly because of tourism. Dream world and Silver storm are two major water theme amusement parks in athirapilly.(fig.2)

4. Most people in Athirapilly depends on tourism for their occupation. Some in the pollution control and site maintenance sector, some in street vending and some as staff in hotels, restaurants and theme parks. Tourism indeed gives so many job opportunities for people in Athirapilly.(fig.3)



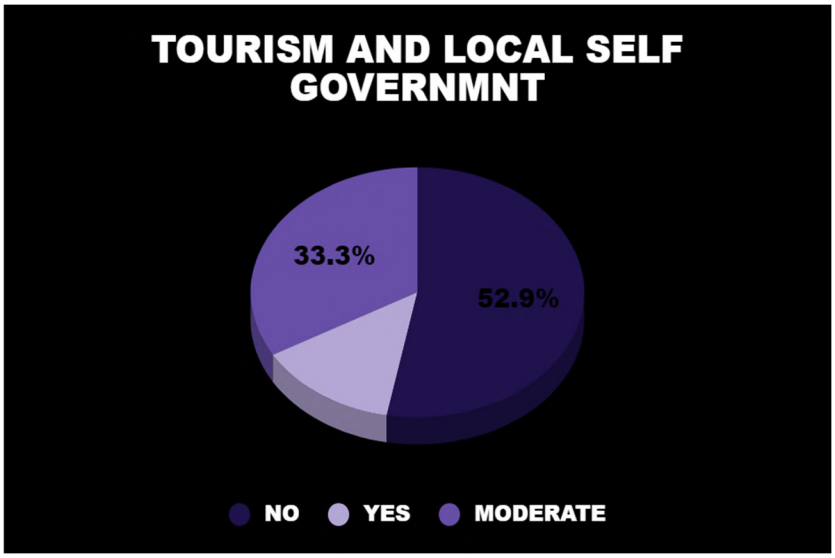
(fig.3)

5. Larger numbers of tourist visits cause some amount of pollution even though in Athirapilly authorities like Vanasamrakshana Samidhi are putting great effort to control pollution and protect the environment. (fig.4)



(fig.4)

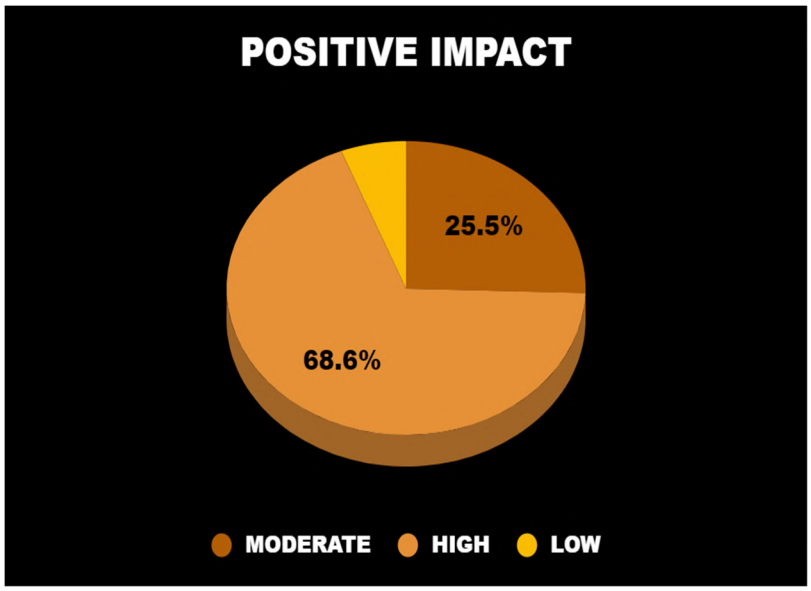
6. Ecotourism in Athirapilly makes lots of profit but it does not benefit local self-government in Athirapilly. Profit made by tourism goes directly to the ministry of tourism. Hence involvement of local self-government in tourism related activities are limited. (fig.5)



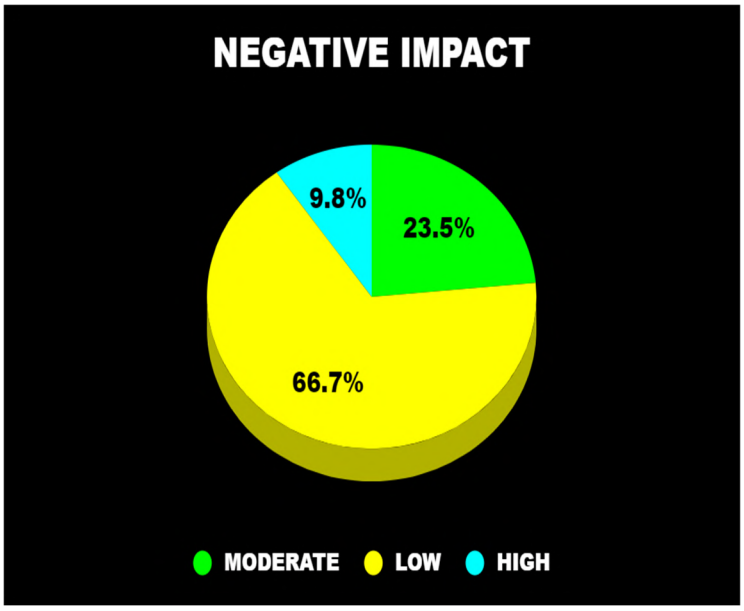
(fig.5)

7. Respondents in study voted high for positive impact made by tourism in athirapilly and low for negative impact. From this we can come to the finding that ecotourism in

Athirapilly managed to reduce the negative impact and also succeed in highlighting positive impact. (fig 6&7)

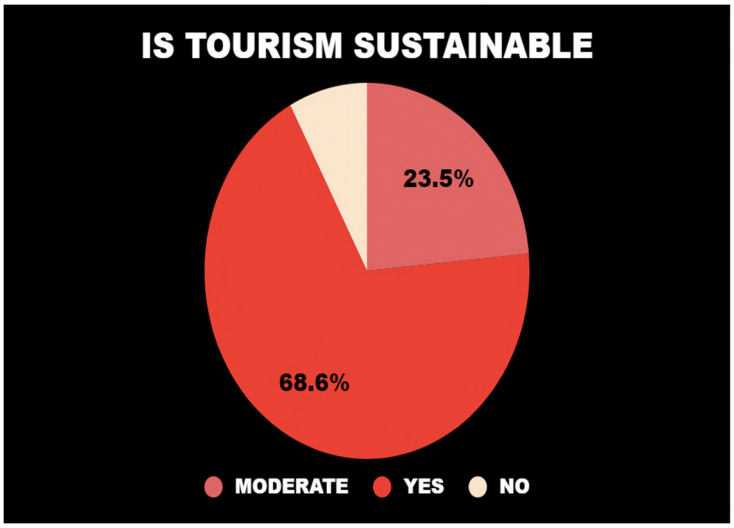


(fig.6)



(fig.7)

8. Majority respondents agreed to the statement that ecotourism in Athirapilly can be taken as a mode of sustainable development in Athirapally.(fig 8)



(fig.8)

From the study we come to find the above-mentioned facts and we also like to put forward some suggestions

1. Involving local self-government in tourism projects will help to develop the service range and quality of service to the tourist. Involvement of local people in planning will help to reach out to more areas in the village.

2. Majority of restaurants, resorts etc are owned by people outside Athirapilly, promoting home stays will help local people financially and also give tourists a chance to mingle with the local culture.

3. Vocational training centre, providing courses related to tourism (e.g.: hotel management, hospitality and tourism etc) can be started in Athirapilly which gives more job opportunities to the youth in Athirapilly.

Limitations of the Study

1. The researcher was not able to go to the field for the collection of data due to the imposed lockdown in the area.

2. Telephonic interviews were used as the tool for collection of data.

3. The involvement of all sectors of people in the area was not complete ensured

4. The study had various assumptions and hypotheses even before the data collection

5. The on field observation about the level of development was not ensured

6. Google map and google earth pro were the only tools used for analysing the rate of change in land use and land cover.

Conclusion

The development and regeneration of rural and remote areas is undoubtedly accelerated by the development of tourism activities in these areas. The relevance of these kinds of study increases as the employment and income generating opportunities are still very less for the local indigenous communities of Athirappally. As cited by Hinch (2001) it is a necessity that an important share of the economic benefits from tourism should go to the indigenous communities. The ecotourism activities could generate a good number of employment opportunities for the indigenous people. Various initiatives have been launched to promote the same. However, most of it remained just on paper. All these should be implemented effectively so that the living standards of the local population will be greatly benefited. Athirapally being an area with vast potential for the sustainable development of the city and communities associated with it we will be able to get more developed once all the initiatives are made into action.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK

ENTREPRENEURS PERSPECTIVE OF CONSUMER AWARENESS IN THE SUCCESS OF GREEN MARKETING APPROACH -A STUDY

Sakshi Kishan POPLI[1]

Green marketing is the marketing or production of a product that is environmentally safe or has minimal disadvantages on the environment. The researcher opted to research the awareness and importance of it for green marketing. The researcher has collected secondary data as well as primary data to substantiate their findings. It has been observed that awareness among people plays a crucial role in the success of green products or green marketing, also green marketing is a very recent concept which is universally followed.

Introduction

Green marketing refers to the marketing of environmentally safe products. It aims at creating long term consumer benefits with products which are not creating any harmful effect on the environment or have the least impact on the environment. Further, it involves various aspects of business connected to green marketing like packaging, production process, advertising, mode of payment etc. Green marketing has two approaches, the first one is philosophical and the second one is a marketing strategy.

Green marketing was initially started in the 1960s when RACHAL CARSON in her book SILENT SPRING (1962) wrote about the harmful impact of the modern world on plants, animals and the environment.

There was an anti-war protest in the US which led to the formation of various acts like the Environmental Protection Agency (1970), the Clean Air Act (1970) and Clean Water Act (1972), and the Endangered Species Act (1973). After this, businesses were asked to adopt green practices and this is how green marketing began. Though green marketing was initiated in the 1960s people are still not aware of the implications, importance and meaning.

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Creating awareness among consumers about green marketing is the first step towards green marketing. To study this problem, the researcher has set specific objectives and collected data.

Literature Review

1.Mayank Bhatia (2014), Impact of green marketing practice on consumer behaviour, proposed that consumers today are more concerned about the environment & he identified organizations like Philips, Nike, Adidas etc. which are selling eco-friendly products. He featured green products as renewable, recycle, water-efficient, energy-efficient, biodegradable etc.

2.Shruti D Vedukiya (2015), Green supply chain performance measurement framework an exploratory study", states the importance of GSCP on economic & environmental factors. If a country like China, Thailand it is necessary to go green as they are developed & in developed countries, there are more environmental issues.

3.Tariq Ahmad Mir (2016), Impact of green sustainable practices on the guests' purchase intention in the hospitality industry", In the paper Identification of hotels or hospitality businesses who are doing green practices was done. Ex-Intercontinental hotel groups etc. It stated that carrying out green practices gives lots of advantages as it creates loyalty, good image etc.

4.Rajesh Kumar SN Nair (2012), A study of sustainable development through green marketing practices in Automobile Industry", talked about sustainable and green marketing, He said green marketing ensures long term profitability & growth of business & also discussed the importance of green marketing considering environmental & market conditions.

5.Sudhir Sachdev (2013), Green Marketing consumer attitude towards eco-friendly fast-moving household care & personal care products" discussed the concern of people towards the pro-environmental product. It states the green marketing concept as a type of marketing & as philosophy.

6.T Guru Sant (2014), Distribution channel coordination in green supply chain management" He considered supply chain management as a very crucial and complex aspect of business and green SCM has competitive advantage according to him, he took it as a 'Mantra' of marketing success. He identified organizations such as Unilever, P n G, Walmart etc.

7.Marti Braleha (2007) "Are you getting most green from Green marketing? ". She mentioned, it is important to understand the true meaning of green marketing & using it in a true sense to get most of the benefits for the economic environment.

8.Muppavara Goswami Shankar (2012) "An attitude and perception of the consumers and marketers towards green marketing with special reference to fertilizer industry", It is concluded that agriculture is the backbone of an Indian economy and it is need of farmers to use fertilizer to feed this many stomachs, so he is throwing light on use of organic Or green fertilizers.

9. P Pirak Atheeswari 'Green marketing- opportunities & challenges", There are lots of opportunities available in green marketing but it's not easy to adopt as various challenges are there such as R & G investment, consumer is not ready to pay a premium, lack of awareness, costly material, some cases are also identified ex. McDonald's, Coca-Cola.

Research Gap

The researcher has studied the topic and found that there was no prior research done about the importance of awareness among customers about green products and marketing. The literature review revealed there is no concrete study done on the same.

Objectives

1.To explore and recognize the scope of green marketing.

2.To understand the importance of awareness about green marketing.

3.To identify which green marketing practices are used by MSMEs.

Problem Statement

Creating awareness among consumers about green marketing is the first step towards green marketing. To study this problem, the researcher has set the objectives and collected data.

Research Methodology

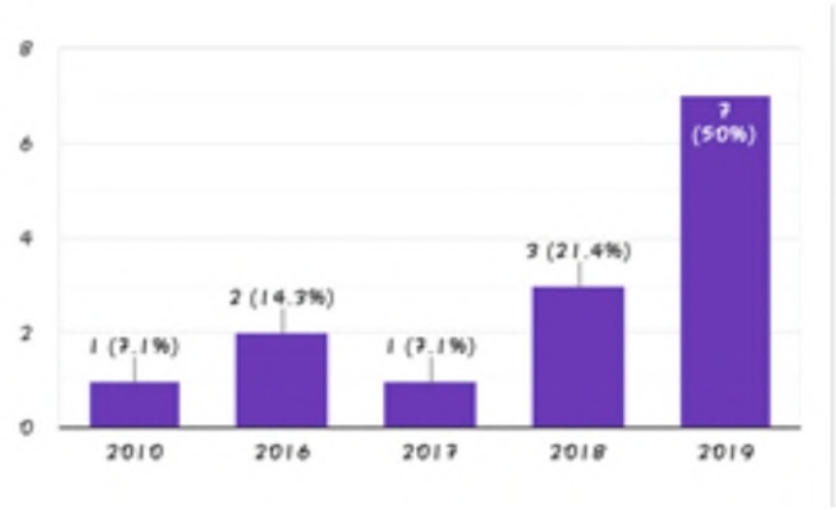
This research study is focused to understand the importance of raising awareness among customers for the success of green marketing. The researcher has collected both primary and secondary data. Secondary data was collected through the various research papers and articles on green marketing which are mentioned in the literature in the review section of the paper.

The researcher has collected primary data through questionnaire and observation from the entrepreneurs who are already in the green field. 14 entrepreneurs were interviewed, a few interviews were taken over the telephone, some were taken on the place of their business and some on email.

Analysis of the Data

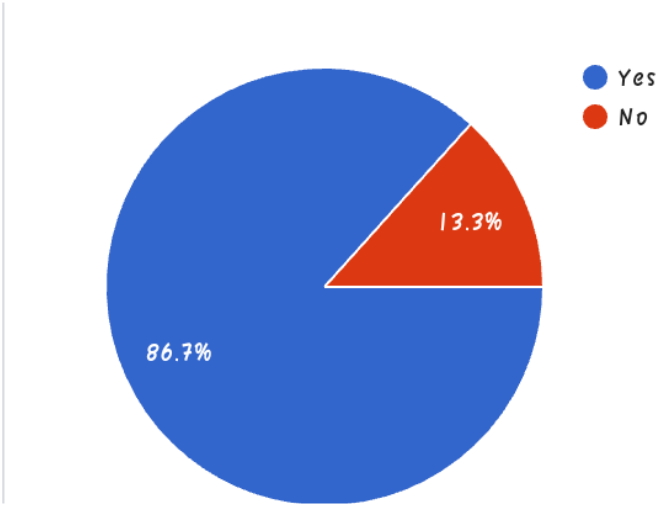
Recent growth in green marketing

The survey inferred that many started their business after 2015 or recently. 14.3%, 7.1%, 21.4% and 50% in the year 2016, 2017, 2018 and 2019 respectively and 7.1% in 2010. So, it can be taken into consideration that people are becoming more aware and concerned about green products and marketing recently.



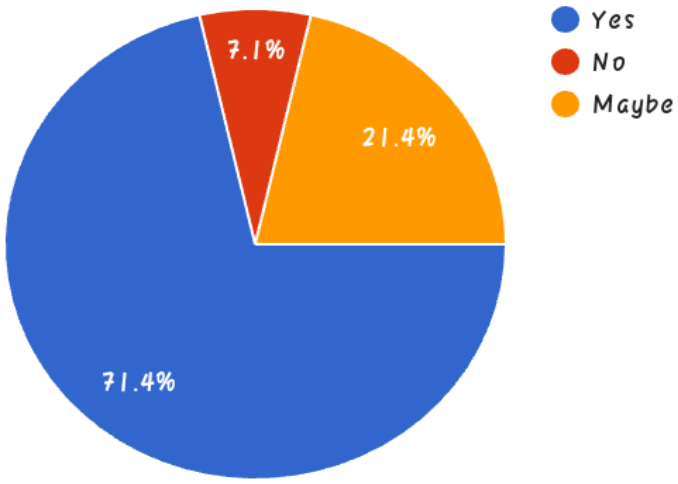
Awareness about Green marketing

About 86.7% of the people are aware of green marketing and 13.7% are not. There are still people who are not aware and there is scope to create awareness about the same.



Green marketing - practices

71.4% of the sample population are practicing green marketing, 21.4% are contributing in some other way and 7.1% are not using green marketing at all even though they are producing green products.

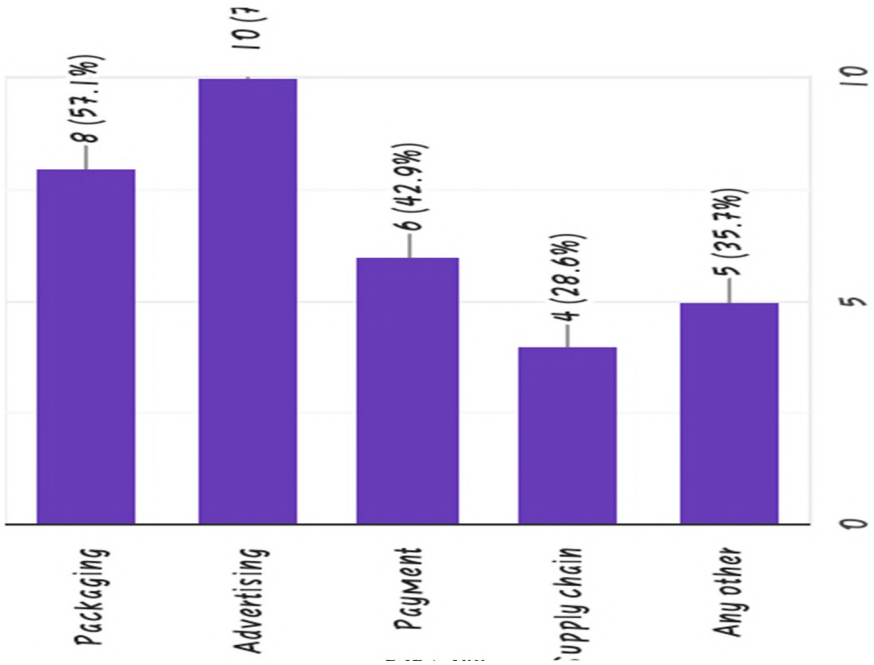


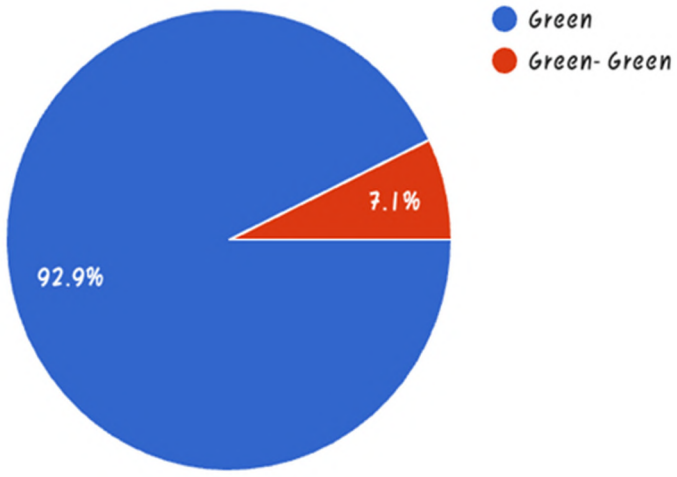
Green marketing – ways

57.1% of entrepreneurs are using the packaging aspect of green marketing, 70% are using green advertising techniques, 42.9% in payment, 28.6% in the supply chain. However, very few of them are running fully green.

Green marketing strategies or Product

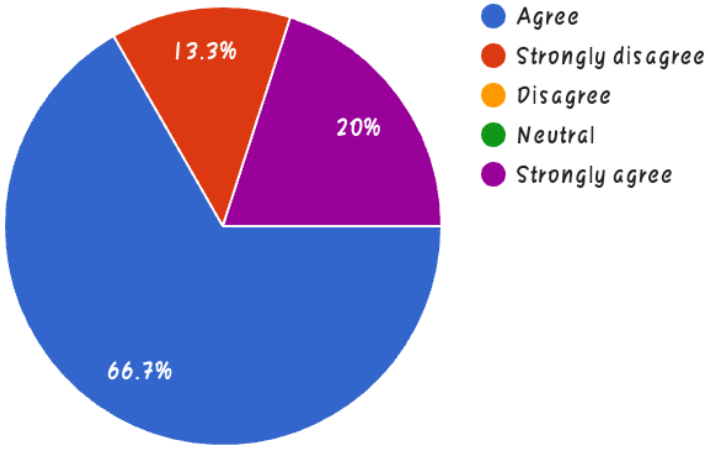
92.9% of businesses are green in nature which means either they are selling green products or their marketing strategies are green. Rest 7.1% are green which means they have adopted both.





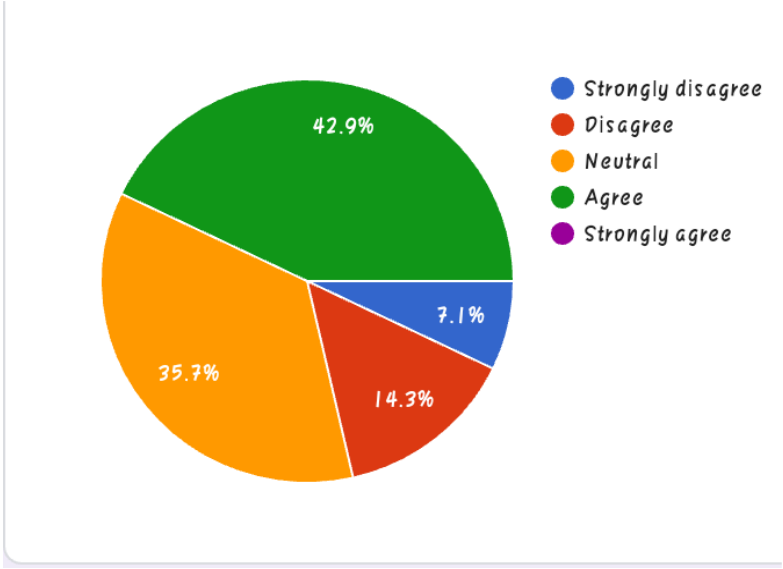
Importance of awareness

To comprehend the importance of creating awareness about green marketing, a statement was made that said, "creating awareness about green Marketing is of utmost importance." 66.7%, 20% and 13.3% agreed, strongly agreed and disagreed respectively. This indicates that awareness plays a vital role in the success of green marketing.



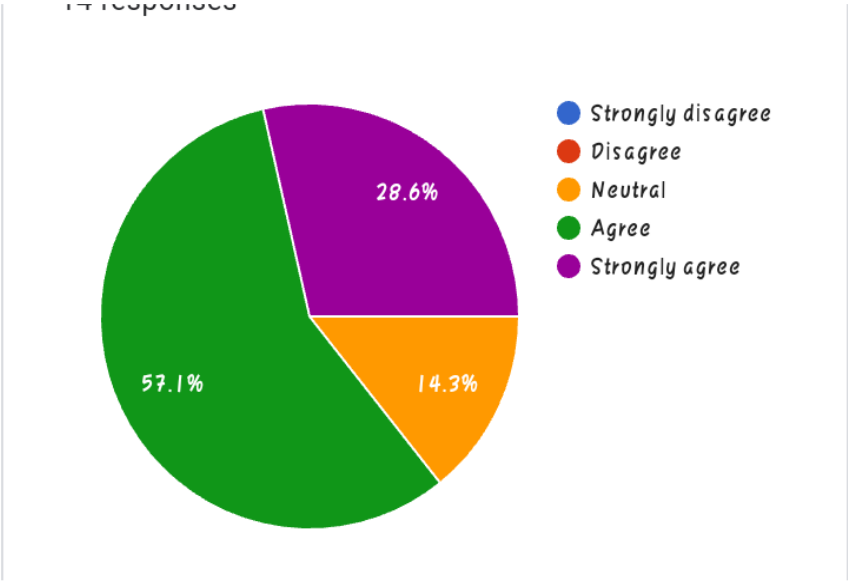
Marketing a green product

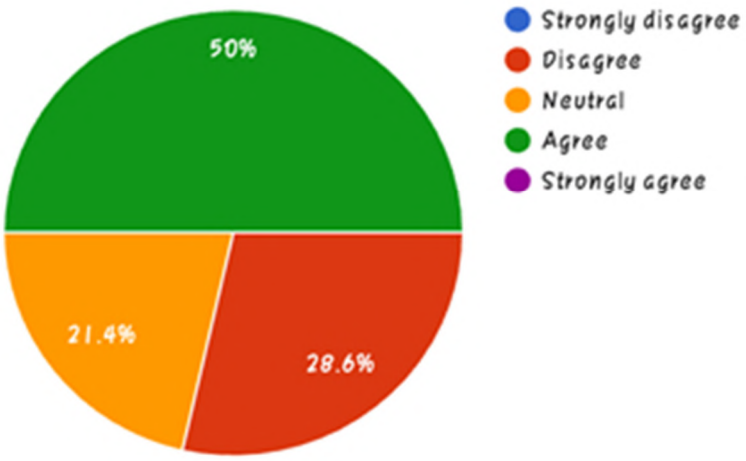
To find out whether or not it is tough to market green products, the survey claimed that "Marketing green products is a tough job". 42.9% agreed, 35.7% were neutral, 7.1% agreed strongly and 14.3% were not agreeing with the statement. If people had been aware of the benefits of going green, it would have been easy to market such products or services.



Pricing of green products

50% of the Entrepreneurs agreed, stating that the high price of the green product is a major problem while marketing the same. 21.4% were neutral and 28.6% disagreed. The reason being for the same is the lack of awareness and People are ready to pay high prices for the quality products.



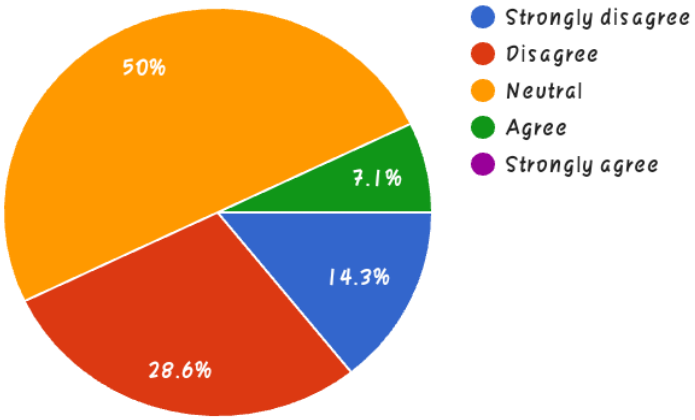


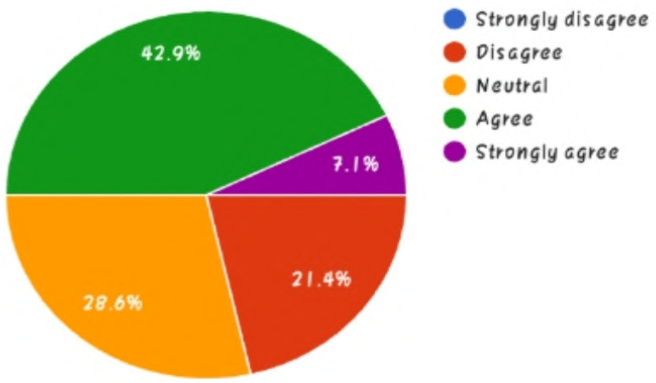
Level of awareness

In order to analyze the importance of creating awareness, the question presented was: 'is creating awareness among customers is the starting point of marketing?' 57.1% agreed, 28.6% strongly agreed and the remaining 14.3% were neutral for the statement. So, it is concluded that creating awareness is a major part of marketing green products.

Understanding entrepreneurial mindset

To understand the mindset of entrepreneurs it was said that non-green methods of marketing are better than green Marketing. 7.1% were agreed 14. 3 agreed strongly, 50% were neutral and 28.6% disagreed. Also, another statement made was it is easy to produce non-green products and do non-green marketing, 42.9% agreed for the same, 7.1% agreed strongly, 28.6% were neutral and 21.4% disagreed.





Opinions of the entrepreneurs interviewed

Any product comes with a cost to the environment and vis-a-vis any environmentally friendly products come with a price. So, people's awareness plays the most important part in green marketing.

Limitations

The researcher has been able to identify a few limitations to the study carried out.

1.Secondary research is being done on a very restricted number of Entrepreneurs.

2.There is no sector-wise specific research done.

3.Entrepreneurs are chosen randomly, there were no criteria to select Entrepreneurs to interview them.

Further Scope

1.Research can be done concerning specific industries.

2.A large number of Entrepreneurs can be taken for a detailed study of the topic.

Conclusion and Suggestions

After carrying out the study, the researcher concludes that people are becoming more aware and concerned about the environment and that this is a very recent concept.

The researcher also recognizes the growing need to create cost-effective green products. Further, there is scope to create awareness about green marketing as not all are aware of the same.

Considering the objectives as defined earlier in the paper, the researcher believes that customers should take into consideration the quality and importance of going green. Furthermore, the responsibility lies on the shoulders of entrepreneurs to carry out activities that promote the goodness of green marketing or green products.

The researcher recommends that awareness campaigns or sessions should be conducted by businesspersons as well as other authorities. Finally, it is important to note that products come at a cost to the environment, so the benefits should be given priority over the price of the green products.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK

CHAPTER 12

GOAL-12: RESPONSIBLE CONSUMPTION AND PRODUCTION

ITS FUNDAMENTALS AND EVOLUTION

Rahmiye Figen CEYLAN[1]

Sustainable development is important for the humanity and all other livelihoods in order to maintain their existence on earth. Accordingly, sustaining the resources and final outputs has been considered in the developed and developing world for quite some time. The United Nations representing 193 members, put forward a strategy on 2015 describing the steps to be taken up until 2030. Responsible/Sustainable Consumption and Production has appeared as a goal to be achieved within this strategy. It has been almost 7 years after announcement of those goals. So, an overview with regards to the SDG 12 was considered as beneficial, by starting with its facets and discussing its achievements due to the change in success indicators. The statistical observations inferred that there still remains a long path to be passed up until 2030.

Since the beginning of the new millennium, sustainability has been a very important supra-concept embracing economic and social development. It encompasses of many diverse subjects, involving sustaining the earth itself. 2030 Agenda for Sustainable Development was discussed in the UN Summit of 2015 that took place in NYC, the USA and 17 SDGs were defined at beginning of 2016 to be accomplished in 15 years (Anonymous, 20221a). Each subject has many important facets and all of them were approved by 193 member states of the UN. Considering the time elapsed, checking the progress and problems with regards to all SDGs is

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essential. Hereby it is intended to focus on SDG 12 ‘Responsible Consumption and Production - SCP’.

The 17 goals had defined a broad frame to maintain all sorts of livelihoods, not only human, to cope with irresistible hunger and poverty, to assure a balanced growth path. By balanced growth, we have to confess that the rising population on earth has rising and evolving needs as well. In order to meet those needs, economic transition needs to be focused on in terms of production and consumption sustainability. Yet, responsible consumption and production comes upfront considering its multiplier effects as well as direct effects. Countries that would gain competence in application of SDG 12 have been expected to achieve overall development plans, estimate and reduce future economic, environmental and social costs, to foster economic competitiveness and to reduce and manage poverty via:

Promoting:	**Providing access to:**
● resource and energy efficiency, ● sustainable infrastructure,	● basic services, ● green and decent jobs ● a better quality of life for all.

with reference to definition of the UN, SDG 12 (Anonymous, 2021).

Like as the other goals, there are concrete determinants of success for SDG 12. Sustainable Consumption and Production has 11 targets and 13 indicators defined to measure the progress. The targets and indicators are as following (Anonymous, 2015; Ritchie et al., 2018).

Table 1: Targets and Indicators for Sustainable Consumption and Production – SDG 12

Targets	**Indicators**
12.1: Implement the 10-year sustainable consumption and production framework	12.1.1: Sustainable consumption and production action plans – number of countries with plans until 2030
12.2: Sustainable management and use of natural resources	12.2.1: Material footprint – total/per capita/per GDP

	12.2.2: Domestic material consumption – total/per capita/per GDP
12.3: Halve global per capita food waste	12.3.1: Global food loss - index
12.4: Responsible management of chemicals and waste	12.4.1: International agreements on hazardous waste – number of countries adopted agreements as the Montreal Protocol, Basel Convention, Rotterdam Convention and Stockholm Convention 12.4.2: Hazardous waste generation – per capita
12.5: Substantially reduce waste generation	12.5.1: Recycling rates - tonnes
12.6: Encourage companies to adopt sustainable practices and sustainability reporting	12.6.1: Companies publishing sustainability reports – number of companies.
12.7: Promote sustainable public procurement practices	12.7.1: National sustainable procurement plans – number of countries.
12.8: Promote universal understanding of sustainable lifestyles	12.8.1: Understanding of sustainable lifestyles – improvement on education and awareness level
12.A: Support developing countries' scientific and technological capacity for sustainable consumption and production	12.A.1: Support for developing countries' capacity for sustainable production
12.B: Develop and implement tools to monitor sustainable tourism	12.B.1: Monitoring sustainable tourism – number of strategies/policies
12.C: Remove market distortions that encourage wasteful consumption	12.C.1: Removing fossil fuel subsidies – per GDP and ratio to national fossil fuel consumption

After its base is defined, it is not hard to mention that SDG 12 is strictly related with many of the other SDGs. The specific connections can be demonstrated as below (Anonymous, 2018).

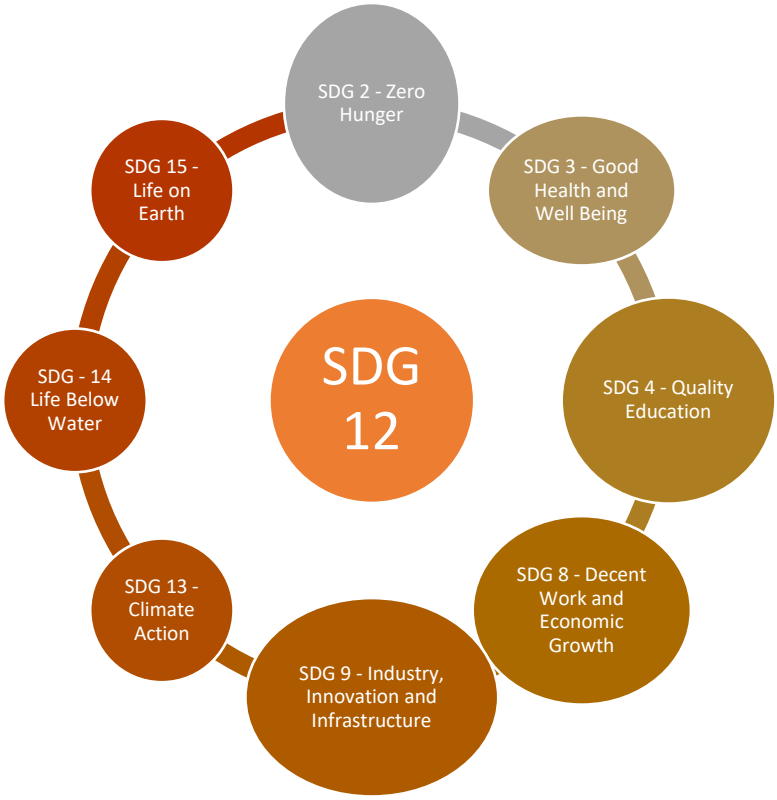


Figure 1: Linkages of SDG 12 with other SDGs

Checking out the proposed interconnection, it is possible to infer that implementation of tasks attributed to SDG 12 will contribute other goals. With traceable sustainability of production and consumption all-around the world:

- Human surveillance will be granted – SDG 2 & SDG 3
- Survival of other livelihoods around the planet will be supported – SDG 13 & SDG 14 & SDG 15
- Economic and social quality of younger generations will be assisted – SDG 4 & SDG 8
- Environmental protection will be embraced in a multidimensional perspective – SDG 9 & SDG 13

We have to be well aware of the deteriorating resources of all kinds. Actually, with the current level of consumption and permanently supported and mostly uncontrolled production, it is inevitable to face with inadequate resources in the close future. The world's population was

estimated to be around 9,6 billion by 2050 with the current population growth rates. This estimate incurs that with available consumption patterns, three worlds will be needed for feeding and survival of the human by then (Anonymous, 2021b). However, it is also important to emphasize that the available resources are not shared in an even unequal but balanced way. Majority of the earth population mainly living in the east and south lack the resources and even unable to meet daily needs. This signifies obesity of part of the world in contrast to atony and insufficiency of the remaining. Therefore, as declared by 2015, sustainability needs to encompass effective but responsible production schemes attached to consumption attitudes.

Responsible - sustainable production and consumption needs to assure the path between inputs-outputs in an efficient way. This may be the most important task residing on reduction of global material footprint. Material footprint corresponds to what we leave behind after production and/or consumption.

Checking out the previous progress (or regression actually) we can infer on the current global position on many aspects of production and consumption. Some figures deprived of the indicators above, provide insights for researchers to concern and think about the forthcoming days (Anonymous, 2020a):

12.2.1: Global material footprint data, referring to the sum of remedies of fossil fuels, biomass, metal ores and non-metallic minerals, incurs significant regression. Comparing 2010 and 2017 data with the previous records, it was seen that accumulation rose by 25 % in 2000, 70 % in 2010 and 114 % in 2017 taking 1990 as a base. In addition, the rise experienced was 36 % in 2010 and 70 % in 2017 taking 2000 as a base. These data signs the increasing speed of deterioration since 2000s. Besides, by 2060, the expected amount is 190 billion metric tonnes with the available scheme. This unsustainable level would also sign more than double of 2017 records.

Table 2. Global Material Footprint – billion metric tonnes

1990	**2000**	**2010**	**2017**
43	54	73,2	92

With reference to the same global footprint data, the per capita and per total GDP indexes were calculated and the dispersion was demonstrated below.

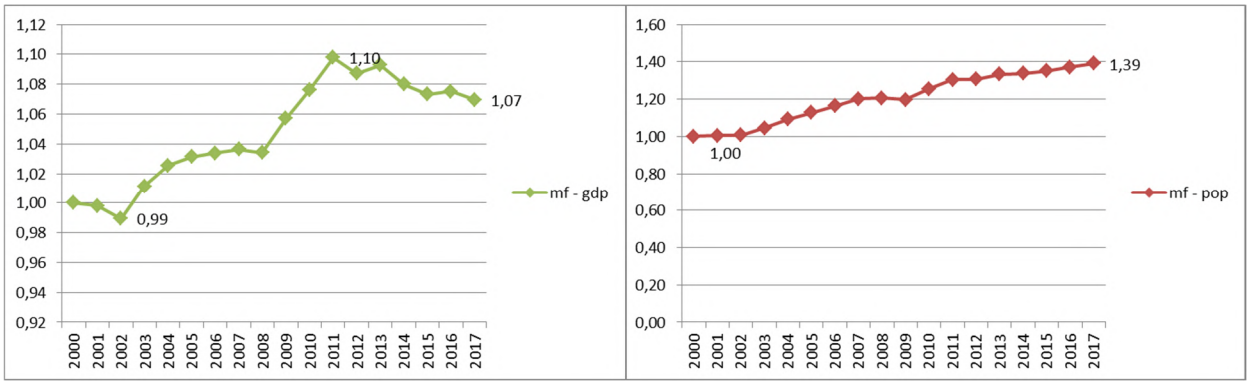


Figure 2: Material footprint per global GDP and global population (2000 base year)

From the figure, it is obvious that the population-based remedies has been rising permanently, while there has been declinations in terms of income. On the contrary, the rising tendency in the population level comparison revealed that the declination per GDP is related with external factors, specifically downsizing global income levels.

In accordance with aggregate amount comparison, differentiation between country groups strengthened the idea that the developed world consumes the rest of the world. Per capita material footprint has been dispersed uneven due to income level of the countries.

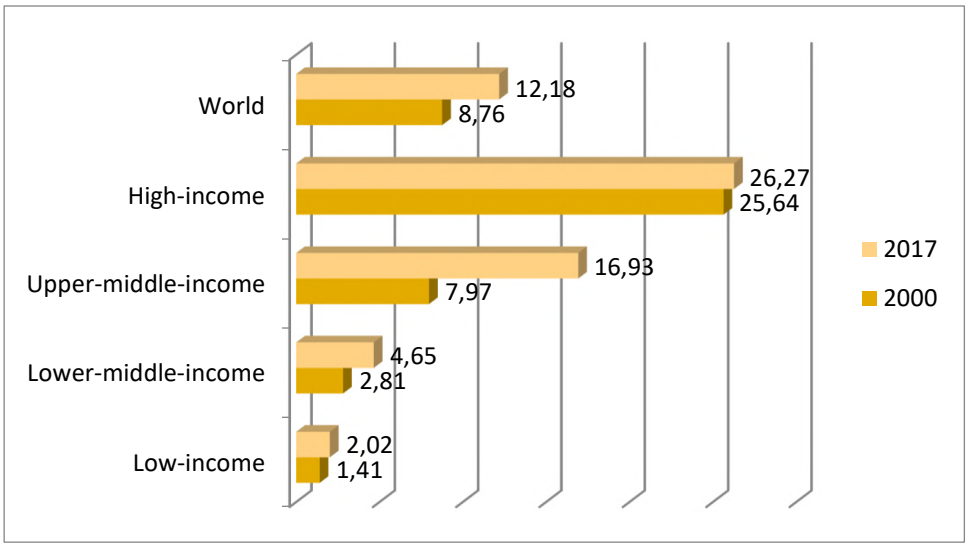


Figure 3: Material footprint per capita due to income level – metric tons per person

It is rather obvious from the figure that the average amount of remedies is rather high for high income countries. However, the uprising experienced by developing countries is much more noteworthy. As much the countries proceeded in the growth and development path, the non-recycled leftovers of those countries do rise. The highest increase between 2000 and 2017 was observed among upper-middle income countries that the per capita remedies doubled within 7

years. The percentage of rise was 65 % for lower-middle income countries. The lowest rise was in the group that produces the highest amount of production/consumption remedy.

Nowadays, it is inevitable to consider the technological disposals, considering the components of material footprint. Since the beginning of the millennium, the personal energy and electronic device use has risen in an incredible rate. So as the personal electrical and electronic disposals that the so-called e-waste had risen from 5,3 kg per capita per year in 2010 to 7,3 in 2019. In the meanwhile, amount of recycled electronic disposals rose from 0,8 to 1,3 kg per capita. These figures are part of the indicator 12.5.1 referring record keeping for recycling rates. Besides, the recycling process has not been widespread all over the world. In contrast to rising disposal production in the developing world, the recycling ratio is higher in the developed world yet, also indicating a relationship between recycling culture and level of income (Ates, 2021; Pelă and Chinie, 2018). However, despite the well-developed recycling infrastructure, the UN indicated low utilisation of the capacity with lower 50 % in the high-income countries. Thus, even if the recycling capacity is well situated, the ideas has not been pre-empted everywhere in a healthy manner. This again signs an obvious need to develop and promote sustainability perspective around the world.

Of course, sustainability of consumption and production is not limited to technological evolution and use of technology bilaterally. A very specific side of economic sustainability is related to food and agriculture systems. As a productive and compulsory sector, water dependence of agricultural production is both significant and needs to be well monitored. This is due to the fact that human nutrition and attached agricultural production consumes the highest share of water among available resources with 70 % (Anonymous, 2021b). While more than two billion people have no or limited reach to water, the remaining population has been using the available resources in an exploiting way (Anonymous, 2019). Importance of water cannot be discussed, so as food resources. The figures relevant food waste has been monitored under the indicator ‘12.3.1. global food losses. Both food security and safety need to be on the agenda permanently. It is very unpromising to recall that almost 16 % of the food gets lost in the transportation process or during storage which refers to a value over $ 400 billion per year. Most of the loss occurs in the Central and Southern Asia (21 %) and Europe and Northern America (16 %), where value chain seems easy to be broken and lack of personal satisfaction has become an unprecedented reason for food disposals. This opinion can also be supported by recognition of the lowest the food disposal rate in Australia and New Zealand 5,8 %

(Anonymous, 2020a). Thus, land-lock regions that are well-aware of the fact that they need to achieve self-sustainability can be referred as more planner than user in terms of food products.

The existing situation and what needs to be done are clear actually. Even if it is costly and timely, an idea-based transition should be recalled. Yet, the question arising here starts with "how?". How can the economy fit in this process? Therefore, the evolution of the business and management approaches specifically since the Industrial revolution can be overviewed shortly.

From now on, transition from linear to circular economy should be discussed as part of the process. Before proceeding with the new cycle, it might be beneficial to define and detail both linear and circular economics. Circular economics has emerged as a new but complementary concept. Actually, the approaches developed for sustaining the input-output system defines the elastic borders of circular economy. The linear economy, which is the traditional approach maintained for millennia of the humanity, incorporates sole utilisation of resources without considering the needs of forthcoming generations. Its best description is made via the abbreviation "Take – Make – (Use) – Dispose" and it can be demonstrated with the below figure.



Figure 4. Linear Economy

Yet, with the Industrial Revolution and technological amendments, use of non-recoverable fossil fuels and ultimately increasing production of disposals that are durable lead everyone involved to consider the process (Onder, 2018). The linear model refers to consumption directly (Brydges, 2021). It starts with consuming the natural resources and converting them to final products. The process continues with again using/consuming resources to transfer the product to end consumers. Consecutively, the end-consumer uses the product and leaves the disposal behind. The remedies continue to consume from the environment via absorbing oxygen and covering the lands in an uncontrolled way.

So forth, reduction of inputs and the waste produced following consumption has been considered as essential. The disposals should be recycled and produced new products would become eligible for reuse. In essence, this life cycle well suits to the idea of linear economics. In order to satisfy contemporary needs of the society and to sustain the management of resources, the durable products should be repaired and reused. Again, within the changing circumstances, the renovated products may be converted to be utilised for completely different purposes. Rethinking the process of production and consumption of non-durable goods and refusing both overuse and disposal of those products should be attached to the process as well (Anonymous, 2020b). This actually signed the transition to circular economy, which encompasses the idea of "re-use" rather than dispose.

How the disposals can be reduced or how resource sustainability can be improved in the scope of production and consumption? Before, proceeding with the question on 'how?', the connection of the SDG 12 with the business world can be emphasized via assessment of the UN Global Compact Principles (Anonymous, 2021c).

There are ten principles that can be used to build strategies for businesses and for economic planning and management authorities. These principles can be tabulated as below and explained afterwards.

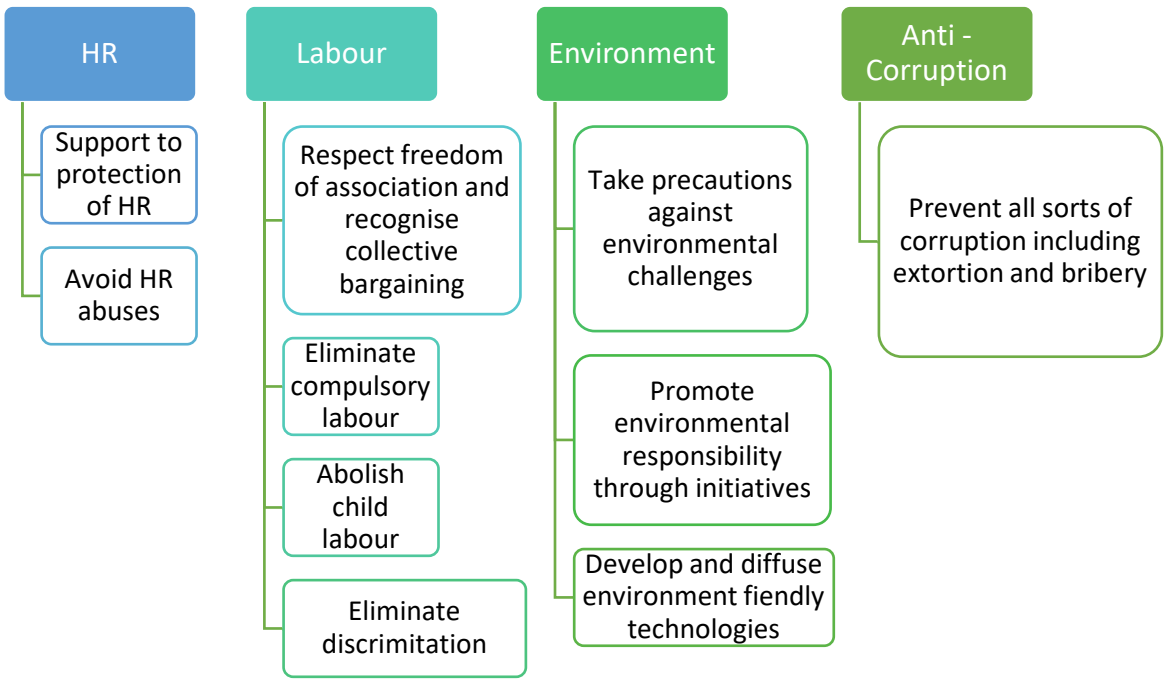


Figure 5: The UN Global Compact Principles

Considering application of these principles, contemporary managerial approaches as LCA (Life Cycle Analysis) business planning with 3Rs (reduce, recycle and reuse) needs to be incorporated in the process to accomplish SDG 12. LCA incorporates a cycle to return disposals to inputs and initiate a new production process, which can be demonstrated as below.

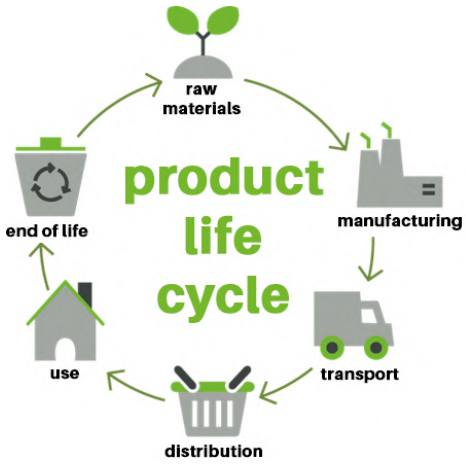


Figure 6: Product Life Cycle

This cyclical process starts with manufacturing out of naturally raw and processed or semi-processed inputs. The processed products are transported to their final destinations and delivered to final consumer or purchasers. Either durable or not, the life of the product ends within time. A new cycle can only take place if the disposed products can be converted into raw material or inputs of new products. This process can also be acknowledged with 3Rs which were converted into 7Rs within the modern management process (Araujo-Morera et.al, 2017) as indicated within Figure 5.

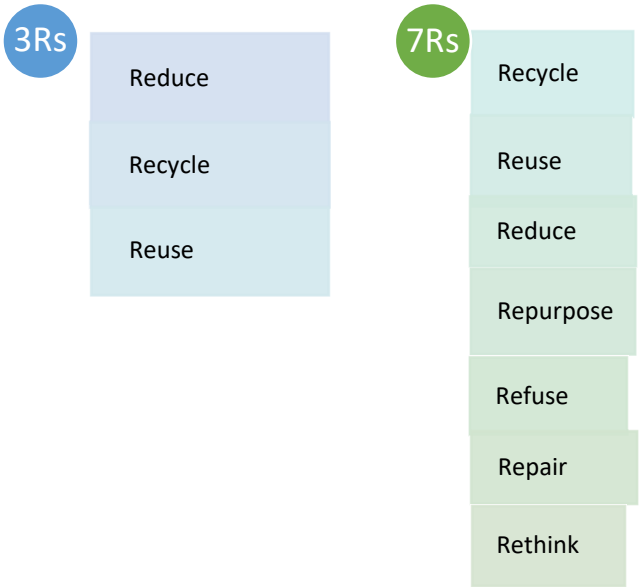


Figure 7: From 3Rs to 7Rs

It is possible to link these strategy and policy development approach easily. In addition to reducing the use of durable inputs or outputs that leave their trace behind, the remedies of these products should be recycled and reused to minimise the sustainable effect. However, this environmental effect control should involve sustainability planning in more details. Therefore, how the recycled inputs/outputs can be used needs to be considered over and over again and the purpose for re-application or reusing the disposals should be re-defined depending on the conditions. If repairing the product (especially durable) is possible, repairing costs should be focused on rather than production from the beginning. If neither repairing nor recycling is promising for the economy, industry or the firm, refusing to use the harming components and replacing them needs to be on the agenda.

With this life cycle assessment and planning approaches, the main intention should be to bring a bottom - up awareness. Actually, evolution on research level continues. However, application in the field by members of societies, specifically the business world, is essential both for success of the existing process and for producing insights for improvement. In order to increase idea and application-level awareness, success of elementary efforts is essential. The international bodies determined and/or enlightened the route. The implementation at least for most harming sectors in many developed and developing countries have been determined. So, it is of the various industries and companies best to follow these paths. Only if the manufacturers aim to reduce their impact on the environment, these discussion and strategic plans can reach their targets.

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TRADEPRENEUR GLOBAL ACADEMIC PLATFORM
SOUTHAMPTON, UK

USE OF BIO-PLASTIC RESEARCH PAPER BIOPLASTICS

Vishal BADHWAR[1]

Introduction

‘‘Plastics’’ were introduced approximately 100 years ago, and today are one of the Most used and most versatile materials. Yet society is fundamentally ambivalent Toward plastics, due to their environmental implications, so interest in bioplastics Has sparked. According to the petrochemical market information provider ICIS, ‘‘The Emergence of bio-feedstocks and bio-based commodity polymers production, in Tandem with increasing oil prices, rising consumer consciousness and improving economics, has ushered in a new and exciting era of bioplastics commercialization. However, factors such as economic viability, product quality and scale of operation will still play important roles in determining a bioplastic’s place on the commercialization spectrum’’ (1).

The annual production of synthetic polymers (‘‘plastics’’), most of which are derived from petrochemicals, exceeds 300 million tons (2), having replaced traditional materials such as wood, stone, horn, ceramics, glass, leather, steel, concrete, and others. They are multitalented, durable, cost effective, easy to process, impervious to water, and have enabled applications that were not possible before the materials’ availability.

Plastics, which consist of polymers and additives, are defined by their set of properties such as hardness, density, thermal insulation, electrical isolation, and primarily their resistance to heat, organic solvents, oxidation, and microorganisms. There are hundreds of different plastics; even within one type, various grades exist (eg, low viscosity polypropylene (PP) for injection molding, high viscosity PP for extrusion, and mineral-filled grades). Applications for polymeric materials are virtually endless; they are used as construction and building material, for packaging, appliances, toys, and furniture, in cars, as colloids in paints, and in medical applications, to name but a few. Plastics can be shaped into films, fibers, tubes, plates, and

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objects such as bottles or boxes. They are sometimes the best available technology. Many plastic products are intended for a short-term use, and others have long-term applications (eg,

Plastic pipes, which are designed for lifetimes in excess of 100 yr). On the other hand, there is a growing debate about crude oil depletion and price volatility, and environmental concerns with plastics are becoming more serious. Approximately half of all synthetic polymers end up in short-lived products, which are partly thermally recycled (burnt), but to some extent end up on landfills or, worse, in the oceans, where large plastic objects are washed ashore, sink or float (eg, the ‘‘North Pacific Garbage Patch,’’ which has continental dimensions), and get fragmented to ‘‘microplastics’’ (particles between a few mm and <5 mm) that harm and kill various organisms, finally ending up on our plates. It is estimated that globally some 900 billion plastic bags (shopping bags, waste bags, etc) are produced each year, with a typical average useful life of only a few minutes and a significant fraction of them ending up as litter in the environment (3), having wasted energy, spoiling the scene, and seriously harming wildlife

• Motivation for and Types of Bioplastics

After food and textiles, the ‘‘organic trend’’ is continuing to spread into materials; bioplastics have come an vogue and receive extensive media attention, although current production volumes are only on the order of 1% of annual plastics manufacturing. Increasing oil prices, rising consumer consciousness and environmental awareness, improving feedstock and process economics, better product quality and scale of operation have helped ‘‘revive’’ bioplastics (see Section 5).

Other factors that motivate R&D in bioplastics are as follows: Rural development, added value and jobs (bioplastics feedstock is typically, grown in rural areas, where farmers can benefit. Interesting new properties or mix of properties (degradability, haptics, weight, etc). Feedstock diversification (less dependence on crude oil, which is finite). Growth rates of bioplastics in excess of 20–30% have been witnessed for several years and several materials. These are expected to continue.

Objective

A discussion of sustainability of plastics has to consider two main aspects: life cycle assessment (LCA) and ecotoxicity. LCA, also referred to as eco-balance and cradle-to-grave analysis, is the investigation and valuation of the environmental impacts of a given product or service over its entire existence (input, life, and output), considering raw material sourcing, production

process, packaging, distribution, usage, and waste management including transport (25). For details, see, e.g., the standards ISO 14040 and ISO 14044.

Ecotoxicity subsumes the consequence of adverse effects caused by a substance on the environment and on living organisms. The environment encompasses water, air, and soil. When only living organisms such as animals, plants and microorganisms are affected, the term ‘‘toxicity’’ should be used.

Pure plastics generally show low toxicity due to their insolubility in water and since they are biochemically inert (because of a large molecular weight). Plastic products, in contrast, contain a variety of additives, some of which can be toxic (e.g., phthalates as plasticizers). Also, residues of toxic monomers can still exist in the product (e.g., vinyl chloride, the precursor of PVC, a human carcinogen), or it can release such monomers or oligomers upon excessive heating (e.g., PTFE).

Toxic substances can further be produced during incineration, particularly when it is carried out in an uncontrolled way (at low temperatures, dioxins, PAHs (polycyclic aromatic hydrocarbons), and other noxious fumes can be formed). An increasing presence of microplastics was found in the marine food chain. Microplastics (debris <5 mm) can occur in the environment as primary or secondary microplastics (26). Primary microplastics are those manufactured for a specific purpose, e.g., for cosmetic products. Secondary microplastics are those produced through environmental fragmentation of larger-sized products. Their typical abundance was reviewed in Reference 26 (see Table 4).

In a recent study of microplastics in bivalves cultured for human consumption, it was found that the two species investigated contained on average 0.36 and 0.47 particles/g, which exposes the European shellfish consumer to an estimated.

Research Methodology

Biodegradable plastics had a difficult start, as marketing claims exceeded performance. ‘‘The U.S. biodegradables industry fumbled at the beginning by introducing starch filled (6–15%) polyolefins as true biodegradable materials. These at best were only biodisintegradable and not completely biodegradable. Data showed that only the surface starch biodegraded, leaving behind a recalcitrant polyethylene material.’’ (38). This situation questioned the entire biodegradable plastics industry and has kept consumers and regulators confused for the understanding of biodegradability and compostability. There are currently 23 active standards for testing the biodegradability or biobased content of plastics according to ASTM protocols

(39). One has to discern between degradability in general and biodegradability in specific. Biodegradability is the capability of being degraded by biological activity (note that the in vitro activity of enzymes cannot be considered as biological activity). Degradation is the lowering of the molar masses of macromolecules that form the substances by chain scissions. All biodegradable polymers are degradable polymers, but not necessarily vice versa compounds can contain nondegradable additives, and copolymers nondegradable moieties). Biomineralization is a process generally concomitant to biodegradation, biofragmentation, and bioerosion. Specific modes are ‘‘hydrodegradation’’ or hydrolysis (by the action of water), photodegradation (by visible or ultraviolet light), oxidative degradation (by the action of oxygen) or photooxidative degradation (by the combined action of light and oxygen), thermal degradation (by the action of heat), thermochemical degradation (by the combined effect of heat and chemical agents), and thermooxidative degradation (by the combined action of heat and oxygen). One can distinguish between physical and chemical degradation. Biodegradation is cell mediated (e.g., bacteria). Enzymatic degradation is a result from the action of enzymes.

An environmentally degradable polymer is a polymer that can be degraded by the action of the environment, though, for example, air, light, heat, or microorganisms. Depolymerization can be caused by the enzyme depolymerase. This term is to be used when monomers are recovered (! Feedstock recycling). Deterioration, which can stem from physical and/or chemical influences, is the deleterious alteration of a plastic material in quality. Erosion is a degradation process that occurs at the surface and progresses from there into the bulk. Fragmentation is the breakdown of a polymeric material into particles irrespective of the mechanism and the size of fragments. Mineralization is the process through which an organic substance is converted into inorganic substances (CO2, H2O, and other inorganics).

Composting is the decomposition of organic wastes by fermentation. It can be performed industrially under aerobic or anaerobic conditions. Biodegradable plastics must undergo degradation resulting from the action of naturally occurring microorganisms such as bacteria. Compostable plastics must further meet the following two requirements: They must biodegrade at a rate comparable to common compostable organic materials. They must disintegrate fully and leave no large fragments or toxic residue.

In short, a biodegradable plastic cannot be called compostable if it breaks down too slowly, or if it leaves toxic residue or distinguishable fragments. In general, an increase in the hydrophobic character, the macromolecular weight, the crystallinity, or the size of spherulites decreases biodegradability (40). The higher the amount of natural polymers such as polysaccharides in

blends, the faster the degradation progresses. Such blends are, however, not completely Degraded; the bulk material will be rendered into minute particles of conventional polymer, which are no longer visible to the naked eye like litter but are still present. An example is mulch film made from PE with starch as filler. Such materials are generally no longer used (41).

Ideally, plastics are mineralized, ie, broken down and converted to water and carbon dioxide after their use, which is mostly time limited. When a mineralization product is CH4, which has a high greenhouse warming potential (31), the environmental impact is significantly aggravated.1010 at present, the biggest market share among biodegradable bioplastics is held by TPS and blends made thereof, accounting for approximately 60% of consumption (54). Next in line is PLA with approximately 20% market share, followed by CA with 15% market share. Other bioplastics such as PHAs are at a market share below 5%, at present. It is assumed that PLA is growing fastest (54).

Figure 5 shows an overview of biodegradable plastics in four families. An extensive list of bioplastics is provided in Reference 6. Biobased polyethylene is the most common nondegradable biopolymer. Below, important biobased plastics are described. First, drop-in replacements (PE, PP, PVC, and PC) will be discussed, followed by biodegradable biopolymers. Note that also blends containing biobased plastics are manufactured. Drop-in Bioplastics are chemically identical to their petrochemical counterparts, but they are at least partially derived from biomass. Generally, one can see a trend toward the replacement of conventional petroplastics by these drop-in solutions, with biodegradable bioplastics receiving comparatively less attention (55). Statistics from European Bioplastics show that durables accounted for almost 40% of bioplastics in 2011, up from around 12% in 2010 (19). This trend is in line with improving properties of bioplastic formulations.

Biobased PE.

PE is one of the most widely used commodity thermoplastics, e.g., for packaging (plastic bags, plastic films, geomembranes, and containers including bottles). Variants are HDPE, LLDPE, and LDPE (high density PE, linear low-density PE, and low-density PE, respectively). The monomer, ethylene, is commonly made from crude oil (via cracking), natural gas, or shale gas (from NGLs (natural gas liquids) (56) or methane after dimerization (57)). Biobased PE was first commercialized by Brazilian company Braskem utilizing local sugarcane-derived ethanol/ethylene as feedstock. In September 2010, Braskem started commercial production of biobased HDPE with a capacity of 200,000 ton/ Yr. The material’s composition and

performance are comparable to those of petroleum-based PE. According to ICIS (1), the ‘‘green PE’’ has a price premium of around 15–20%, which is possible in selected markets and covers the higher cost of production compared with petrochemical-based plastics. Another bio-PE plant was built in Brazil by Dow Chemical and Mitsui. That plant has a capacity of 350,000 ton/yr with main target markets in flexible packaging, hygiene.

Findings

The growth in bioplastics is driven by the expansion in demand. One can observe a shift from compostable (biodegradable) to durable bioplastics, away from single-use applications such as disposable bags or plastic cutlery toward more valuable, high performance goods such as automotive parts and household appliances. This trend is coupled with an increase in biopolymer products’ performance (132).

The production capacity of 3.5 million tons in 2011—one-third of which was utilized—is expected to triple to nearly 12 million tons by 2020 (132). With an estimated total polymer production of roughly 400 million tons in 2020, the biobased share would then have increased from 1.5% in 2011 to 3% in 2020. The highest growth is expected in drop-in biopolymers. Biobased PET should reach a production capacity of about 5 million tons by the year 2020, using bioethanol from sugarcane, followed by biobased polyolefins such as PE and PP from the same feedstock. PLA and PHA are expected to at least quadruple the capacity between 2011 and 2020. Most investment in new biobased polymer capacities is estimated to happen in Asia and South America because of better access to feedstock. Europe’s share in bioplastics will decrease from 20 to 14% and North America’s share from 15 to 13%, whereas in Asia it will increase from 52 to 55% and in South America’s from 13 to 18%. This means that each region of the world will see an increase in bioplastics use.

Conclusion

The proliferation and use of bioplastics should not be determined by their relative costs, but by their performance instead. Specific advantages for target applications need to be worked out. Bioplastics are not generally more environmentally sound than conventional plastics. They can be based on renewable feedstock, biodegradable, or both. Bioplastics currently only constitute approximately 1% of global plastics production; however, a huge potential is seen. Drop-in bioplastics have identical properties to their petrochemical counterparts, which has accelerated their commercialization. ‘‘Green’’ PE and PET are already on the market, as are PLA and starch

blends. With consumer consciousness and sustainability becoming new market drivers, the push to bring more bioplastics to commercialization has become stronger, improving properties and performance, and reducing production cost (1). By finding suitable monomers from renewable feedstock, a cost-effective swap toward bioplastics is feasible, because no entirely new polymerization plant has to be built, but only the upstream infrastructure is amended, eg, by a fermentation unit or a catalytic cracker. The concept of a biorefinery (133) also fits well into bioplastics, several high value products can be obtained from a given feedstock/raw material mix, and integration brings costs down.

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Wikipedia

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THE LINK BETWEEN CIRCULAR ECONOMY AND RESPONSIBLE CONSUMPTION

Yeliz PEKTAŞ[1]

Motivated by United Nations' Sustainable Development Goals (SDGs) and the importance of responsible consumption, this study examines how circular economy fulfils and penetrates the value of SDG 12 Responsible Consumption. By examining SDGs 2030, I mention that the initial steps for circular economy and actions of Turkey in the frame.

The Sustainable Development Goals are interlinked. In most cases, creating a positive impact in one will also benefit other. Responsible consumption and production make critical connections among other goals. This centrality of SDG 12 has important implications for sustainable businesses of all sectors. Yet again, it demonstrates that a focus on the fundamental ways in which we produce, distribute, use and dispose of products is vital. The growth of the circular economy is essential. Circular economy methods aim to decouple economic activity from resource consumption and its accompanying environmental and social repercussions, which is central to this goal. Importantly, this objective is a critical facilitator for attaining the majority of the other SDGs (''Unenvironment" n.p.), making the indirect impact of circular economy practices even more substantial.

Introduction

With industrialization increased waste due to resource use brings various problems. Limited resources are gradually decreasing, access to raw materials is getting harder, competition is increasing, and the inevitable consequences of climate change are strikingly visible. Countries have begun to explore various remedies as a result of rising environmental degradation and climatic crises. Every product generated in the production system trash is recycled, so that raw material costs are minimized, resource efficiency is at the highest-level sustainable production model circular economy, these solutions come first. Many governments are taking initiatives

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and drafting policies about about the circular economy. This topic has risen to the top of the political agenda in Turkey in recent years.

‘‘The natural biosphere operates according to a system of nutrients and metabolisms, in which there is no such thing as waste’’(Bockholt 870). However, the take-make-dispose (linear) economic model, which has utilized raw materials indefinitely since the Industrial Revolution, is not the best model for ensuring the efficient use of nature's transformation system and resources. With the current unsustainable production and consumption system, the global consumption rate has expanded eightfold in the previous few decades. Global resource consumption is anticipated to quadruple by 2050 due to rising consumption rates. The following are some of the issues that have arisen as a result of the linear economy paradigm are following.

Industrialization has led in an economic structure that is dependent on resource utilization. The linear economy, which does not account for limiting natural resources, does not appear to be sustainable as the danger of resource shortages grows considerably. As a result of globalization, supply chains have become more complicated, market competitiveness and price volatility have grown, and industrial operations have gotten more complicated. Likewise, the existing economic system's linearity hastens its disintegration from sustainability. This circumstance also creates a barrier to the attainment of the United Nations' 17 Sustainable Development Goals.

A new economic model is needed that adopts the principle of cycle continuation by making end-of-consumption or production-based outputs the input of the same or another sector, which is more applicable, increases inter-sectoral cooperation, ensures resource efficiency, and reduces the concept of waste.

The place of circular economy in practice of SDG 12

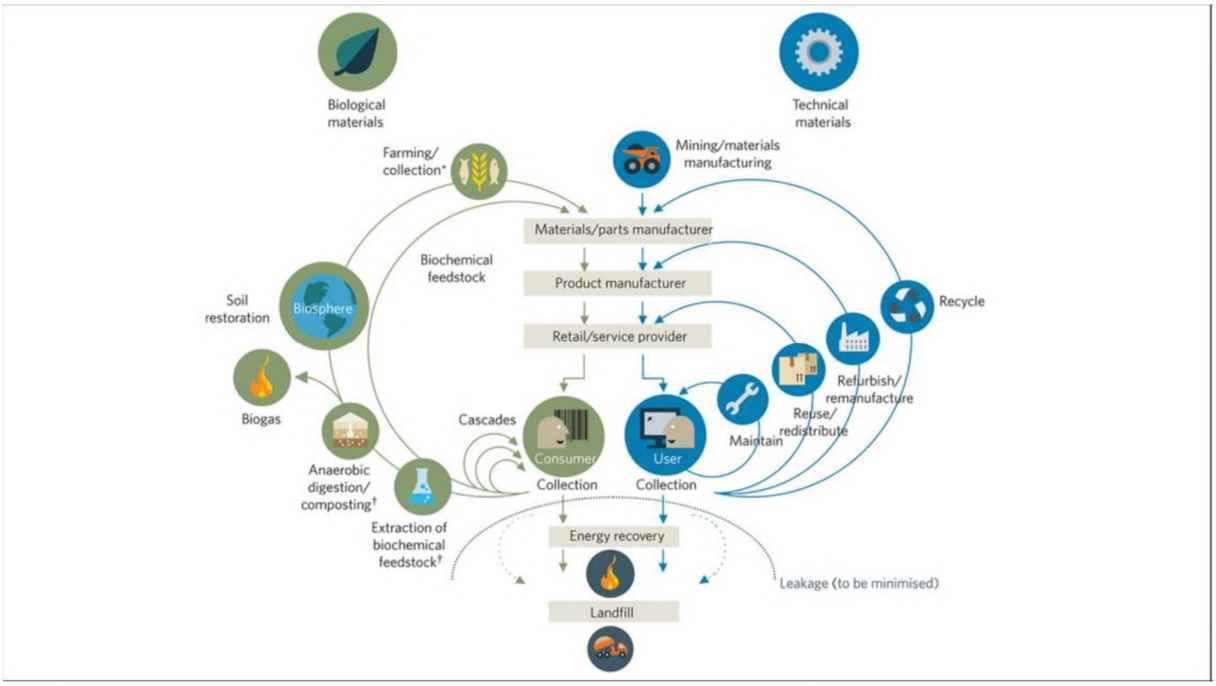
Sustainable consumption and production entails encouraging resource and energy efficiency, as well as giving access to essential services, green and decent jobs, and a higher quality of life for everybody. Its implementation contributes to the achievement of overall development goals, the reduction of future environmental, and social costs, the strengthening of economic competitiveness, and the reduction of poverty.

Within SDG 12, the concept of a circular economy, which is an alternative economic framework, has gained major importance in recent years, likewise considered as presenting a “approach for achieving local, national, and global sustainability” (Schroder 77). Circular

economy practices consist of various techniques and business models which are reuse, repair, refurbishment, remanufacturing, recycling, rethinking, reducing, redesigning, and repurposing.

Our present economic strategy is built on a linear economy model based on the concept of "take, make and dispose." The circular economy model, on the other hand, is prioritized because of the rapid increase in consumption as a result of the use of resources to serve a rapidly growing population with rising living standards; it is a regenerative system that attempts to optimize the resources we use and keep them in cycles for as long as possible.

‘‘The concept is characterised, more than defined, as an economy that is restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value at all times, distinguishing between technical and biological cycles. It is conceived as a continuous positive development cycle that preserves and enhances natural capital, optimises resource yields, and minimises system risks by managing finite stocks and renewable flows. It works effectively at every scale’’(‘‘Ellen MacArthur Foundation’’ n.p.).



The Ellen MacArthur Foundation defines the circular economy using the graphic above, which incorporates the two cycles:

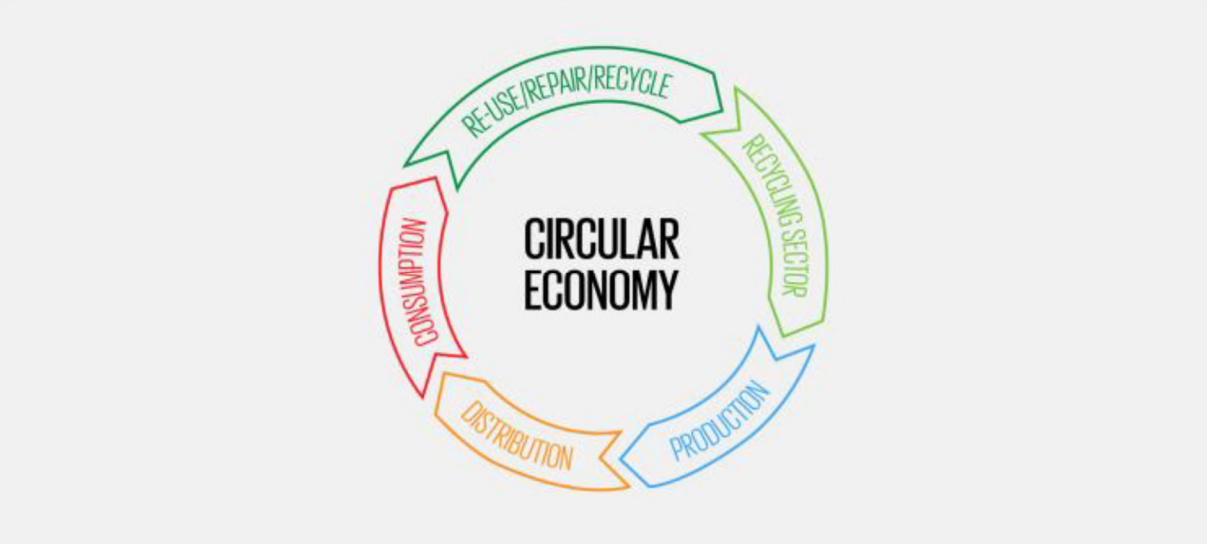
a) A biological cycle in which after-use leftovers are returned to nature;

b) A technological cycle in which products, components, or materials are intended to reduce waste.

Materials, whether biological or technological, are reused in cycles in a circular economy, reducing the environmental effect of products and services along the value chain.

Why is circular economy needed?

Each year, more than 100 billion tons of resources are transferred to the economy, with more than 60% of them resulting in waste and an increase in greenhouse gas emissions, which is one of the causes of the climate catastrophe.



Where should be started?



• *Raw Material*

End-of-life items should be reconsidered as potential sources for a new cycle, and unused material losses and stockpiles should be avoided within the value chain. There are several

options for rational raw material usage, including material reduction and optimization, industrial symbiosis, recycling, reuse, redistribution, resale, refurbishing, remanufacturing, maintenance, repair, and service which are circular Rs.

• *Design*

During the design stage, about 80% of the product's environmental implications may be found out. A good design benefits to cost saving, time, energy, and materials. The scope of eco-design criteria would be broadened beyond energy efficiency to encourage enhanced repairability, upgradeability, durability, and recyclability of items, according to the circular economy action plan presented as part of the EU's 'circular economy' package. It is a bottom-up technique that tries to reduce resource needs and environmental effect on the life cycle of a product from an early stage of product design (Mendoza 526).

• *Supply Chain*

Redesigning your goods and operations to utilize fewer material benefits both the environment and your business. Instead of acquiring virgin material, picking alternate sources of supply, such as recycled material is a new option. Instead of using fossil fuels, choosing sustainable energy sources is an alternative. Improving supply chain entails finding the weakest links in the chain rather than just lowering numbers. It shows dependency on crucial raw materials.

• *Circular Supply Chain*

The circular supply chain paradigm entails replacing traditional industrial inputs with biodegradable, renewable, or recyclable / recycled resources. This concept may be viewed of as a type of resource recovery in which material recovery is considered much earlier in the product life cycle. The theory underpinning the circular supply chain is known as "cradle to cradle" product design. In the cradle-to-cradle strategy, endless use of materials become inputs in the manufacturing of new goods.

• *Extending the Product's Life*

At the stage of classic long-life model, the goal of this business strategy is to make assets last longer. Changes in product design lengthen the product's projected life. Reusing models provides to products which will be discarded before reaching their expire date are redistributed and repurposed. Maintenance and repair guarantee that damaged items fulfil their full life cycle by repairing or replacing damaged components. The final stage which are renovation and remanufacturing provide "new life" to products by mending and restoring them.

• *Sharing Economy*

Sharing economy starts with the idea of every underutilized resource is a wasted resource. It creates a platform for product users to collaborate, allowing them to share surplus capacity or underuse, as well as increased productivity and user value generation.

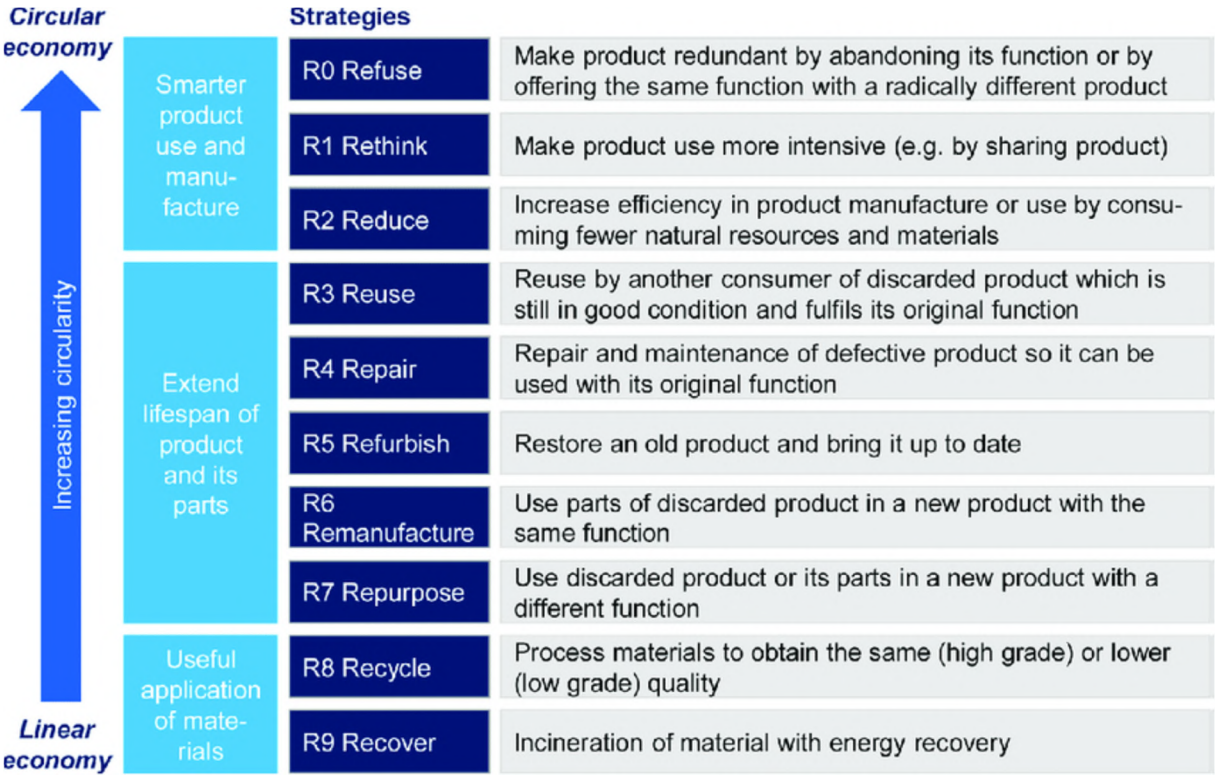
• *Product Services System*

The product services system business model combines a physical product with a service component, providing an alternative to the classic "buy and own" paradigm. It has described as a marketable product and service group that can fulfill its consumers' demands in a cost-effective and long-term way. Customers rent or pay for products they utilize.

• *Resource Recovery*

Production of secondary raw materials from trash is one of the resource recovery business strategies. Collection, sorting, and secondary production are the three major tasks here. The resultant secondary raw materials (metals, plastics, paper, and so on) are subsequently sold to a variety of manufacturers. The usage of materials in the waste stream is at the heart of resource recovery models.

According to the European Union Commission's Categorisation System for the Circular Economy, there are four core models. First of all, circular design and production strive to improve resource efficiency through design innovation and reengineering. Implied applications provide benefits after-use phases, which also reduces need of raw materials. Secondly, circular use aims to increase resource efficiency through product and asset lifespan extension based on circular Rs. Thirdly, circular value recovery aims to increase resource efficiency by recovering waste in preparation for circular Rs which are carried out at the stage after-use period. Lastly, the circular support category group's goal is to enable other circular practices and provide contribution to increased resource efficiency (''European Commission'' n.p.).



Turkey's Transition to Circular Economy

According to the Turkish Statistical Institute (TURKSTAT) sustainable development indicators, whereas our country's raw material consumption was 500 million tons in the 2000s, this value has more than doubled, surpassing 900 million tons with a moderate growth in the 2010s. Similarly, home energy consumption has increased to 3900 (Bintep) from 2054 (Bintep - tep: ton equivalent oil), and whereas dependency on foreign energy reached from 66 percent in the 2000s to 74 percent in the 2010s. In the last ten years, the EU has prioritized the circular economy, with Northern European nations leading the way. Turkey is likewise aware of the situation and is attempting to take appropriate action. Since restructuring of the EU market will have an impact on Turkey, the circular economy issue is critical for our country. Turkey's primary development difficulties, in light of population and industrial expansion, are pollution prevention and waste minimization. On the other hand, the number of research on the circular economy is progressively expanding, and the idea of circular economy is gaining prominence in Turkey, as evidenced by the fact that activities on this subject are expanding day by day. The Environment Chapter was launched in 2009, with the start of full membership discussions with the EU, and legislative harmonization began under this framework. During this time, significant efforts were taken in the waste industry, including the publication of communiqués and rules on a variety of topics, including waste oils, packaging, electronic trash, and batteries. The inclusion of the circular economy on Turkey's agenda is based on the EU's Circular Economy

Package, which was enacted in 2015. Due to the EU's scarce and restricted resource dilemma applies to Turkey, and Turkey is a candidate nation for the EU, Turkey should take comparable actions and adopt / align with this law. Aside from that, within the context of the circular economy: Zero Waste Regulation and Zero Waste Project, Sustainable Consumption and Production Action Plan and Near Zero Waste (NØW) Turkey Program application and actions can be given as an example.

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CHAPTER 13

GOAL-13: CLIMATE ACTION

GREEN DEAL AGREEMENT AND POSSIBILITIES OF ITS APPLICATION IN TURKEY

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Having talked about environmental problems; air, water and soil pollution come to mind. Environmental pollution has gained more importance in recent years due to the crowding of the world and insufficient resources. For this reason, many countries of the world want to prevent such negativities with various agreements. The Paris agreement signed on 22 April 2016 and the Kyoto agreement signed on 11 December 1997 can be given as examples. In addition, with the green deal published on December 17, 2020, it is aimed to reduce the net greenhouse gas emission of the EU industry to 0 until 2050. Although Turkey is one of the important countries of its region, it has been involved in this issue late.

In this study, Turkey's compliance with the European Union Practices on Climate Change - Green Deal toward climate change has been examined with the SWOT Analysis method. According to analysis, it can be seen that there are significant opportunities in adoption to the process.

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Introduction

Environmental problems appear due to the damaged environmental values caused by various activities that people perform (Kaypak, 2013). Environmental problems can be expressed as the negativities that people give to the environment in the process of intervening and benefiting from nature (Aydın & Çamur, 2017). It is also clear that environmental problems are not regional, they are global and they affect all societies (Kılıç, 2001).

Also, no phenomenon is more effective in disrupting natural flow and changing the climate than the presence of human power. Therefore, greenhouse gas emission is the most important factor in climate change. Climate change leads negativities for the ecosystem and raises possibility for natural disaster encounters in general. Reduction in water resources-reserves, rising temperatures, experiencing precipitation above seasonal norms are attached to effects of the climate change. These long-lasting problems follow each other as if they are the rings of a chain. (Engin, 2019).

In this study, it was intended to give information about the process of combating climate change in the world, in Turkey and in the European Union. In addition, it was aimed to detail and summarize Turkey's position in this struggle process with a SWOT analysis in the light of the Green Deal Consensus.

Effects of Climate Change in the World

The United Nations Framework Convention on Climate Change – UNFCCC defines climate change as following. "Besides the natural climate change observed in comparable time periods, it is defined as a change in the climate because of human activities that directly or indirectly disrupt the composition of the global atmosphere" (Arıkan, 2012). It is also defined as a change in water, air and soil pollution.

Pollution: Big Cause

Pollution can be defined as the process of making air, water, soil, and relevant natural resources dangerously dirty. By this rising dirt, the resources become not suitable for use of people or other living species. Pollution has also been related to global warming as a significant and devastating phenomenon for the World.

It is a widely agreed phenomenon that the process of global warming is speeding up because of human – caused effects today and that climate change has reached a level that will affect the future of societies (MacCracken 2001, IPCC 2001, Cook et. al, 2013). Climate change has been

on the policy agenda in Turkey since the beginning of the 2000s. In this process, embodied by the establishment of the Climate Change Coordination Board in 2001, climate change is not only referred in documentation documents but also incorporated in national plans and urbanization policies (Albayrak and Atasayan, 2015). Countries and global companies which precede sustainable development, economic growth, think that a solution that will stop existing while not advocating a return to the production system would upset the ecological balance of the world. Yet to enter a phase of growth in developing countries, developed countries are mainly responsible for global warming as a priority of economic inequality, which stated that between their countries should be eliminated. Environmentalists say that the policies of continuous growth and rapid development should be abandoned immediately. The extent to which the idea of "Sustainable Development", which has been put forward as the most balanced formula since the 1980's, can respond to the thoroughly added problem is a matter of debate (Reyhan and Reyhan, 2016).

On the other hand, some countries established the vast majority of mandatory carbon markets under the Kyoto Protocol of the United Nations Framework Convention on Climate Change, signed in 1997. The Kyoto Protocol stipulates that industrialized countries have to withdraw from the 1990 level on average by 5.2 % between 2008 and 2012, which was the first commitment period. Developing countries do not undertake any emission commitments under the motto of "common but differentiated responsibility" (Güldoğan, 2010). Therefore, the areas that need special attention within climate change and whose negative effects are expected to become widespread in the near future can be specified as air pollution due to water pollution and carbon emissions.

The last significant cause is water pollution. As well known, water is also an important natural resource of which the scarcity directly threatens the security of states and sustainability of livelihoods. In addition to ensuring the continuation of the life of all livelihoods, water is necessary for the development of economic, social and cultural life as well (Tuğaç, 2014). The negative effects of climate change on water reserves and rising drought incidences are already being recognised.

Effects of Climate Change in Turkey

Turkey formed the concepts related to environmental pollution in the 1970s, when the EU faced this problem in the same years. They deal with the fight against environmental pollution and evaluations in relation to economic growth and development. It can monitor significant change

in this area within the framework of development plans. In the Development Plans made until 2000, environmental evaluations have always remained in the background, and it has been created the plans based on the possibility that environmental policies may harm national development efforts. However, with the Eighth Five-Year Development Plan, the policies applied for the solution of environmental problems and the efforts to harmonize the decisions taken with the European Union norms and international standards were included.

The National Environmental Strategy and Action Program, which was prepared within the process of forming Turkey's environmental policy and started in 1995 and completed in 2000, has an important place. The objectives of this program include preventing air/soil/water pollution, facilitating access to environmental infrastructure and services, encouraging the use of renewable resources, and creating policies that will make the environment and the economy sustainable (Çokgezen, 2007; Yıldırım & Budak, 2005). The voluntary carbon trade has also been implemented in Turkey since 2006, which has become widespread in countries that have not signed the Kyoto Protocol and therefore do not have greenhouse gas reduction obligations as well Most of the projects in voluntary carbon trade in Turkey are related to energy sector (Bal, 2013).

The Kyoto Protocol was signed in 1997 and entered into force in 2005, contents some principles against Global Climate Change. The goals of this agreement are to decrease and control greenhouse gas amount on atmosphere will be reduced to 5 %, spend less and clean (carbon zero) energy for machines and transportations, encourage using green energy – like bio diesel, reduce the rate of methane and carbon dioxide released into the atmosphere etc.

There are projects and activities developed and implemented in Turkey to reach the afore mentioned targets and to rise adaptability of the country to the Protocol.

Bandırma Wind Power Plant (BARES) with 30-Megawatt power, which is the first greenhouse gas reduction project in the country, is an example for these projects. The plant, which was constructed and managed by the consulting company Futurecamp GmbH, has reduced annual carbon emission to 72,000 tons of CO_2 (Taşdan, 2009). Therefore, it can be said that environmentalist steps in Turkey have been taken, even though there required more efforts. In addition, the "European Green Consensus – EU Green Deal" that was dated on 11th of December 2019, is a roadmap that aims to reorganize the previous commitments of the European Union (EU) in a broader and more effective way to tackle climate and environmental challenges. New strategies will be determined to achieve the goals of economic growth while

reducing natural resource consumption and zeroing the net emission value of greenhouse gases (carbon neutral) in 2050 (Anonymous, 2020; Anonymous 2020).

Green Deal – European Green Consensus

The regulations brought by the EU focused on combating climate change, the incentives it provides and the steps it wants to maintain after the Paris Agreement, which was signed on April 22nd, 2016. When the Paris Agreement was examined in depth, the sensitivity of the EU, which seems to be one of the most efficient implementers, is seen in the Constitutional Court. The EU has reflected the European Green Consensus, from end-user product supply that may affect climate change, to household level energy consumption and even to agricultural policies, although it is not limited to certain sectors (Şahin and Önder, 2021).

The European Green Consensus is the name given to all action plans implemented by the EU to play a dominant role in the fight against the climate crisis and global warming. This agreement includes a series of regulations aimed at making all EU member states carbon neutral by 2050. We can list the main EU regulations and policies on the subject as follows (European Commission, 2019):

- EU emissions trading system
- Member states' targets for non-emission trade sectors
- Contribution of forests and lands to combating climate change
- Reducing greenhouse gas emissions in transport
- Energy efficiency and renewable energy investments
- Supporting low carbon technologies
- Stage down of fluorinated greenhouse gases
- Protection of the ozone layer
- Preparing for the effects of climate change
- Climate change investments

In this context, the EU implements a series of measures, especially the climate law and the carbon limit tax, within the relevant agreement. Simultaneously, the EU is trying to support this process by creating various transition funds to enable companies to switch to green energy and move away from carbon and fossil-based energy and fuel. Over the next 10 years, the size of Europe's environmental projects is estimated to exceed one trillion Dollars (European Parliament, 2020).

In Paksoy's (2019) study of "The Current Situation of Turkey's Climate Action", it was seen that Turkey did not struggle adequately in combating global climate change in 2008-2017, and in comparison, with the EU countries, it maintained its weak position among these countries. After recognition of this situation, it was agreed on once more that Turkey should be active in combating global climate change because of its binding responsibilities stemming from both the UN's climate change protocol and the EU climate acquits.

Evaluating the Position of Turkey in the Framework of Combat with Climate Change

In this study, Turkey's compliance with the European Union Practices on Climate Change - Green Deal toward climate change has been examined with the SWOT Analysis method. Although SWOT analysis was introduced in the 1960s, it has been updated and turned into an important strategy development tool for social sciences (Andrews et al., 1986).

Strengths

- Turkey has the power to take initiative politically and socially to develop a carbon-free economic growth model based on energy and material-efficient circular economy instead of carbon-based economic growth.
- Adoption of the practices will support Turkey's compliance with the environmental policy in the EU accession process.
- Reducing import expenditures for items such as petroleum, coal and natural gas is considered as a significant benefit for Turkey.
- Willingness to strengthen environmental law and the tendency to reduce bureaucracy will contribute to the rapid development of the process.

Weaknesses

- Turkish social structure does not have sufficient knowledge and experience on this field.
- Education courses in primary and secondary level have insufficient coverage of environmental awareness.
- Insufficient awareness of the clean city in the society constitutes a barrier against evolution.
- Existence of bureaucracy in the individual / state mechanism and deficiencies in the organizational structure of local governments will not speed up the adoption process.

- Financing issues. Even planned actions were not implemented due to financial difficulties.
- Inadequate infrastructure disables further investment and movement.
- Lack of legislation within environmental protection and environmental sustainability disables society level participation on the process.
- Lack of non-governmental organizations to work on urbanization and green spaces and insufficient public awareness on civil society.

Opportunities

- The high use of social media by the young population and the fact that their interest in the issue can be easily achieved in this context.
- The high contribution of countries with a clean environment and green area and high tourism potential to GNP makes it possible for green consensus to be achieved faster in touristic areas.
- Accelerating the harmonization with the European Union countries is expected to increase trade.
- Providing convenience in air pollution control by reducing carbon emission will be faster considering the existence of power plants and potential to establish new ones.
- The fact that the young population can be educated by working on the content of Environment courses in primary and secondary education levels.
- Meeting recreation needs of people in developed and protected environmental areas will drive their interest to environmental protection more
- Ensuring easy access to financial resources and funds of the European Union will be contributory and employment for environmental protection may be increased in this way.
- Creating investment opportunities for the public and private sector will increase positive financial effects of the process.
- Legislators will be directed to improve application of Environmental Law.

Threats

- Possibility of public administration to affect the process inversely by not taking ownership of structural changes and the process appear as a problem.
- Concerns that the expenditures made on this issue will not be covered by the required budget distract states as well as enterprises.
- The fact that public opinion cannot be changed in a short time and the possible negative impact of this on the changing process.
- Existing studies will contradict with the interest of conventional producer / industrial groups in the countries.
- Economic priorities do not overlap with the goals of the reconciliation process

Results and Discussion

As a result of the analysis, it has been seen that it will be very beneficial for Turkey, if state authorities agree with the Green - Deal Agreement. When the strengths are examined, it was understood that the chance of getting a share from economic development and providing personal economic freedom will be very important for the country. Especially rising freedom will contribute creation of sufficient employment opportunities. Apart from this, the factors of providing the necessary conditions for protection of physical and mental health and raising awareness on the protection of natural energy resources are also important factors among the strengths.

Looking at the weaknesses, it can be shown that the Turkish society does not have sufficient knowledge and experience on this topic. It is possible to overcome this problem with publications and extension activities. In addition, public communication can be made by activities like advertising and demonstration. Increasing the awareness on the subject with publications is an important detail. In parallel with the reasons, we have mentioned above, the clean city consciousness does not suit well in the Turkish society. Apart from these, another detail that needs to be emphasized is bureaucracy. It is a big problem that the citizen cannot reach the state and the state cannot accurately reflect what the citizen wants. This problem also makes it difficult to organize Green Deal adoption in local governments. Factors such as legislative deficiencies, difficulties in financing, and lack of infrastructure should not be ignored. One of the most important problems is that the organization on this issue is very low in Turkey. Public and non-governmental organizations must be more active.

Looking at the opportunities, it is possible to see issues related to strengths and weaknesses.

For Turkey, as a developing country, the development of cleaner and more liveable cities by making the necessary investments, the acceleration of employment and economy in parallel, the contribution of clean environment and green areas to the GNP of countries with high tourism potential, increasing trade with EU countries and most importantly, it is possible to control air, water and soil pollution due to the increasing population and industry.

When the threats were analysed, it should be kept in mind that the loss of public trust in this direction may be an important threat. Considering that the consciousness of the society in this direction is low, it is certain that this is a correct statement. In addition, the possibility that the activities to be implemented cannot be financed as a due to lack of proper plans and prolongation of the awareness rising process of the society on the environment issues., and the negative impact of this situation may be significant threats. Apart from these, it may not be pleasing to have studies contrary to the interests of a certain class in the country.

In this context, the potential suggestions can be listed below.

1- For the Green Deal Reconciliation, the infrastructure must be set up and prepared in a short time.

2- The society should be made aware of various publication activities. The Green Deal should be explained to people by making various publications from internet media, television and newspapers. It should be aimed to increase the awareness of every segment of the society with the necessary publication activities.

3- It should be developed and updated the Environmental Law by legislators.

4- The organizational structures of local governments should be improved. In this regard, the intensity of bureaucracy forces the execution. Bureaucracy should be reduced.

5- For companies that will export to the EU countries, it is imperative that inspections are tightened and illegal actions are prevented.

6- Care should be taken to protect the environment and green areas in order to increase tourism revenues, also called chimney-free industry.

7- Organizational awareness should be developed. If necessary, the state should take steps in organizing and the non-governmental organizations should be encouraged

to be more active in environmental issues. Approximately there are 2500 NGOs across the country (OR - DA, 2015)

8- In order to prevent soil, water and air pollution, the existing environmental problems should be brought under control with various dissemination studies and official controls to increase awareness.

9- The necessary financing should be provided in this regard and the state should be a leader in financing. In this regard, the Ministry of Environment and Urbanization should use its budget in accordance with planning and create funding sources if necessary.

10- People who have a say in the society, leading farmers, etc. People like that should lead the way in instilling awareness in the society.

11- Most importantly, every member of the society should be aware of what kind of environment they will leave for their children and grandchildren in the future.

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CLIMATE ACTION AND ITS PRINCIPLE WITH AGRICULTURAL PERSPECTIVES

Makbule Nisa MENCET YELBOĞA[1]

Abstract

Climate change is upon us. This is not a pneumonia or science fictional theory. We are all living in the middle of climate change crises. There is no need to look far for searching climate change effects therefore the relatively "new" UN sustainable goals list includes climate action and its indicators to be achieved by 2030. In this paper, climate change action is defined and discussed broadly and special attention is roomed for agriculture sector. Agriculture contributes to climate change and also it is affected vice versa. Therefore, agriculture is also one of the key solutions to decrease climate change effects by using mitigation and adaptation techniques. Finally, in this paper it was intended to discuss what can we do individually or institutionally and how policies are important for our future. Beyond the all efforts, the planet is urgently needing the Indian word as a gift to us called "Ahimsa".

Keywords: SDG 13, agriculture, mitigation and adaptation, Ahimsa.

Chronically, people have started to be anxious about all the world from many years especially after the world II. Because since nations started to explore how to be rich and be developed countries even though polluting the earth. Then day by day the growing levels were not enough so people came together to decrease effects of economic development declare the "The Limits to Growth" by Roma Club in 1972. The declaration was accepted as a milestone in which the Club of Rome for the first time used complex mathematical models for predictions on future interdependencies of social, environmental and economic factors (Schimt, 2021). Dennis

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Meadows explained the situation as “When you have physical growth in a finite planet, pressures are going to mount the stop the growth” *(Himmelfreundpointner, 2012).*

One side of the world has no access the enough food, water and all basic needs and the other sides deplete the resources unconsciously for many years. Then people were started to be aware of the relationship poverty and the environmental pollution with depleting natural resources and loosing biodiversity. Yet, the common problems of the world didn’t end so the UN set 13 goals for 2015 and then number of goals are 17 for 2030. A Sustainable Development Goals are connected with tightly and strongly. They have common ultimate aims which is making the world as a better place idea. Each goal is unique and comprising for all of the world with economically, ecologically and socially wellbeing environment for everybody.

According to official declarations from the UN, Sustainable Development Goal 13 (SDG 13) aims to “take urgent action to combat climate change and its impact”, while acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change (Anonymous, 2021). The UN has defined 5 Targets and 8 Indicators for SDG 13. The original text of all targets and indicators summarized at Table 1.

The main idea of all SDG 13 targets is to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. The question how we could understand if the aim is realized solved by setting indicators. These indicators facilitate the targets and aims more visible and measurable. All the aims also serve number integrate climate change measures into national policies, strategies and planning in the cover of the climate action 13.

Table 1. Targets and Indicators for Climate Action – SDG 13

Targets and Indicators	
Target 13.1 (13.1,13.2, 13.3)	a. Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries b. The number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development. c. The proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.

Target 13.2	a.The number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development.
Target 13.3 (13.3.1, 13.3.2)	a. Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula. b. Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions
Target 13.A.1	Mobilized amount of United States dollars per year between 2020 and 2025 accountable towards the $100 billion commitment. Annual US$ contributions to the Green Climate Fund (GCF).
Target 13.B.1	Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management.

Source: UN SDG, Sdg tracker, 2021https://sdg-tracker.org/climate-change

The Target 13 A and B are representing the economic and social way of climate action. It is expected from the developed countries, they should contribute to Green Climate Fund. Unless the contributing to developing countries to finance precautions for climate change these goals cannot be achieved properly (Table 1). This aim is criticized by some people to make more burden on economies. However, the cost of stabilising the climate is manageable delay would be dangerous and much more costly. Stern (2006) explained the damages from climate change rise disproportionately with temperature (25% increase in storm wind speeds is associated with an almost 7-fold increase in damages to buildings). Also, the author estimates that the dangers could be equivalent to a least 20% of GDP. As a contrast, the costs of action to reduce greenhouse gas emissions to avoid the worst impacts of climate change can be around 1% of global GDP each year.

Climate change relation with agriculture

Relationship between the agriculture and the environment appears in different directions. Climate change is one of the primary subjects of that relationship. Agriculture sector can locate in a different place from the other sectors due to agriculture is tightly connected with nature and climate. According to Wreford et. al. (2010), agriculture to total food system emissions is from

7,300 to 12,700 $MtCO_2e$ per year. Of global anthropogenic emissions agriculture is estimated to account for about 60% of N2O and about 50% of CH4. It is about 14% to 24% of total global emissions (Vermeulen et.al., 2010). Agriculture as a contributor to climate change with direct and indirect way. The estimation is especially hard for agriculture due it is heterogeny around the world. Greenhouse gases estimation should start from input production until the wasted after consumption. Therefore, scientist give a rank mostly like 14% to 24%. This variation comes from how the agricultural manager or farmer use the land. IPCC (2000) searched the agricultural effects to climate change basically in two ways. First of all, Change the way land is used (e.g., clearing of forests for agricultural use, including open burning of cleared biomass. Second, affect the amount of biomass in existing biomass stocks (e.g., forests, village trees, woody savannas, etc.). Other agricultural activities related greenhouse gas emissions are; Deforestation peat land degradation rice production, GHG emissions from the digestion process of ruminant animals, other land using, input usage (pesticides, fertilizers etc.) etc.

Possible climate change impacts on agriculture and food

- Food security: Crop response-yield variability
- Food prices
- Food safety and nutrient losses

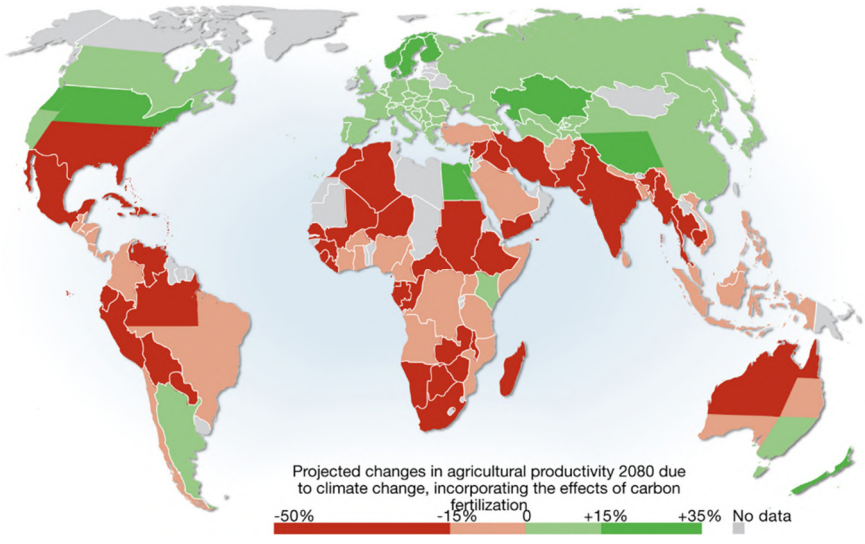


Figure 1: Projected agriculture in 2080 due to climate change (Cline, 2007)

Cline (2007) researched widely agriculture and climate change relationship and he addressed that agriculture is a larger share of developing economies than of industrial If steps are not taken to curb carbon emissions, agricultural productivity could fall dramatically, especially in

developing countries (Figure 1). According to Cline (2007) study, damage will generally be greater in countries located closer to the equator (see chart), where temperatures already tend to be close to crop tolerance levels. Country elevation also should be considered because of higher elevation and lower average temperatures, Uganda faces smaller losses (17 percent without carbon fertilization) than Burkina Faso (24 percent) even though the latter is situated about 10 degrees farther north of the equator. Whereas the major losses are concentrated in the lower latitudes, the gains, where they occur, are toward the higher latitudes. In the near future, food prices and trade are expected to change. Traditionally south produce and north consume agricultural products but southern countries have difficulties to produce and sell agricultural products more than before. The impacts of climate change not only on yields but also on food quality may be critical to future food security. Malnutrition is another threat and people face hunger in the world.

There are two main strategies in agriculture during the tackle with climate change affects which are called mitigation and adaptation. Shortly, mitigation attempts to reduce the causes of climate change and adaptation attempts to manage the impacts of climate change. Therefore, in agriculture sector there are alternatives ways from production to consume. Consumption shouldn’t be separated from the entire supply chain.

Conclusion

Climate change is affecting everyone sooner or later. Especially the poor and vulnerable, as well as marginalized groups like women, children, and the elderly. With holistic approaches, poor and developing countries, particularly least developed countries, will be among those most adversely affected and least able to cope with the anticipated shocks to their social, economic and natural systems. Agricultural policies should be proper with cross-compliance and farmers should be aware of climate change with training and advisory services, agri-environmental schemes.

Beyond all politic words and strategies, the planet need “Ahimsa” which is a gift from India to us.

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CHAPTER 14

GOAL-14: LIFE BELOW WATER

LIFE BELOW WATER

Gurjit KAUR[1]

Healthy oceans and seas are essential to our existence. They cover 70% of our planet and we rely on them for food, energy and Water. Yet, we have managed to do tremendous damage to these precious resources. We must protect them by eliminating pollution and overfishing and immediately start to responsibly manage and protect all marine life around the world.

Introduction

The world's oceans – their temperature, chemistry, currents and life – drive global systems that make the Earth habitable for humankind. How we manage this vital resource is essential for humanity as a whole, and to counterbalance the effects of climate change.

Over three billion people depend on marine and coastal biodiversity for their livelihoods. However, today we are seeing 30 percent of the world's fish stocks overexploited, well below a level at which they can produce sustainable yields.

Oceans also absorb about 30 percent of the carbon dioxide produced by humans, and we are seeing a 26 percent rise in ocean acidification since the beginning of the industrial revolution. Marine pollution, an overwhelming majority of which comes from land-based sources, is

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reaching alarming levels, with an average of 13,000 pieces of plastic litter to be found on every square kilometer of ocean.

The Sustainable Development Goals (SDGs) create a framework to sustainably manage and protect marine and coastal ecosystems from land-based pollution, as well as address the impacts of ocean acidification. Enhancing conservation and the sustainable use of ocean-based resources through international law will also help mitigate some of the challenges facing our oceans.

The Challenge

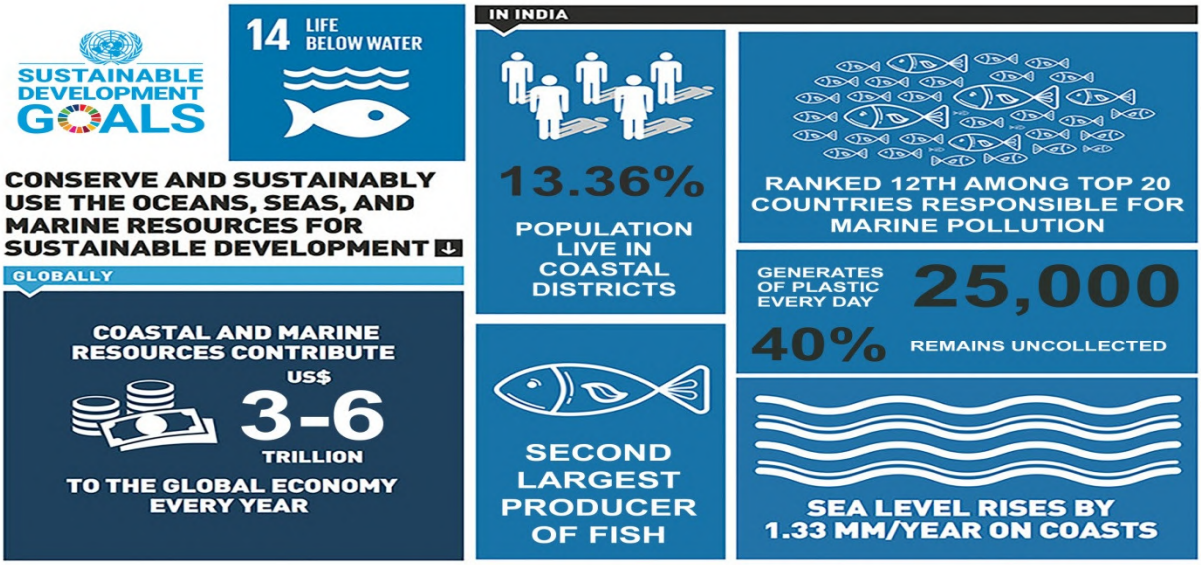
- We are a land-dwelling species, but we depend more on our oceans than we can imagine. Oceans cover close to three quarters of the Earth's surface, contain 97% of the Earth's water, and represent 99% of the living space on the planet by volume.
- Over three billion people depend on marine and coastal biodiversity for their livelihoods.
- Globally, the market value of marine and coastal resources and industries is estimated at USD 3 trillion per year or close to 5% of global GDP.
- Oceans contain more than 200,000 identified species, but actual numbers may lie in the millions. It is estimated that 91% of ocean species have yet to be classified, and that 95% of the ocean remains unexplored.
- Oceans absorb about 40% of the carbon dioxide produced by humans, buffering the impact of global warming. They also serve as the world's largest source of protein, with more than three billion people depending on the oceans as their primary source of protein.
- Unmonitored fishing is also contributing to the rapid depletion of many fish species and are preventing efforts to save and restore global fisheries and related jobs, causing ocean fisheries to generate USD 50 billion less per year than they could.
- As much as 40% of the world's oceans are heavily affected by human activities, including pollution, depleted fisheries, and loss of coastal habitats. Across the globe, 1,851 species of fish — 21 percent of all fish species evaluated — were deemed at risk of extinction by the IUCN in 2010, including more than a third of sharks and rays.

Why is this Important?

Coastal and marine resources contribute USD 28 trillion to the global economy every year. But this is only a small part of why they are so important to our planet. The world's oceans – their temperature, chemistry, currents and life – drive global systems that make the Earth habitable for humankind. Our rainwater, drinking water, weather, climate, coastlines, much of our food, and even the oxygen in the air we breathe, are all ultimately provided and regulated by the sea. Throughout history, oceans and seas have been vital conduits for trade and transportation. Careful management of this essential global resource is a key feature of a sustainable future.

How can We Address this?

Sustainable Development Goal 14 commits countries to unite over what is a truly global responsibility – the protection of our oceans and the lives that depend on it. By 2020, countries commit to achieving the sustainable management of marine ecosystems, and in another five years, significantly reduce marine pollution of all kinds. This will require an international scientific partnership, regulation of harvesting and fishing, and enhance our research and knowledge on issues critical to the survival of life below water



How can we help life below water?

1. Reduce Marine Pollution.
2. Protect and Restore Ecosystems.
3. Reduce Ocean Acidification.
4. Sustainable Fishing.

5. Conserve Coastal and Marine Areas.
6. End Subsidies Contributing to Overfishing.
7. Increase the Economic Benefits from Sustainable Use of Marine Resources.

Targets

- By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.
- Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.
- By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
- By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information.
- By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.
- By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.
- Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to

enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing states and least developed countries.

- Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.

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LIFE BELOW WATER - CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

Shrujal DAWAR[1]

The Sustainable Development Goals (SDGs), which were approved by the United Nations in September 2015, are accompanied by objectives that must be reached by member governments individually and collectively. SDG14, Life below Water, strives to provide the groundwork for ocean management that is both integrated and sustainable. This Paper describes additional in-depth elements, allowing for a more accurate assessment of country progress in supporting life below water.

Introduction

The preliminary findings on research needs for Goal 14: Life below Water is presented in this review. It focuses on three thematic areas, namely a) marine pollution, b) ocean and climate, and c) sustainable use of marine and ocean resources, which are all closely linked to all seven SDG 14 targets. The analysis reveals research shortages in each of the three subject areas, as well as cross-cutting concerns such as interconnections to other SDG targets and the challenges (and opportunities) of balancing the social, economic, and environmental elements of sustainable development, all of which are intertwined with SDG.

Nilsson has proposed three unique responsibilities for science, technology, and innovation in the framework of the SDGs.

1. Defining the difficulties

2. Giving solutions; and

3. Bolstering government institutions and society.

In my study, I concentrate on research requirements for the first and second positions, although the main study also covers the third job.

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Goals and Targets

The aim and its seven targets served as our starting point for our analysis. Table 1 shows the aims and methods for achieving SDG 14's goals. The methods of implementation are not considered in this review.

Table 1. Overview of Sustainable Development Goal 14.

14.1	Prevent and considerably decrease all types of marine pollution, particularly from land-based activities, such as marine debris and nutrient pollution, by 2025.
14.2	To attain healthy and productive oceans by 2020, sustainably manage and conserve marine and coastal ecosystems to avoid substantial negative impacts, particularly by building their resilience and taking action for their restoration.
14.3	Reduce the effects of ocean acidification and address them, especially via increased scientific cooperation at all levels.
14.4	Implement science-based management plans to effectively regulate harvesting and end overfishing, illegal, unreported, and unregulated fishing, and destructive fishing practises by 2020, in order to restore fish stocks in the shortest time possible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
14.5	Conserve at least 10% of coastal and marine areas by 2020, in accordance with national and international legislation and based on the greatest scientific data available.
14.6	By 2020, prohibit certain types of fisheries subsidies that contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported, and unregulated fishing, and refrain from introducing new such subsidies, acknowledging that appropriate and effective special measures are needed.
14.a	In order to improve ocean health and the contribution of marine biodiversity to the development of developing countries, increase scientific knowledge, develop research capacity, and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology.
14.b	Provide access for small-scale artisanal fishers to marine resources and markets
14.c	Improve ocean conservation and sustainable resource use through applying international law, as expressed in UNCLOS, which provides the legal basis for ocean conservation and sustainable resource use, as recalled in paragraph 158 of The Future We Want.

Method and Approach

SDG 14 was chosen as one of three SDGs for which this evaluation technique would be tested. As a result, this assessment should be viewed as a preliminary attempt to identify research

requirements. The scope of this research did not allow for a comprehensive or in-depth examination of the state of knowledge.

The first stage was to identify significant themes among the SDG 14 objectives in order to uncover wider knowledge areas that pertain to multiple objectives and to organise them. The criteria and methodology used to pick these major topics are outlined below.

The next stage was to perform a literature evaluation in order to identify research requirements that were either expressly or implicitly identified in previous work. The SDG's breadth posed a significant difficulty.

The final stage was to organise an expert workshop, which took place in Stockholm on May 3, 2018. A total of 25 professionals from science, policy, and practice attended the session. The goal of the workshop was to identify high-priority research requirements based on early findings from the literature review, but not restricted to them.

On the process and technique of the literature review, a number of obstacles and limits should be recognized. First, as previously stated the SDG objectives are quite broad and include enormous fields of knowledge, making full evaluations impossible. Second, the SDG objectives are the outcome of international negotiations, notwithstanding their scope. As a result, they may not always represent local or national sustainable development objectives and concerns, and gaps between local and national viewpoints may still exist.

Identifying Key Themes

For all three SDGs reviewed in this project, the same set of four criteria were applied to

Identify key themes among targets. These criteria are as follows:

-Targets where a lack of understanding or research isn't a major stumbling block were omitted (e.g., targets for implementing a international political agreement).

- Targets that address related challenges and belong to the same knowledge area were grouped together in a group

-Our discovered themes interpret or expand on the stated aims in certain situations, particularly, a) adapting objectives to a Swedish context, and b) looking at the more general sustainability challenges suggested by the aim but not necessarily reflected by the objectives.

-Due to the limited scope and resources of our investigation, a smaller number of targets were prioritized in some circumstances.

The following three topics were chosen for this study based on the criteria given above.

• Marine pollution

• Ocean and climate

• Marine and ocean resource sustainability

Table 2. Shows how the SDG 14 targets can be grouped according to the three key themes.

Marine pollution	Ocean and climate	Sustainable use of marine and ocean resources
14.1	14.2	14.4
	14.3	14.6
	14.5	14.a,b,c

Key Theme 1: Marine Pollution

Marine pollution is a multifaceted environmental issue. Littering activities in various land and marine-based industries contribute to the passage of litter to the sea. As a result, success in waste and litter management across sectors, as well as progress on other SDGs, is inextricably tied to addressing marine pollution (SwAM 2017).

The analysis will focus on the following four aspects under the marine pollution theme:

• Marine litter

• Micro plastics

• Eutrophication

• Brownification.

Key Theme 2: Ocean and Climate

This review of research gaps on ocean and climate focuses on the following three issues:

• Ocean warming

• Acidification

• Marine protection.

Key Theme 3: Sustainable use of Oceans and Marine Resources

This section will give a quick summary of the challenges at hand, as well as research gaps in resource sustainability and overfishing, including fishing subsidies. This section will focus on two topics in particular:

• Blue economy and marine resource management that is sustainable

• Overfishing and subsidies for fisheries

Conclusion

The Research identifies research gaps across a wide range of topics linked to SDG 14: Life below Water. Two of the three specified responsibilities have been highlighted in the evaluation of what role science, technology, and innovation may play in contributing to SDG 14: defining the difficulties and delivering solutions. This paper covers more fundamental study, such as the effects of several human-induced influences on species and ecosystems. The Research found various cross-cutting research needs and observations for SDG 14 in addition to topic-specific research gaps, which are presented in the themed sections.

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CHAPTER 15

GOAL-15: LIFE ON LAND

BIODIVERSITY

Meral ÖDEMİŞ[1]

Biodiversity can be called as a whole formed by the genes and ecosystems in a region. Biodiversity consists of 4 parts. These; species diversity, gene diversity, functional diversity and ecosystem diversity. Turkey is a country rich in biodiversity. In every public and private practice that makes a decision on biodiversity, biological resources are used in return for monetary value. The European Union has published and implemented many funds for biodiversity conservation. In this study, biodiversity, types of biodiversity, the relationship of biodiversity with finance, threats to biodiversity, biodiversity in Turkey are aimed to be explained. In this review, what biodiversity is, threats to biodiversity, how to protect it, etc. their effects are summarized. It is to meet and preserve the needs of present and future generations, which will not cause a decrease in biological diversity in long periods. This study is for compilation purposes and has been created by collecting and gathering previous academic studies and sources.

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Introduction

Biodiversity is the variety of life on earth and includes variation at all levels of biological organisation from genes to species to ecosystems. Genetic, organismal and ecological diversity are all elements of biodiversity with each including a number of components (Gaston & Spicer 2004). Biodiversity in short, which includes all plant, animal and microorganism species in a place in general, consists of three main parts, from large to small. These are ecosystem diversity, species diversity and genetic diversity (Topçu, 2012).

Humans cannot exist without biodiversity as we use it directly and indirectly in a number of ways. Direct use includes things like food, fibres, medicines and biological control, whilst indirect uses include ecosystem services such as atmospheric regulation, nutrient cycling and pollination (Gaston & Spicer 2004).

Many of the uses of biodiversity have not been added to economic calculations, causing people to underestimate the value of biodiversity. Ecosystem services and resources such as mineral deposits, soil nutrients and fossil fuels are capital assets, but traditional national accounts do not include measures for depletion of these resources.

If an evaluation is made from the past to the present, there are serious variations on the world's current biodiversity, mainly due to anthropogenic effects. Biodiversity forms the basis of ecosystem functioning (Harrop & Pritchard, 2011).

Assessment of biological diversity provides information on the structure and functioning of biological diversity at the micro level, on the one hand, and on the other hand, makes a significant contribution to revealing the complex role that biological diversity plays in the process of raising human welfare. Macro-level evaluation, on the other hand, enables us to monitor how the change of biological diversity resulting from human activities affects the integrity of human and natural environment, making it easier for us to create indicators on human well-being and sustainability (Freeman, 2003).

Material and Method

This study is for compilation purposes and has been created by collecting and gathering previous academic studies and sources.

Research Findings

-Types of Biodiversity

Biodiversity, which is one of the important parameters of sustainable development and guarantees of human well-being; It consists of genetic diversity, species diversity, ecosystem diversity and functional diversity (Nunes et al., 2003: 21).

-*Genetic Diversity*

Genetic diversity (intra-species diversity) is defined as "the diversity of genes both in populations isolated from each other and belonging to species within the same population" (Dervişoğlu, 2007). Individuals that make up the species have common genes as a requirement of belonging to the same species, as well as having different genes in terms of some characteristics creates intra-species genetic diversity (Işık, 2003). Genetic diversity is an important phenomenon that ensures continuous biodiversity (Çepel, 1997).

It is the simplest component that allows for biotechnological manipulations, showing the degree of difference between species by the differentiation of genes, nucleotides, chromosomes and individuals in each organism (Boyle and Boyle, 1994).

-*Species Diversity*

Species diversity is the genetically similarity and mutual reproduction of a group of organisms and the emergence of productive creatures called species (Erdem, 2004). Species diversity is usually measured in terms of the total number of species within certain geographical boundaries. When considering species diversity, taxonomic diversity should also be taken into account. Species diversity also refers to the diversity of species in a particular region, area or the whole world. The number of species in a region (that is, the "species richness" of that region) is the most common criterion used in this regard (Polat, 2017).

-*Ecosystem Diversity*

It is an important system that includes living creatures living in a certain area (habitat) and constantly interacting with each other and their non-living environment, encompassing the diversity at the society level, and providing first habitat diversity and then species diversity (Tekeli et al., 2006: 49).

The entire mutual and complex relationships of non-living and living (biological) elements that affect each other in a self-supporting community are called ecosystems (Tanyolaç, 2006). When Turkey is evaluated in terms of ecosystem diversity, it consists of different ecosystems. These; agricultural area-steppe biodiversity, inland water biodiversity, forest and mountain biodiversity, and seashore biodiversity (Polat, 2017).

-Diversity of Ecological Events (Functional Diversity)

It is the functional dimension of biological diversity (Nunes et al., 2003: 23). Functional diversity occurs as a result of interactions between the structure and process of ecosystems. While the ecosystem structure here is concrete structures that make up the ecosystem such as plants, animals, soil and water, ecosystem processes express the dynamics of the transformation of matter and energy between living and non-living beings (Turner et al., 1999).

In a living environment, there are very complex relationships in the interaction of living beings among themselves on the one hand and with their physical environment on the other. The best known of these interactions and relationships are those in the form of hunter-prey, parasitism, and symbiosis. In addition, nesting site selection, nest material selection, use as breeding ground, etc. There are countless relationships between living things and non-living environments. These relationships are called “processes” in ecology language and “events and functions” in everyday language (Işık, 2003).

The more versatile these relationships are, the more diverse the functions of that ecosystem. At the basis of this is the diversity of species, genes and ecosystems described before. The more diverse these are, the more diverse the ecological processes (nutrition, competition, development, movement, local distribution, energy flow, material circulation) will be. Therefore, the fourth element of biodiversity, "the diversity of ecological events" is a result of the diversity of the first three basic elements (Çepel, 1997).

Threats to Biodiversity

One of the factors threatening biodiversity (Polat, 2017):

• Destruction of pastures to obtain fertile land,

• Land speculation in coastal areas, especially in the Aegean and Mediterranean regions,

• Inadequate control and non-monitoring in the processes of over-fishing, collection of wild animals and birds and hunting, uncontrolled collection / removal of medicinal plants and herbs / onions,

• Salinization of agricultural areas due to unproductive irrigation,

• Industrial and agricultural pollution, domestic wastes,

* Irreversible destruction of coastal habitats, dunes, lagoons, coastal forests and fertile agricultural areas for tourism purposes,

• There is a shortage of experts and technical staff in environmental protection programs.

What Measures can be taken to Protect Biodiversity?

The Millennium Ecosystem Assessment (mea 2005) lists at least the following future actions: they are partially successful in reducing biodiversity loss and can be further strengthened (Dr Natasha de Vere, 2008).

* Protected areas.

* Species protection and recovery measures for threatened species

* Preservation of genetic diversity (e.g., Gene banks).

* Ecosystem restoration.

* Payments and markets for biodiversity and ecosystem services (e.g., for ecotourism or carbon sequestration).

* Increased integration of sectoral responses (i.e., biodiversity issues in agriculture, fishery, and forestry management in many countries are the responsibility of independent ministries, these ministries need to establish processes that encourage the development of cross-sectoral policies).

* Sustainable intensification of agriculture (Dr Natasha de Vere, 2008).

6.) Biodiversity and Sustainable Development

Sustainable development can be defined as increasing and improving the quality of life in harmony and balance with the ecosystems that human beings are a part of and provide the basic support for their survival. (Filiz Demirayak, TUBITAK, ARALIK 2002 VIZYON 2023, Biyolojik Çeşitliliğin Korunması ve Sürdürülebilir Kalkınma).

Contract 2 of the Convention on Biological Diversity defines the sustainable use of biological diversity as "the use of biological diversity elements in a way and at a rate that does not cause a decrease in biological diversity in the long term, and thus preserves the potential of biological diversity to meet the needs and aspirations of present and future generations" (Filiz Demirayak, TUBITAK, ARALIK 2002 VIZYON 2023, Biyolojik Çeşitliliğin Korunması ve Sürdürülebilir Kalkınma).

Basic components of sustainable development; economic viability, social equity and environmental sustainability. (Filiz Demirayak, TUBITAK, ARALIK 2002 VIZYON 2023, Biyolojik Çeşitliliğin Korunması ve Sürdürülebilir Kalkınma).

Biodiversity is an indicator of the healthy environment and the ability of ecosystems to sustain the life support process essential for human well-being. (Filiz Demirayak, TUBITAK, ARALIK 2002 VIZYON 2023, Biyolojik Çeşitliliğin Korunması ve Sürdürülebilir Kalkınma).

Turkey and Biodiversity

Turkey is the country with the richest biodiversity in Europe and the Middle East. It ranks ninth in terms of biodiversity in the European continent. Each of the 7 geographical regions of the country displays different climate, flora and fauna characteristics (TUBITAK, ARALIK 2002, VIZYON 2023, Biyolojik Çeşitliliğin Korunması ve Sürdürülebilir Kalkınma).

This feature of Turkey begins with the disintegration of Pangea, which existed as a single continent 200 million years ago, and also derives from the geological process that formed the world today and the glacial age that took place four times in this process. The very different climatic zones that have occurred depending on the different surface shapes formed have created a wide variety of living spaces. In addition, during the warmer periods between the glacial periods and the eras, Anatolia has been a good shelter for the species that migrate from the north and south (Uzun, 2004).

There are 351 fish species in fresh waters and 548 fish species in seas in Turkey (Anonymous, 2015b). It is known that there are approximately 12,800 plant, 120 reptile, 465 bird and 100,000 insect species. The Mediterranean and Aegean coasts are the habitat of endangered sea turtles such as *Caretta caretta* and *Chelonia mydas* and the Mediterranean Monk Seal (*Monachus monachus*). The population of the Mediterranean Monk Seal in the Aegean, Mediterranean and Black Sea is not constant, and this species is about to disappear in the Black Sea and Marmara (Öztürk, 2002; Demirayak, 2002).

33% of the plant species in Turkey are endemic. More than 500 bulbous plants in its rich flora, which includes more than 9,000 plant species in total, approximately 3,000 endemics; Snowdrops, snowflowers, cyclamen, tulips, crocus species are well-known in international flower bulbs trade (Atay, 1996).

Information on extinct fauna species in Turkey is very limited and there is information that some vertebrate species are extinct. Kunduz (Castor fiber) became extinct in Turkey at the beginning of the last century. Anhinga melanogaster rufa, an endemic species for Turkey, became extinct as a result of the drying of Amik Lake for agricultural purposes (Demirayak, 2002).

Biodiversity - Finance

Financial solutions to conserve biodiversity can be in the forms of instruments, tools, strategies and mechanisms related to generating revenue, avoiding future expenditures, delivering better conservation, and realigning expenditures to be more efficient (Biofin, 2017).

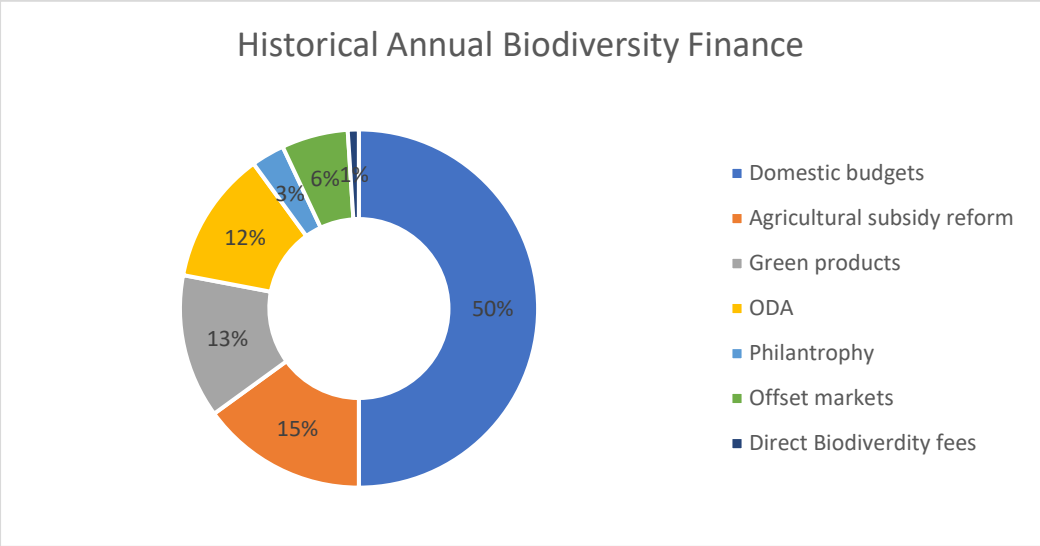
One of the tools used in the evaluation of biological resources is implicit (monetary) evaluation. Any public or private decision or practice that has an impact on biodiversity means that we put a monetary value on that resource (Aruoba, 2007).

Assessment of biological diversity provides information on the structure and functioning of biological diversity at the micro level, on the one hand, and on the other hand, makes a significant contribution to revealing the complex role that biological diversity plays in the process of raising human welfare. Macro-level evaluation, on the other hand, enables us to monitor how the change of biological diversity resulting from human activities affects the integrity of human and natural environment, making it easier for us to create indicators on human well-being and sustainability (Freeman, 2003).

Nature and biodiversity were seen as common public goods that yielded no direct return on investment, which made them apparently uninteresting to the private financial sector. However, there is a strong case for the financial sector to get involved in the finance of biodiversity and ecosystem services and to explore opportunities for private investment in this domain (Finance Sector and Biodiversity Conservation,2010).

Biodiversity finance flows include private and public financial resources used to conserve and restore biodiversity, investments in commercial activities that produce positive biodiversity outcomes and the value of the transactions in biodiversity-related markets such as habitat banking. Data on biodiversity finance is difficult to track due to the opacity of certain transactions and the lack of commonly understood definitions (BIOFIN The Biodiversity Finance Initiative WORKBOOK 2018)

Figure. Historical Annual Biodiversity Finance (Source: Adapted from the Global Canopy Programme, 2012)



Public finance solutions: Government policies and budgets

Governments play an essential role in financing biodiversity. Domestic budgets account for approximately 50 percent of the total invested in biodiversity annually. If ODA (Official Development Assistance) and biodiversity- positive policies are added, the public sector accounts for 75 percent of all biodiversity expenditures. A study in Latin America and the Caribbean found that governments directly supported 60 percent of protected area management costs on average (Bovarnick ve ark.,2010).

Integrating biodiversity targets into long-term strategic planning is one important means of assuring that biodiversity is adequately financed and supported by government fiscal and regulatory policy. (BIOFIN The Biodiversity Finance Initiative WORKBOOK 2018.)

Environmental ministries and civil society can shift allocations in favour of nature only if they present powerful arguments responding to a country's development goals, often focusing on economic development. (BIOFIN The Biodiversity Finance Initiative WORKBOOK 2018.)

Public finance management frameworks usually describe the rules governing taxes, subsidies, fees, fines, intra-governmental transfers, monetary policy, debt management, budgeting and regulatory mechanisms (BIOFIN The Biodiversity Finance Initiative WORKBOOK 2018.)

Conclusion and Suggestions

There are many reasons for preserving biological diversity. These; cultural, economic, etc. are the reasons. Biodiversity, efficient and sustainable use and minimization of losses are important in terms of economy.

Although preserving and preserving the existence of plant biodiversity and plant genetic resources on earth has an ecological importance in terms of the sustainability of life on our planet, it should not be forgotten that the products produced from these sources have an important market value (ranging between 500 - 800 billion USD) on the basis of the global economy (Kolankaya , 2012). Plans and programs for all sectors of biological diversity conservation should be gathered under a single roof. However, plans and programs specific to each region should be implemented.

Conservative sustainable policies should be established and implemented for all ecosystems and should be adopted by the society.

Traditional practices that protect biological diversity should be supported and maintained in order to continue. Financial resources allocated to studies on biodiversity conservation should be increased.

Organic agriculture studies should be made widespread, protected and supported. Studies on the economic evaluation of Biodiversity should be of priority.

The fact that “loss of biodiversity and ecosystem destruction” is among the 5 most likely risks occurring in the next 10 years shows us that the most valuable investment to be made in nature is to preserve biological diversity and protect rare and threatened species, living populations and natural areas (Anadolu Group, 2020). For this reason, they are aware that the studies will increase the awareness of the society.

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The Consequences of Global Warming: Drought, Hunger, Poverty

Fatoş YİĞİT[1]

Nowadays, we are witnessing an unprecedented scale of soil degradation; the loss of arable land reached 30 to 35 times the historical rates. Drought and desertification are also increasing each year, causing loss of 12 million hectares worldwide and affecting poor communities. Poverty reduction struggles are essential to human development. Increasing sea levels due to melting glaciers due to climate change jeopardizes the future of the dense human population on the coastal strips. Damage to agricultural land and crops is one of the main factors facing hunger for millions of people today. This number is roughly equivalent to the number of refugees in the world. In this article, first of all, the causes of global warming, Climate Change-Migration, Poverty, Drought, Hunger, Global warming, its effects on desertification, then the natural and social consequences of warming will be focused on. It will be discussed. Climate changes since the existence of the earth, within the framework of the natural cycle, it took place in different periods and in different ways. The natural and social effects that occur in the world due to this; climate history, environmental anthropology and it is revealed in environmental history researches. Climate change is also happening in the current period. However, the real cause of climate change is global warming due to human activities such as excessive use of fossil fuels and massive industrial pollution. The increase in greenhouse gases, especially carbon dioxide, in the atmosphere, causing global warming and, consequently, the climate. leads to change. The danger of global warming we face today, condensation of greenhouse gases in the atmosphere is due. With the increase in temperature, the glaciers will melt. rising water levels in oceans and freshwater the evaporation seen in the natural resources disrupts the natural balance and causes many problems. It also threatens the life of many plant and animal species. These developments cause countries to take measures in this regard. directed. Since the 1970s, the greenhouse gases

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emitted into the atmosphere restriction and use of clean energy resources international initiatives have been initiated to disseminate.

Introduction

Poverty, which has emerged in the form of production weakness in every period of its history, it is one of the problems faced by societies and wherever in the World every country has to fight poverty. Which is actually a global problem poverty is an issue that concerns almost all countries. Despite efforts to fight internationally, poverty has become widespread in many countries lately. Poverty reduction struggles are essential to human development. The eradication of extreme poverty and the protection of the global environment were two of the eight United Nations Millennium Development Goals, which were targeted to be achieved by 2015 by 192 countries that became members of the United Nations in 2000. However, the effects of climate change pose a major obstacle to the fight against poverty.

Today, there is no doubt in the scientific community about the reality of climate change. Physical and biological effects caused by the increase in surface temperature have been observed in the last century. Scientific research draws attention to the fact that weather events such as drought, flood and hurricane are more frequent and severe with the increase in sea levels caused by the increase of temperatures. The negative effects of climate change turn the daily lives of the vulnerable poor who struggle for a good life, safe home and livelihood into a struggle for survival. Climate change is becoming a real threat in accessing potable water and safe food sources, especially in countries in Africa, Asia and South America. The losses in the agricultural lands and coastal land masses in these countries cause famine and leave no solution to the people living in this country other than immigration. Climate changes, which are a result of global warming, are also a scientific type of atmospheric or astronomical events. It is formed by the compression of greenhouse gases such as CO2 (carbon dioxide), CH4 (methane), C4H10 (butane), which are produced because of human activities, in the atmosphere. Developed industrial countries are the primary responsible for climate changes and global warming in the world. Throughout history, these natural phenomena that directly affect human life affect the poorest and developing countries the most. Since 1980, nearly 80% of people in Asia, Africa and Latin America have suffered from weather and climate disasters. These regions are highly affected by extreme weather events due to their geographical conditions. One reason for this is that advanced industrial countries, which emit excessive gas into the atmosphere with the

advanced industrial technologies they use, are reckless in developing strategies for preventing global warming and adapting to climate changes. This situation has created serious justice problems that need to be solved between those who pollute the environment for the sake of more wealth and those who struggle to survive in the environment that is polluted. The most important of these problems is poverty, hunger and drought, which are strongly correlated with climate changes. In the warning made by the Food and Agriculture Organization of the United Nations (FAO), it was announced that 122 million people could be pushed into extreme poverty by 2030 due to climate change. Because climate changes, which adversely affect food security, greatly damage agricultural activities. Damage to agricultural land and crops is one of the main factors facing hunger for millions of people today. This number is roughly equivalent to the number of refugees in the world. In the Pacific Ocean, one of the largest water bodies in the world, El Nino which is used as the general name for the great warming in the temperature of the surface waters and the atmospheric phenomena caused by this situation, and in Africa, South Africa, Central America, Asia, the Caribbean and the Pacific. people have faced severe drought and floods. Currently, 31.1 million people are struggling with hunger and food insecurity in Somalia. In Ethiopia alone, 9.7 million people affected by drought need urgent humanitarian food assistance.

Causes of Global Warming

Climate scientists analyse the global warming that has occurred since the end of the 1800's; Human beings have made explanations that the activities carried out by human beings have a very important effect on approaching this end. Human beings contribute more and more to global warming day by day, especially by increasing the natural greenhouse effect of the earth, and progress in this regard without slowing down. The greenhouse effect creates effects that can cause sunlight to heat the surface of the earth with a complex process that includes gases and particles in the atmosphere. The gases of heat that are confined to the earth's atmosphere, in this case, are included as greenhouse gases. Carbon dioxide gas, which is the biggest harm, is one of the gases that create greenhouse effect. Some scientists, who believe that greenhouse gases do not make a measurable change in temperature, make many statements that natural formations can cause global warming. These formations occur with the effect of the increase in energy emitted from the sun, but climate scientists argue that the very large heat has little effect on the energy around the Sun plus special warming. Human effects that contribute to global warming arise from the burning of fossil fuels and the inclusion of coal, oil and natural gas in these fossil fuels. In addition, the continuous destruction of forests is one of the most important

factors in this situation. In addition, many fuel consumptions in factories, automobiles and power plants emerges as one of the most important factors of global warming. In addition, the global warming of carbon dioxide gas resulting from the burning of fossil fuels has the most important effect. Carbon dioxide is included as a gas that slows the heat outflow into the atmosphere. Plant species and trees use the carbon dioxide required to produce food through photosynthesis. With the destruction of forests, the amount of gas destroyed by plants is reduced there, or with the decomposition of dead vegetation, they have the most important effect that contributes to the proliferation of carbon dioxide.

Climate change or global warming is the result of the greenhouse effect, which is thought to be caused by greenhouse gases released into the atmosphere and caused by the increase of heat-holding gases such as carbon dioxide, and it is the change in the world's climate due to the increase in average temperatures measured on land, sea and air throughout the year. climatologist) agree on global warming. Most of the increase in the amount of carbon dioxide in the atmosphere is due to human activities. Especially the use of fossil fuels causes a high amount of carbon dioxide to be released into the atmosphere. In addition, cement production is one of the important reasons for this increase. The two main methods that can be used to prevent the increase in the amount of greenhouse gases in the atmosphere are to reduce the amount of greenhouse gases released into the atmosphere as a result of human activities and to increase the efficiency of biological processes that use greenhouse gases in the atmosphere. For example, by using fewer fossil fuels or by increasing the number of plants that use carbon dioxide during photosynthesis, a further increase in the amount of greenhouse gases in the atmosphere can be prevented.

The main causes of global climate change; It is the development of industry with the increase in population and other human activities such as energy consumption, land use, international trade and transportation. The main cause of climate change is global warming. The reason for this is the increase in "greenhouse gases" in the atmosphere. It is known that greenhouse gas emissions increase with human activities. Carbon dioxide (CO 2) is the most important greenhouse gas; It is released to the atmosphere from vehicle exhausts, fuels burned for heating purposes, and factory chimneys. Measures to be taken to prevent global warming:

Transportation: The increase in the number of vehicles circulating in the city and the increase in the consumption of fossil fuels accelerate global warming. Fossil fuels cause air and water pollution. The most important feature of these gases is that they cause an increase in global scale and keep the heat in the atmosphere.

Industrialization: As a result of the rapid increase in industrialization, carbon emissions are increasing, and global warming is accelerating.

Tree cutting: Trees in our country and in the world are cut down to build industrial areas, to create land areas suitable for farming, to build houses and hotels. Trees make a great contribution to ecology. The destruction of green spaces causes air pollution.

Livestock: The destruction of the greens consumed by animals and the vegetation consumed by animals accelerates global warming. At the same time, the wastes left by animals in the nature also cause environmental pollution. Medicines and chemicals used for industrial animal husbandry cause global warming.

Industrial Farming: The reason why industrial agriculture is preferred over organic agriculture is because it is much more profitable and easier. The medicines used in agriculture are causing the destruction of agricultural land and rising temperature on the planet.

Consumption Frenzy: Hundreds of thousands of products are produced every day to meet consumption. The resources spent in the production phase of these products, which are produced to meet people's expectations, constitute 60% of greenhouse gas emissions.

Consequences of Global Warming

Global warming brings many problems with it. Among the problems caused by global warming are melting of glaciers, rising sea water level, storm, flood, increasing amount of rainfall in rains, melting of bronze, drought and evaporation. All these cause imbalances in nature in the future. Drought and improper land management, land and water use, and soil and climate It is a result of the incompatible combination between. Of real deserts today and Very arid, arid, semi-arid and dry semi-humid lands with areas prone to desertification cover approximately 47% of the earth's land.resel warming also causes serious "vital" problems. So, while knocked over a stone, we destroy many stones with it. We experience the results of global warming by experiencing the effects, not by hearing them already. Glaciers are melting, for example. Those huge chunks of ice are melting out of sight. The rains are no longer drizzle, it's pouring rain. Increase in downpours causes an increase in the water level of the seas. These rises also cause an increase in storm and flood damage. The residual amount of evaporation also affects the drought. We are confronted by a vicious circle and we are constantly struggling to find a way out of this maze. While global warming causes severe hurricanes and floods by causing climate changes, it also causes desertification with prolonged droughts. The melting of the polar glaciers will cause the coastal areas to be completely submerged. This will narrow the habitable

space in the world. Frequent avalanches will occur due to temperature changes in the snowy mountains, endangering the surrounding settlements. As a result of the rapid depletion of water resources, thirst will begin. Increases in temperature cause drought, desertification and forest fire. There are many negative consequences caused by changes in climate. These:

-Melting glaciers

-Increase in precipitation in the form of downpours in the amount of rain

-Water level rise of the seas

-Increased storm and flood damage

-Tundra melting

-Increase in the amount of evaporation

-Drought and desertification

-It is possible to sort as.

The consequences of global warming as a result of the studies of the UN Intergovernmental Panel on Climate Change (IPCC), the consequences of global warming in Europe, the poles, small island states and other parts of the world have been determined. The draft report will be discussed at the IPCC meetings to begin tomorrow, which includes around 2000 scientists and government representatives, supported by the governments of more than 130 countries, and the final form will be announced in Brussels on 6 April.

Expected Effects of Climate Change In Europe

- Parts of riverbed basins with violent and dangerous currents will increase from 19 percent to 34-36 percent in 2070.

- Probably millions of people in Western Europe will live in deprivation with wetlands.

- In the event of a scenario in which global temperature averages will rise rapidly, an additional 2.5 million more people per year will be affected by floods on the coastlines in the 2080s.

-According to various scenarios, stream potentials will decrease between 20-50 percent in the Mediterranean part of Europe, while they will increase by 15-30 percent in the parts of Northern and Eastern Europe in the 2070s.

-The smaller Alpine glaciers will disappear; the larger ones will melt by 30-70 percent by 2050.

-While tourism for the Mediterranean falls in summer, it will increase in spring and autumn.

Poles and Some Other Regions

-Arctic sea glaciers will decrease by 22-33 percent by 2100 and may disappear in Antarctica. There will be significant thinning of glaciers in non-marine areas, and this will raise the sea level on earth.

-It is estimated that by 2100 sea level rise could be between 18 and 59 centimetres.

-The Himalayan glacier area, which is currently 500 thousand square kilometres, may decline to 100 thousand square kilometres in 2030.

-There will be a hunger problem in many countries in Asia.

-In 2020, the number of people suffering from water shortages in Asia could rise to 1.2 billion people.

-International airports and roads that are generally built on the coasts in island states will be submerged.

The pollen season has prolonged with the imbalance seen in the seasons as a result of global warming. This has led to an increase in allergies. According to the report announced as a result of the research; When the temperature reaches +2 degrees, there will be sandstorms in various places and agriculture will become impossible, there will be a serious increase in sea levels, water problems will be experienced in various regions, many species will disappear. When the temperature reaches +5 degrees, sea level will rise to 70 meters and all food stocks in the world will run out. When reaching +6 degrees; We will return to the days of immigration, everyone will migrate to find a living space. We are already experiencing many effects of global warming. Here are the consequences of global warming; Melting of glaciers, increase in precipitation in the form of downpours in the amount of rain, rise in the water level of the seas, increase in storm and flood damage, melting of tundra, increase in the amount of evaporation and drought.

How to Avoid Global Warming?

To leave a more liveable world to future generations, we need to use the world we are in more accurately. It is necessary to use public transport as much as possible to prevent global warming. At the same time, it is necessary to keep the environment clean and consume as much as necessary and reduce the use of drugs in agriculture and animal husbandry. The use of perfume and deodorant is also among the factors that accelerate global warming. As a result of global warming, the seasons change, and adhesion irregularities appear. The deterioration of the

seasons and the balance of nature occurs due to global warming. For this reason, everyone should try to contribute to nature by doing their part. You can contribute to the prevention of global warming by trying to use public transport and electric vehicles rather than increasing the amount of smoke coming out of the exhaust by traveling a person in a single vehicle. In this context attention is paid to these to prevent global warming:

a. Calculating the Carbon Footprint

The carbon footprint, measured in terms of carbon dioxide, characterizes the environmental damage caused by human activities that produce greenhouse gases. Accordingly, carbon dioxide emission resulting from activities such as domestic energy consumption, transportation and nutrition is called the primary carbon footprint. Calculating our carbon footprint is important as it will lead to greater awareness of how much we do to the environment. For this reason, before other answers to the question of how to prevent global warming, it is useful to learn the results of your own activities by getting support from the tools and websites developed to calculate the carbon footprint.

b. Using Renewable Energy Sources

renewable energy Choosing institutions that offer clean energy options such as wind and solar energy is one of the most perfect steps to be taken to protect the future of the world. However, if it does not seem possible for you to switch to renewable energy sources in one item, you may consider applying other ways to support renewable energy sources. For example, solar panels can be used to heat water, electric cars can be preferred, sunlight can be used more in lighting, rain water can be used in garden irrigation.

c. Switching to Energy Efficient Household Appliances

How to prevent energy-efficient global warming Energy-efficient models of almost every electronic home appliance are now being developed. You can use more energy-efficient home appliances to contribute to the future of our world and to reduce billing costs. Energy-saving light bulbs, washing machines, refrigerators, televisions and more… With these types of household appliances, you can reduce your carbon footprint while making better use of a considerable portion of the household income that goes to bills beforehand.

d. Changing Consumption Habits

An important part of energy consumption; It is used in food growing, processing, packaging and transportation. Almost half of these foods are wasted. So our energy resources turn into

waste. Based on this, it is possible to conclude that switching to a wasteless lifestyle will significantly reduce energy consumption.

e. Recycling Waste

Not all waste is garbage. For example, materials such as paper, plastic, glass, aluminium can be recycled and serve different usage purposes. For this, you can start by separating recyclable wastes and non-recyclable wastes at your home, workplace, school.

f. Making Thermal Insulation

how to prevent global warming thermal insulation The fact that the house you live in has thermal insulation plays a critical role in reducing the amount of energy needed for the heating and cooling of the house, and consequently, in the reduction of expenses. If your building does not have thermal insulation, we recommend that you notify the building management of your request. On the other hand, effective measures can be taken against global warming by taking steps such as lowering the temperature of the heater during sleep hours, using a thermostat heater, and having double-glazed windows.

g. Unplug Electrical Equipment

Attract unplugging how to prevent global warming When we assume that there are an average of 10 sockets in each house and these sockets are constantly used to power electronic devices, it is possible to say that even if you do not actively use any of them, you cause significant energy consumption. Because even when you are not watching TV, plugging the TV into the socket causes the TV to consume electricity even when it is on standby. Moreover, television is just one example among these devices. In addition, other devices such as chargers, sound systems, vacuum cleaners also consume a certain amount of energy as long as they are plugged in. In order to prevent this, it is enough to unplug the devices that have ceased to be used.

ğ. Using Recyclable Products

As we mentioned in article 5 of our content, where we seek an answer to the question of how to prevent global warming, the re-evaluation of waste is very important. However, for this, of course, it is necessary to have recyclable products. In other words, products made from recyclable materials should be preferred while shopping, cloth shopping bags or nets should be used instead of grocery bags in order to protect the environment and reduce energy consumption.

h. Using Water Resources Efficiently

Using Water Resources Efficiently Water waste is one of the biggest problems of our age. Moreover, the changing climatic conditions due to global warming now put us in danger of drought. Acting with the awareness that water resources are not unlimited will prevent our children from living in a future without water. For this, first of all, it is useful to check the plumbing system in the house against water leakage and to have it repaired if necessary. In addition, using economical faucets and faucets, avoiding long showers, not consuming excessive water while washing face and brushing teeth are among the measures that can be taken to use water resources more efficiently.

ı. Giving Importance to Afforestation

If you have the opportunity to plant trees in the garden of your home or workplace, don't stop and start digging the ground. Because, as you know, trees absorb carbon dioxide and give off oxygen during photosynthesis. The increase in the number of trees is the most effective way to reduce the effects of human-induced increase in carbon dioxide. Afforestation To give importance to afforestation to prevent climate change, to keep your environment as green as possible and to cooperate with local governments to increase the number of green areas will be the most logical steps you can take in this sense.

i. Drying Clothes Naturally

Using a dryer to dry the laundry also serves to increase energy consumption, thus carbon emission and climate change. The way to dry wet laundry without harming the world is actually through traditional methods. You can also use a hanger while drying to prevent global warming and to ensure that your laundry stays durable for longer.

j. Participating in Social Responsibility and Environmental Communities

how to prevent global warming Let's not go without saying that while taking measures against global warming as an individual, you can create a greater impact by combining your power with other individuals. By participating in communities that carry out social responsibility projects for the environment, you can learn more about what can be done to make a difference, evaluate the latest developments in global warming with different minds and benefit from statistics.

Preventing the global warming initiatives in the international arena started in 1979. World Organized by the Meteorology Organization "First World Climate Conference, the seriousness of the situation was on an international platform for the first time. has been discussed. In the following period, in 1985 and 1987 At the meetings held in Austria and in Canada in 1988, the climate policy alternatives to be followed in the face of changes it has been decided to develop

it. Toronto, Canada in 1988. At the Toronto conference on “Changing Atmosphere” held in on the other hand, carbon dioxide gas emissions worldwide by 2005.and the reduction of the" Climate Agreement" by up to 20%. It was decided to prepare its framework. In the same year, Malta's with the efforts of the United Nations General Assembly Protection of Global Climate for Present and Future Generations " has put into force the Decision on the subject. Geneva, Switzerland in 1990. The “Second World Climate Conference” held in Among the conferences aimed at preventing the damages of heating is the important one. In this conference, “Climate Change Framework Agreement and greenhouse gas to an agreement to keep its emissions at a certain level. have been reached. In 1992, in Rio de Janeiro, Brazil, the danger of greenhouse gases accumulating in the atmosphere on the climate system to stop the human-induced effects that create and human-induced greenhouse gas emissions, the target is a year for the future. for the efforts of determining and reducing the desired level United Nations Conference on Environment and Development was held.“Agenda 21”, one of the most important declarations of the Summit, to achieve the goals related to the economic growth relationship It has been a step. Agenda 21 Declaration consists of three main sections. These are:

- The first of these is the social and economic dimensions of global warming. The acceleration to sustainable development in developing countries cooperation in the international arena for achieving ensuring that the economic policies that support this development changing consumption habits, demographic regulation of movements, measures to protect human health supporting the healthy development of residential areas and it is the establishment of the relationship between environment-development-development.

- The other is for environmental protection and resource use. Miscellaneous protection of the atmosphere with precautions, land resources are planned and properly utilizing deforestation and desertification. and combating drought, sustainable agriculture protection of biological diversity, protection of water resources is the management of solid and liquid wastes.

- The last one is the change of role between the main groups. Objectives, policies and in the effective implementation of implementation tools support is given. This is the most important aspect of sustainable development. is conditional.

One of the hurting facts that we all know today is global warming. It is a problem that negatively affects not only human health, but also the environment and the right to life of animals. Let's start with the answer to the question of what global warming is. Global warming is a problem caused by the greenhouse effect of the gases released into the atmosphere by humans. With the

greenhouse effect, the temperature on the earth's surface increases and thus global warming occurs. If we go into a little more detail… The surface of the earth is heated by the sun's rays. Earth reflects these rays back into the atmosphere. However, some rays are kept closed by a natural cover created by water vapor, carbon dioxide and methane gas in the world. This keeps the earth warm. Recently, the accumulation of carbon dioxide, methane and similar gases in the atmosphere has increased. This was one of the causes of global warming. Especially the increase in the last 50 years is noticeable now. We are witnessing the melting of the ice at the poles. Sea water level is rising, and soil is lost in coastal areas. There is a decrease in snow cover and a corresponding increase in sea levels. In some regions caused by global warming, natural disasters such as hurricanes, floods or floods occur. On the contrary, long-term and severe droughts can also be seen. The increase in temperatures in winter is also one of the effects of global warming. In the blink of an eye, we see spring coming, and on the contrary, autumn is also late. Even the migration periods of animals can now change. As climates change, we try to adapt to them. It is difficult for animals and plants to adapt easily to these changes in climates, as a result, many plant and animal species are decreasing. There are even extinct animals. Of course, we do not see the effects of global warming only on animals or plant species.

Global Warming Problem

Climate change within the framework of the Intergovernmental Panel on Climate Change (IPCC) according to the system review reports; carbon dioxide in the earth's atmosphere, the rates of methane and nitrous oxide started to increase in parallel with the intensity of human activities and the speed of social-economic development since 1750, which can be regarded as the beginning period of the industrial revolution. According to the findings revealed by examining ice cores with years of history, this today, the increase has far exceeded its pre-industrial values.1 In the same reports, from the beginning years of the industrial revolution to the present day, the heat in the climate system It is stated that the increase is 0.9 degrees Celsius and carbon emissions into the atmosphere It is predicted that 0.3 degrees Celsius warming will be in question for each ten years in the coming period, if the production-consumption system is not reduced and the production-consumption system is maintained as it is. energy for the success of the fight against climate change, industry needs to be freed from fossil fuels. in oil, coal, Burning the carbon in natural gas, wood and other organic materials leads to the production of carbon dioxide. The rate of carbon dioxide in the atmosphere is 380 ppm and Scientists trying to determine the safe limit for global warming, the temperature increase the

world can handle is 1.5-2 degrees Celsius at most. Otherwise, in parallel with warming, completely life-threatening effects They determined that it could be. Accordingly, global warming; some living species existing ecological risks such as destruction, millions of people threatened by hurricanes and floods, aridity, desertification, and water shortage. revealed the factors. However, the temperature above the 1.5-2 centigrade range In the event of its occurrence, the danger of the extinction of living generations and the deterioration of ecosystems to a significant extent will emerge in a more concrete, tangible and unacceptable manner, as well as disaster predictions.

The CO2 concentration was 280 ppm before industrialization. Oxygen and nitrogen make up 97% of the atmosphere. Oxygen makes up 21 percent and nitrogen make up 76 percent. If it is left behind, it creates water vapor and various gas mixtures, these gases Carbon dioxide is the most important for the climate, with 380 ppm. 7 Second most the important thing is gas (in an environment where vegetal substances are not oxygen, for example from the rot of a cow) methane gas and 1.8 ppm in the atmosphere Dir. The general situation of greenhouse gases in terms of today's sources in Table 1 are laid out.

Table 1. Greenhouse gases (excluding water vapor):

greenhouse gases	Current concentration (ppm)	Average life (years)	Greenhouse gases for 100 years per unit of weight potential	CO2 equivalent present concentration (ppm, 100 years)	Greenhouse Gas of effect percentage (100 years)
Carbon dioxide (CO2)	380	30.000-35.000	1	380	%61
Methane (CH4)	1,8	15	25	26,3	%15
CFC	0,0009	100	1,810-10.900	14,3	%11
Ozone (O3)	0,0015-0,05	0,16 (2MOON)	<2.000	18,9	%9
Nitrikoksit (N2O	0,3	114	298	8,5	%4

Source: (Hans-Wernersınn, 2016, p.27)

This table forms the basis for calculating the greenhouse effects of these gases over the next 100 years. Greenhouse effect of each gas (except water vapor) The last column, which shows

it as a percentage, is an important indicator in terms of demonstrating this effect of carbon dioxide while developing climate policies.

Basic scientific findings, data and calculations on global warming warnings made based on scientific journals, conferences and symposiums. Unfortunately, it has not aroused enough interest. Later, due to the disagreements about paying the costs of the measures to be taken, the adequacy of the solutions proposed to the problems has become debatable. This subject is known is still ongoing and controversy continues.

Poverty Phenomenon

The multifaceted dimension of poverty as a social phenomenon makes it clear makes it difficult to determine the limits. The definition and limits of this phenomenon to reach a common definition, as it may vary according to development levels and consumption scales. is getting difficult. For example, the limit of poverty accepted for any society is another. wealth for a poor society, as can be regarded as the measure of wealth for society criterion may be well below the poverty line of rich societies. It In this context, Simmel considers the poor as a social type; poverty is a quantitative situation cannot be defined as such, but the social response resulting from a specific situation. as a unique sociological phenomenon identifiable in terms of.(Erdoğan, 2001:9). Although poverty is an economic disease that exists in all countries in general, However, it can be said that it is more serious in underdeveloped and developing countries. Two main characteristics of poverty in developing countries are observed. First, Millions of people in these countries are born poor, live poor, die poor, and transfers poverty to their children. Second, it is very difficult to overcome the poverty experienced in these countries. it is difficult. Because the poor in these countries are either geographically or in terms of physical security. livPoverty is generally an economic disease that exists in all countries.

Gordon Marshall, in his Dictionary of Sociology, explains impoverishment from economic crisis. Beyond being a problem arising from the society, isolation and exclusion from the society explained as a concept. Two ways of impoverishment, absolute and relative. The author, who explains the absolute impoverishment in the way in addition to meeting the amount of a person's contemporary needs, accommodation, education, deprivation of the needs brought about by basic cultural and social demands such as health; relative impoverishment from anything found in them compared to others. expressed as deprivation (Marshall, 1999:825).

However, it can be said that it is more serious in underdeveloped and developing countries. Two main characteristics of poverty in developing countries are observed. First, Millions of

people in these countries are born poor, live poor, die poor, and he transfers poverty to his children. Second, overcoming poverty in these countries is very it is difficult. Because the poor in these countries are either geographically or in terms of physical security. They live in areas that are very difficult to reach. Also, these people get together with other people. There are social institutions such as strong kinship ties that prevent them from coming (Hulme and Shepherd, 2003: 417). This may cause their economic alternatives and other opportunities. hinders their assessment. e in areas that are very difficult to reach.The absence of a single criterion and approach in the measurement of poverty, makes it difficult to grasp. To talk about two main approaches in the measurement of poverty direct approach (basic needs approach) and indirect approach. Direct approach, by determining whether needs are met It is the comparison of the observed situation with the normative situation in terms of each need or person. In the indirect approach, the resources owned by the household are Comparison with the composition and size of resources is taken as basis. Different measures for determining whether a household or individual is poor has methods.

Theories of Poverty

It is common for poverty to be handled in three general ways. The first of these is development the World Bank's poverty alleviation initiatives within its projects; second, more inequality in income distribution by shifting poverty to the problem of inequality in the political dimension. emphasis: Thirdly, within the framework of a sociologically weighted interpretation, the cause of poverty, It is the approach that suggests that the poor have an identity problem to be sought in themselves. Approaches to the study of poverty generally include the following It can be grouped under the headings. These are: a) Poverty approach in individual and cultural theories: This approach was very popular in the 19th century, and it took poverty as the fault of the poor. sees. b) Underclass (not even class) and poverty approach: In recent years It is an approach related to stratification used. Members of the underclass are only They are not the poorest members of society, but their lifestyle is a type of poverty.contains. In this group, it is rather marginalized and marginalized in developed societies. groups are discussed. c) Poverty in confrontational and functionalist theories: Inequality and When the functionalist model of poverty is followed, the social roles of individuals in society It seems that the focus is on. Accordingly, some talented people play very important roles, prestige, high income, and desirable resources, while some individuals have roles that do not require knowledge and prestige across the society, have less economic income are roles. For conflict theorists, poverty and inequality in most societies Like the social problem, they are the consequences of the power

structure. Power-controlled group in all societies or segments use economic, political and all other important activity resources.

Describing the characteristics of groups of poor people, this theory It forms the origin of the first empirical studies on the subject. b) Poverty subculture and the deprivation era: with the work of Oscar Lewis in Mexico, Puerto Rico and New York This theory, which has been developed, has been developed especially by anthropological and sociological studies. is used. He argues that the poorest segment of society is sub-society or sub-culture. Continuing, Lewis examines the life cycle while dealing with the subject in the family and individual plane. This culture is distinct from the social formation that reproduces poverty and in which it lives. refers to the values, meanings and practices that can be thought, and poverty is fatalism, it deals with pathologies such as indolence and violence, and from this situation the poor themselves blames. On the other hand, cultural defence developed to get out of poverty also refers to the mechanisms.

The theories developed on poverty, which are considered very generally, are It is seen that they examine poverty within the framework of the difference in their perspectives. Sociological the approach or approaches to address poverty in the context, with a holistic perspective. a critical approach that will not overlook the macro and micro dimensions and the relationship between them. It is thought that being in the framework of.

Poverty is not a new issue and the origins of interest in the subject go back to the early 17th century is going. But the spread of poverty, which is described as mass poverty, and its continuity has increased noticeably since the middle of the 18th century (Şenses, 2006: 32). Intense economic, political and social crises at the end of the 20th century Along with this, poverty has become more and more widespread. With some other effects of globalization Together with the decline in living standards and opportunities, poverty has globalized, it has increased the deprivations in human rights and needs by diversifying (Burkett, 1990: 22).

7. The "Natural" Consequences of Global Warming: Drought, Desertification and Flood

The impact of global warming on precipitation regimes is important. One of its negative consequences is drought and desertification. Deserts fall annually As places where it is less than 254 mm and evaporation rates exceed this figure is defined, although often associated with hot climates and regions There are also cold deserts.

Table 2. Areas covered by arid lands on Earth

Classification	Drought Index (CI)	Domain (%)
Very Arid	Kİ<0.05	7.5
Dry	0,05<Kİ<0.20	12.1
Semi-Arid	0.20<Kİ<0.50	17.7
Dry Semi Moist	0.50<Kİ<0,65	9.9

Source: (Türkeş, 2012, p.21)

As stated in Table 2, it is more common in regions that received precipitation before. It is predicted that there will be precipitation and this problem will increase in drought areas. are being. Floods are when large amounts of water flow into a certain area. that exceeds the capacity of natural discharge and evaporation processes to discharge water. It occurs because of the rapid release. As a result, global warming will cause floods, floods and hurricanes and severe droughts in some areas, which is very will put many people at risk of hunger and thirst.

Every year, the World Meteorological Organization makes a statement about the state of the global climate, giving a summary of the latest data and quickly the events that took place in that year associated with global climate change are listed. For example, only a few of the major climatic events we experienced in 2013 are as follows: 27 Typhoon Haiyan (Yolanda), one of the strongest storms in history that caused landslides, devastated the central regions of the Philippines. High heat waves were detected in the Southern Hemisphere.

8.“Social” Consequences of Global Warming: Climate Migration

Scenarios of ecological disasters that could be caused by global warming and more generally by global climate change are starting to become reality. The first concrete problem that humanity will face at the moment will be the deterioration of the world's population balance with the new migration movements. This situation, which is now being seen concretely, has resulted in a serious social crisis, political crisis, together with the ecological crisis. It will bring along the crisis and ultimately the humanitarian crisis. 1990 of the IPCC in the evaluations made since the first reports published in system has been found to warm up 0.30 degrees every 10 years, and this the situation has revealed a pessimistic picture of the future of the world.

Migration movements caused by global climate change, "environmental migration", Although it is named with different conceptualizations such as "ecological migration" or "climate migration" We are confronted as an important and dangerous process today and in the foreseen future. comes out. Therefore, it is most important to call the phenomenon of new or possible migration climate migration. It will be appropriate expression. Environmental migration, volcanic eruptions before the industrial age, occur mostly in the form of natural disasters such as earthquakes, floods, natural droughts. on the way out; In the process that started with the industrial revolution and deepened today Environmental migrations have become much more common due to human-induced reasons. Climate In addition to environmental destructions such as desertification, lack of water and overflow caused by the change, nuclear accidents and disasters resulting from chemical wars are also accepted as the causes of climate migration. In short, factors such as desertification, deforestation, and agricultural land Migration movements in which people live are called climate migration. people who have been forced to qualify as "climate refugees".

Various scenarios and reports prepared in the international framework regarding the ecological disasters caused by climate change and the migration movements that will intensify accordingly, also draw attention to the subject. For example, according to the IPCC scenarios, in 2030 there will be large increases in climate migration; millions of people will be forced to migrate due to environmental irritation; some island countries may disappear socially and culturally altogether; drought in some places, In some places, migration will increase due to heavy rainfall; On the one hand, from village to city While migration accelerates, on the other hand, it will cause the collapse of the infrastructure in the cities and thus the migration from city to village; depending on the changes in global climate conditions There will be great refugee and immigrant problems with wars.

Global Climate Policies

The global climate change problem was held at the Rio World Environment Summit in 1992. With the adoption of the United Nations Framework Convention on Climate Change, it has been accepted as an international problem and after this date, the world countries a country in which it undertakes various obligations to develop preventive policies. the process has begun. It has been discussed previously, limited to some academic studies. The cluster of problems such as desertification, drought, natural disasters and climate migrations caused by the incoming climate change, the main national and international issues for which they are struggling have started to become.

At the end of the summit, which reflected some of the problems arising from the conflict between countries and industrializing countries, it the "Copenhagen Agreement", which includes financial aid to countries, was signed. The things to be done in this agreement are grouped under two headings: first; advanced All of the countries have declared their will to limit the carbon emissions from their own countries, the other is these countries until 2020 in order to adapt their industrial capacities. and the initiation of the 100-billion-dollar financial aid program, which is envisaged to be implemented. Although the Congress was found positive for the first time in terms of the willingness of all countries to participate in preventive policies against global climate change, the problem was the most industrialized countries such as the USA and China, which are shown as a major source of It has been criticized for its loose attitude and the weak binding power of the Congress. As a result, no concrete binding text emerged with the Copenhagen Accord. The treaty was limited to stating future predictions.

Lately, it has been the biggest cause of heat the development of new sustainable alternative energy sources instead of fossil fuels with new technologies has led to new investment areas in this area. The emergence of the current situation, the fact that the current situation is already unsustainable in the short term, began to be seen with concrete signs of climate change, and more importantly, the increase in global environmentalist sensitivities in this direction led these two countries to take a more positive attitude in terms of the obligations of the great states and the Paris Convention Expectations from the lands are increased. In this framework, before the Treaty, 2014 Greenhouse gases of 197 countries that are responsible for 95 percent of their carbon emissions. Their national contribution statement on reduction raised the hopes even more. Eventually, the meeting was held, and 195 countries signed the Treaty that puts themselves under obligation on emission reduction. The treaty, especially It wants developed countries to set their 2050 targets in a way that will provide zero emissions. Treaty: The action plans that will reduce global warming not to exceed 2 degrees Celsius, which is the limit of the world's temperature lifting capacity, and even to 1.5 degrees Celsius, should be developed in cooperation with the countries. aims to implement.

Climate Solutions

How to reduce the consequences of global climate change? Of course, To do this, reduce the amount of carbon in the atmosphere and prevent global warming. or bring it to a reasonable level should be the main goal. For this, first of all, fossil Giving up energy systems based on

fuels to renewable, clean energy it is necessary to turn. Recently, the increasing global awareness and with the effect of global agreements (especially after the Kyoto process) It is possible to say that there are positive developments.

Renewable energy accounts for 12.4% of global final energy consumption, on the other hand, it constitutes 22.8% of electricity generation. So renewable energy for the first time in 2011, investments in fossil fuels surpassed those made. One of the countries that are very close to their 100% target in renewable energy one is Uruguay. Uruguay stated that they meet 95 percent of their electricity needs from renewable energy sources, in less than a decade without government subsidies and without high consumer prices, their carbon footprint is very low, according to Ramón Méndez, National Energy Director of Uruguay, Paris Climate Summit. 45 Considering the ratio of the population of the developed countries to the population of the developing countries and the population of the developing countries trying to develop in the same direction, the problem is growing dimensions arise. For example, for a long time and environmental Although the pressures of economic growth and development are understood, it is still electricity consumption per capita, which is accepted as an indicator, is 12% at 6% per year. 100% per year and 400% increase in 24 years, in return for air pollution It is calculated that its contribution can grow by 800%.

Conclusion

The economy, which is the three main elements of global warming and sustainable development, there is a close relationship between social and environmental sustainability concepts. While it is aimed to increase the welfare and happiness of people with economic development, global warming and global climate change threaten this prosperity foresight. Since the 1990s, more or less "sustainable development", which is very effective, is necessary for the well-being of the peoples. It has been charged with the function of ensuring the economic growth that is considered and ensuring the ecological balance that is increasingly under threat as a concept, it has always been on the agenda. However, economy and ecology in the sustainable development policies developed with the aim of considering the economy, the pointer is mostly in favour of the economy, and that the economic targets are the forefront. It is possible to say that it came to the plan.

The first problem in dealing with poverty in the poverty studies literature is the absolute whether the poverty approach or the relative poverty approach is chosen. is to be determined. According

to the concept and limit of absolute poverty, no one in a society is poor may not be, and the opinions of the poor are not important here. This approach is out of the poor. It is based on the evaluations made. However, considering poverty as a phenomenon of inequality and According to the concept of relative poverty, which highlights how the poor evaluate themselves, there will always be a section of society that is poor. In fact, the difficulties in implementing the international decisions taken in the context of reducing carbon emissions related to global warming are always this. it resulted from the weight of the economic point of view. However, medium- and long-term climate scenarios reveal that if the warming of the earth continues at this speed, that is, if the increase in greenhouse gases continues at the same speed, the world will be very serious. Natural and social disasters will await. As discussed in this article, drought desertification, floods and climate migration are the consequences of global warming and it has already begun to make itself felt. In these scenarios Just as there will be no ecosystem that needs to be protected when events happen, so it will be too late and there is also an economy that can be maintained. will not happen, the economic losses caused by climate problems will be many times more than the economic gains that are now indispensable.

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CHAPTER-16

GOAL-16: PARTNERSHIP FOR THE GOALS

REDUCING VIOLENCE TO ADVANCE PEACE AND SUSTAIN DEVELOPMENT

The 2030 Agenda for Sustainable Development brought together world leaders around a shared vision and commitments, including to foster "peaceful, just and inclusive societies which are free from fear and violence." The resulting Sustainable Development Goals (SDGs) contain an ambition to significantly reduce violence in all its forms (SDG 16.1). This goal and target—the first time a quantified target on violence prevention has been placed at the heart of the global development agenda—will be under review at the 2019 High-Level Political Forum (HLPF) on Sustainable Development in July. This presents an opportunity to face the reality of the violence prevention challenge, and to build on successes.

The target to reduce violence contained in SDG 16 does not stand alone. It is backed up by 36 other targets from eight SDGs that aim to build more peaceful, just, and inclusive societies. This shift away from SDG 16 to SDG 16+, articulated by the Pathfinders for Peaceful, Just and Inclusive Societies, ensures that prevention is not understood in isolation from the factors which give rise to violence, insecurity, and injustice that are identified in the agenda. SDG 16+ underscores that progress made in reducing violence—or the lack thereof—will impact whether other goals, e.g., on women's empowerment, the reduction of hunger, and access to water, will be achieved.

Unfortunately, the world is not on target to achieve a significant reduction in all forms of violence. According to a business-as-usual scenario, violent deaths will increase by nearly 10 percent from current levels, reaching 610,000 in 2030. Under this scenario, the number of conflict and non-conflict deaths would grow, although the homicide rate would decline slightly.

A more negative scenario is also possible, if conflict deaths continue to rise and homicide rates regress towards the worst performers in each region. Under this scenario, violent deaths would grow to 819,000 in 2030, an increase of 46 percent.

But violence is not only a matter of mortality rates. Violence impedes all forms of development. Violence instills fear within communities, homes, schools, workplaces, and along city streets. Violence makes it harder for parents to get their children proper health care or a nutritious diet. In Africa, for example, between three and four young children are estimated to have lost their lives for every direct death from conflict.

Conflict and its insidious impacts are only part of the picture. Eighty-two percent of all violent deaths occur outside of conflict zones. Fewer than half of the world's 20 most violent countries are affected by conflict, reflecting extremely high levels of non-conflict violence, especially in urban centers. On current trends, between 43 and 60 percent of the extreme poor will live in countries affected by conflict, violence, and fragility in 2030.

It is worth recalling that, while there is a high degree of variation, all societies experience violence, injustice, and exclusion. Disadvantaged and intentionally marginalized people, groups, and communities face the brunt of these burdens. Over a third of women have experienced physical or sexual violence at the hands of their partners, or have been victims of non-partner sexual violence. One billion children are victims of serious violence each year. Young men are disproportionately likely to be victims (and perpetrators) of many forms of violence, with homicide the fourth leading cause of death for young people globally.

The many forms of violence and the relationship with many aspects of peace and development require an integrated approach. This is why the Roadmap for Peaceful, Just and Inclusive Societies identifies strategies, actions, and enablers for the implementation of SDG 16+. The transformative strategies cover the prevention of all forms of violence, institutional renewal to underpin sustainable development, and action to increase social, economic, and political inclusion. This 16+ framing is critical to making sure response options are pursued through just, legitimate, and equitable pathways.

The universality of Agenda 2030 is essential. All countries face their own unique challenges with violence. And all countries should strive toward building more peaceful, just, and inclusive societies. Through collective action, they should also work together to reduce risks to peace that span national borders.

The positive news is that we can do this.

There is consensus that significant reductions can be achieved. The Global Status Report on Violence Prevention identifies six "best buy" strategies for preventing interpersonal violence at a policy and programmatic level. The Igarapé Institute and Inter-American Development Bank have argued that, in Latin America, a 50 percent decline in violence could be achieved in just ten years. The United Nations and World Bank have united behind Pathways for Peace, a shared framework for the prevention of violent conflict.

A group of international organizations have proposed a framework to underpin action to prevent violence against women in 2015. For children, a similar group identified seven strategies, named INSPIRE, for ending violence against children. These multi-sectoral approaches to prevention are based on data about the scope of the problem, the identification of risk and protective factors, implementation of evidence-based interventions, and monitoring of impacts and cost-effectiveness.

The Global Partnership to End Violence Against Children was launched by then-UN Secretary-General Ban Ki-moon at the HLPF on Sustainable Development in July 2016. The End Violence Partnership aims to "make societies safer for children and end violence against children everywhere." It mobilizes global movement, strengthens political will, identifies and shares solutions, and makes a compelling investment case to end violence for all children. The Partnership is also identified as the overarching platform for the implementation of the INSPIRE strategies to help countries and communities achieve ending violence against children. INSPIRE strategies cover SDG targets for ending violence against children including the main target SDG 16.2 on children, SDG 5.2 on women and girls, SDG 16.1 on all forms of violence, and others to address all risk factors for violence against children.

Simultaneously, Secretary-General António Guterres has reinforced such unified thinking through the promotion of a "peace continuum" that brings together prevention, mediation, conflict-resolution, peacekeeping, peacebuilding, disarmament, and sustainable development. While the creation of discipline-based communities of practice is essential to furthering research and analysis, so is re-orienting around the overarching goals of increased peace and safety.

Advancing peace and safety for all peoples is our collective responsibility. We have the evidence to make the world more safe. While destruction can be achieved with remarkable

efficiency, preventing such destruction is more complicated. It requires collaboration, partnership, sustained attention and continued dedication. Fundamentally, it requires acknowledging we have the tools and evidence to save lives. The question is whether we can work together, in collaboration and partnership, to put them to use.

Reference

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HOW CAN WE PREVENT VIOLENCE? – UNDERSTAND



Safety is a Human Right

In societies marked by high levels of violence and crime, such as in South Africa, people invest in anything that makes them feel more secure, from burglar bars and panic buttons to high concrete walls and electric fences.

Governments tend to take a hard-line approach, putting more police on the streets and toughening punishments for offenders. However, clamping down on violence and crime affects only its symptoms; focusing on security alone fails to address the causes of violence.

Rather, what is needed is a change of emphasis from security to safety. Security means protection against a known or perceived threat, while safety means to live without that threat or fear.

To create a society where everyone feels safe requires an understanding of safety as a human right and a public good that needs to be protected. The way to achieve this is through a commitment to preventing violence and crime by addressing its root causes.

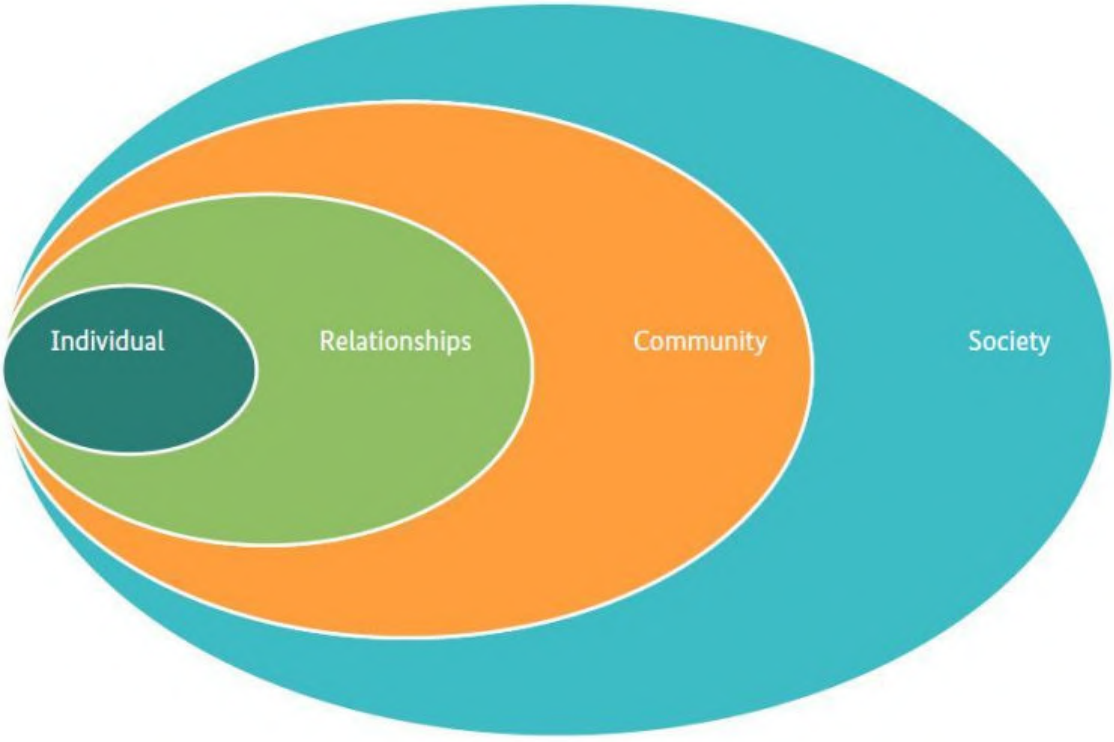
What Makes People Violent? A Look at the Ecological Model

The Ecological Model

"The ecological model highlights the multiple causes of violence and the interaction of risk factors operating within the family and broader community, social, cultural and economic contexts." (WHO World Report on Violence and Health, 2002)

There is no single reason that explains why people become violent. Social research has shown that violent behaviour in people is influenced by a complex interaction of many factors.

In order to help explain the complex phenomenon of violent behaviour, the World Health Organisation (WHO) uses the ecological model, as seen below. The model differentiates between four levels - individual, relationship, community and society – and factors specific for each level which influences and affects people's behaviour.



Four levels of the ecological model - adapted from WHO World Report on Violence and Health, 2002

Each of these levels presents certain risk and protective factors, producing mutually reinforcing factors of influence over an individual.

Therefore, the model provides a helpful orientation for the planning of violence prevention measures because it considers the interplay of many factors contributing to violent behaviour, as well as the influence of the environment people live in. It also highlights the importance of the co-ordinated action required on multiple levels in order to prevent violence.

Example

Someone with an aggressive disposition (risk factor on the individual level) is more likely to take a violent stance if he or she has previously experienced violence as a means of conflict resolution at home (risk factor on the relationship level). Likewise, someone living in an urban district with high levels of unemployment and crime, and a lack of leisure activities (risk factors on the community level) is more likely to adopt violent behaviour than with someone who grows up in peaceful surroundings, with more varied and better opportunities.

Risk and Protective Factors

Understanding and considering risk factors and protective factors is crucial in the prevention of crime and violence, as it can be assumed that the prevention violence can be achieved through a reduction of risk factors and a strengthening of protective factors.

Risk Factors

Risk factors are "characteristics, variables, or hazards that, if present for a given individual, make it more likely that this individual, rather than someone selected from the general population, will develop a disorder." The word ‘disorder’ here refers to a tendency toward certain behaviour, such as violence.

The presence of risk factors increases the likelihood of an individual being involved in criminal and violent activity - the more risk factors a person is exposed to at different levels, the higher the probability.

It is important to note that risk factors, which appear at every level of the ecological model, do not cause violence - they give an indication of the likelihood of violent behaviour, however many people with multiple risk factors don’t resort to criminal or violent behaviour. For

example, poverty is a risk factor, however most people living in poverty do not resort to violence. All it means is that they are more vulnerable to violence.

Protective Factors

"Protective factors are those factors that mediate or moderate the effect of exposure to risk factors, resulting in reduced incidence of problem behaviour."

At the other end of the spectrum are protective factors, which provide a buffer between the presence of risk factors and adoption of delinquent behaviour, thus decreasing the probability that a person will engage in or be victim of violent behaviour. For example, a child growing up in a warm and caring family environment is less likely to resort to violence him- or herself than a child who experiences violence at home.

Protective factors help promote resilience in the face of adversity, and resilient people, or communities, are those who manage to abstain from involvement in crime and violence, despite exposure to risk factors.

Resilience and the impact of protective factors is a growing area of interest and research, producing scientific findings to suggest that the presence of just a few protective factors can minimise the impact of risk factors. Like the risk factors, protective factors can also be listed according to the levels of the ecological model.

Related Resources

Advancing Early Childhood Development: from Science to Scale - Report/Study

04 Oct 2016 The Lancet

Why invest in violence prevention? - Article

01 Nov 2011 Violence Prevention Alliance, Education Development Center

Preventing the Victimisaton of Women and Children - Report/Study

01 Jan 2005 Open Society Foundation for South Africa

Preventing Crime and Violence in South African Schools - Report/Study

02 Sep 2002 Open Society Foundation for South Africa

Preventing crime and violence through work and wages - The impact of the CWP - Article

02 Jul 2015 Institute for Security Studies Centre for the Study of Violence and Reconciliation

Preventing youth violence: an overview of the evidence - Report/Study

Preventive interventions to reduce youth gang violence in low- and middle-income countries - Report/Study

01 Nov 2015 The Campbell Collaboration

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CHAPTER 17

GOAL-17: PARTNERSHIP FOR THE GOALS

PARTNERSHIP FOR THE GOALS: UNITY AND TOGETHERNESS

Asena BOZTAŞ[1]

In today's international system, where globalization is gaining momentum, it is accepted that the world is in a worsening situation. The international community, which has problems in many issues from economic problems to hunger, should re-orient the international system by remembering the basic universal values of humanity. This direction; should be based on the values of equality, justice, etc. In 2015, the UN set 17 targets (Sustainable Development Goals-SDGs) by considering these basic values and put them on its agenda. The 17th goal (SDG-17) has been determined as "Partnerships for the Goals", officially “Strengthen the means of implementation and revitalize the global partnership for sustainable development” with its structure that includes all other 16 goals. SDG-17 refers to the need for cross-sector and cross-country collaboration in pursuit of all the goals by the year 2030.

Economy and Trade are Most Important

SDG-17 has seventy targets to be achieved by twenty thirty, broken down into five categories: finance, technology, capacity building, trade and systemic issues. Progress towards nineteen targets will be measured by twenty-five indicators (Alan, 2018).

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It is a call for countries to align policies. SDG-17 is a vision for improved and more equitable trade, as well as coordinated investment initiatives to promote sustainable development across borders. It is about strengthening and streamlining cooperation between nation-states, both developed and developing, using the SDGs as a shared framework and a shared vision for defining that collaborative way forward. It seeks to promote international trade, and help developing countries increase their exports to ensure a universal rules-based and equitable trading system that is fair, open and beneficial to all.

With 5 trillion dollars to seven trillion dollars in annual investment required to achieve the SDGs, total official development assistance reached A hundred and forty-seven point two billion dollar in twenty seventeen. This, although steady, is below the set target. In twenty sixteen, six countries met the international target to keep official development assistance at or above o point seven percent of gross national income. In twenty seventeen, international remittances amounted Six hundred and thirteen billion dollars, with seventy six percent invested in developing countries. The bond market for sustainable business is also growing. In twenty eighteen global green bonds reached A hundred and fifty-five billion dollar, up to seventy eight percent from twenty seventeen (The Sustainable Development Goals Report 2020).

Human and Nature Impact

In today's world, where humanity and nature react as well as economy and trade, the goals of the UN are of great importance. Humanitarian crises brought on by conflict or natural disasters have continued to demand more financial resources and aid. Even so, many countries also require official development assistance to encourage growth and trade. The global progress map for SDG-17 shows that significant and major challenges remain in the majority of the world. Many regions of strong economic status perform very poorly, like the United States and much of Europe (The Sustainable Development Goals Report 2020).

Covid-19 Process Affect

Support for implementing the SDGs has been steady but fragile, with major and persistent challenges. Financial resources remain scarce, trade tensions have been increasing, and crucial data are still lacking. The COVID-19 pandemic is now threatening past achievements, with trade, foreign direct investment and remittances all projected to decline. The pandemic also appears to be accelerating existing trends of global value chain decoupling. One of the few bright spots at this time is the increased use of technology as people flock to the Internet to work, shop and connect with others, but even this draws attention to a still-enormous digital

divide. Containing COVID-19 requires the participation of all governments, the private sector, civil society organizations and ordinary citizens around the world. Strengthening multilateralism and global partnership are more important than ever (The Sustainable Development Goals Report 2020, p. 60).

> «Everything we do during and after this crisis (COVID-19) must be with a strong focus on building more equal, inclusive and sustainable economies and societies that are more resilient in the face of pandemics, climate change, and the many other global challenges we face. »
>
> António Guterres
>
> Secretary-General, United Nations

The magnitude of the economic as well as social and environmental impacts of the Covid-19 Pandemic is an undeniable fact. In this context, it should be stated that there are economic effects on the basis of social effects. Again, the international community was most affected by the bottleneck that the companies fell into. As seen in Table 1, developed and developing countries, as well as undeveloped countries, were adversely affected financially and economically (investments, etc.) in the world order before and after Covid-19.

As a conclusion (The Sustainable Development Goals Report 2020);

- Major donors say they will strive to protect ODA budgets, even as the coronavirus upends the global economy

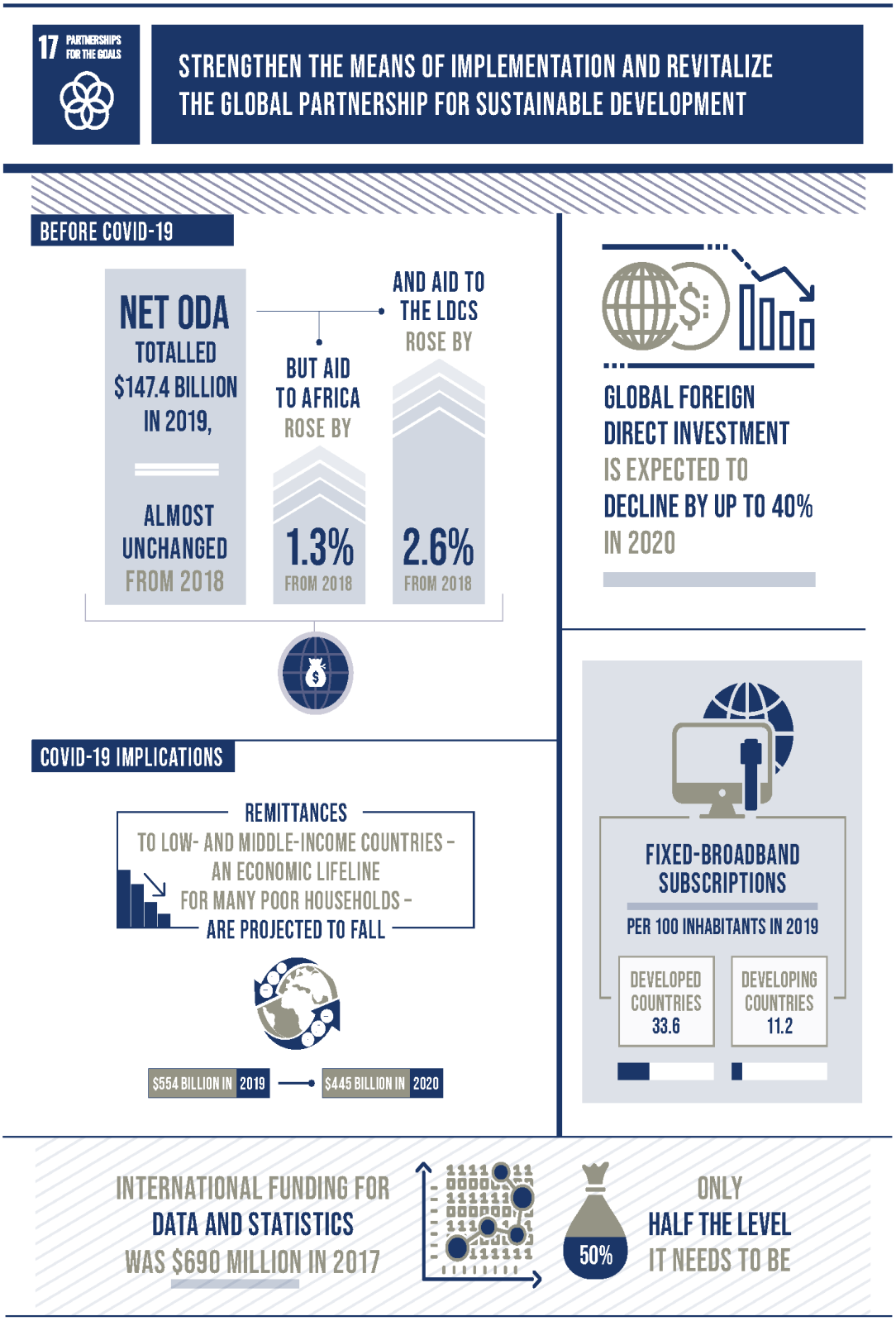
-After reaching a new high, remittances are expected to drop dramatically in 2020

- Foreign direct investment and global value chains are likely to take a hit from the coronavirus crisis

-Global trade is expected to plummet while LDCs struggle to build their share of exports

- The Internet is now essential for many daily activities, but half the world’s population is still not connected
- While the need for sound data continues to escalate, poorer countries lack the resources to produce them

Table 1. Partnership For the Goals: Covid-19 Effect



Source: The Sustainable Development Goals Report 20

Table 3. SDG targets with 2020

Biodiversity-linked SDG targets with a 2020	Progress analysis
2.5 Maintain the genetic diversity of seeds, plants and animals for food and agriculture	Progress has been negligible in maintaining plant and animal genetic diversity for food and agriculture. The number of local livestock breeds (occurring in only one country) with sufficient material stored to allow them to be reconstituted in case of extinction increased to 101 in 2019 – a tiny proportion of the approximately 7,600 breeds reported globally. According to country reports, 73 per cent of assessed breeds are at risk of extinction. At the end of 2019, global holdings of plant genetic material conserved in gene banks totalled 5.4 million samples, a 1.3 per cent increase from 2018.
6.6 Protect and restore water-related ecosystems	In 2018, slightly more than 2.1 per cent of global land was covered by freshwater bodies. Water-related ecosystems captured by these data (lakes and large rivers) have maintained a consistent spatial area since the baseline reference year 2000 (*progress indicated in yellow*). For other water-related ecosystems, including wetlands, groundwater and open water bodies, global-level data is not yet currently available (*progress indicated in grey*).
12.4 Responsibly manage chemicals and waste	Parties continue to meet their commitments as required by multilateral environmental agreements in the chemicals and waste cluster, in particular for the Basel, Rotterdam and Stockholm conventions (*progress indicated in yellow*). However, between 2010 and 2019, global generation of e-waste – discarded electronic and electrical equipment – grew from 5.3 to 7.3 kilograms per capita, while the environmentally sound recycling of such waste increased at a much slower pace – from 0.8 to 1.3 kilograms per capita (*progress indicated in red*).
14.2 Protect and restore marine and coastal ecosystems	The global Ocean Health Index appears to have been static over the last eight years. Some regions have low scores on ocean health that are likely worsening.
14.4 Restore fish stocks to sustainable levels	The sustainability of global fishery resources continues to decline, although at a reduced rate, with the share of fish stocks within biologically sustainable levels at 65.8 per cent in 2017, down from 90 per cent in 1974, and 0.8 percentage points lower than 2015 levels.
14.5 Conserve at least 10 per cent of coastal and marine areas	As of December 2019, over 17 per cent (or 24 million square kilometres) of waters under national jurisdiction (0 to 200 nautical miles from shore) were covered by protected areas, more than double the area covered in 2010. The global mean percentage of each marine KBA covered by protected

	areas increased from 30.5 per cent in 2000 to 46.0 per cent in 2019, but the majority of these sites still have incomplete or no coverage by protected areas.
14.6 End subsidies that contribute to overfishing and to illegal, unreported and unregulated fishing	As of February 2020, the number of parties to the Agreement on Port State Measures – the first binding international agreement that specifically targets illegal, unreported and unregulated fishing – increased to 66 (including the European Union) from 58 the previous year. Close to 70 per cent of countries reported high scores in implementing the Agreement.
15.1 Conserve and restore terrestrial and freshwater ecosystems	In 2020, on average, 44 per cent of each terrestrial and 41 per cent of each freshwater and each mountain KBA were in protected areas, an increase of 12 to 13 percentage points since 2000. However, the majority of KBAs still have incomplete or no protected area coverage. Moreover, since 2010, the increase in coverage has slowed considerably compared with the previous decade.
15.2 Promote sustainable management of forests, halt deforestation and restore degraded forests	The world's forest area continues to shrink, although at a slightly slower pace than in previous decades. From 2015 to 2020, the annual rate of deforestation was estimated at 10 million hectares (*progress indicated in yellow*). While forest loss remains high, 2020 data show the proportion of forests in protected areas and under long-term management plans, as well as certified forest area, increased or remained stable at the global level and in most regions of the world (*progress indicated in green*).
15.5 Protect and prevent the extinction of threatened species	Globally, species extinction risk has worsened by about 10 per cent over the last three decades, with the Red List Index declining from 0.82 in 1990 to 0.75 in 2015, and to 0.73 in 2020 (a value of 1 indicates no threat to extinction and a value of 0 indicates all species are extinct).
15.8 Prevent invasive alien species on land and water ecosystems	The overall rate of biological invasions shows no sign of slowing down, with growth in both the number of invasive species and their spread due to increased trade and transport (*progress indicated in red*). However, preliminary results of a survey carried out by the International Union for Conservation of Nature's Invasive Species Specialist Group show an increased commitment by national governments to prevent and manage the spread of such species (*progress indicated in green*).
15.9 Integrate ecosystem and biodiversity values in governmental planning and accounts	As of January 2020, 113 parties had assessed progress towards their national targets related to Aichi Biodiversity Target 2. About half of the parties made progress towards their targets, but not at a rate that will allow them to achieve their goals by the end of 2020. In 2017, 69 countries had programmes on the System of Environmental Economic Accounting, a 28 per cent increase since 2014.

Source: The Sustainable Development Goals Report 2020

By the end of 2020, twenty-one of a hundred and sixty-nine Sustainable Development Goal targets will have matured. This review progress made towards those targets at the global level based on available data as of June 2020. It takes stock of how far the world has come in meeting these commitments by mid-2020 and provides an assessment in stoplight colours. Of these twenty-one targets, twelve are linked to the United Nations Convention on Biological Diversity Aichi Biodiversity Targets. The biodiversity-linked SDG targets are grouped together on Table 3 (The Sustainable Development Goals Report 2020).

Conclusion

The dynamics of the globalizing international system have deprived the international community of equality and justice along with problems such as violence, chaos and environmental problems in the process. The UN, which aims to direct the international community in this structure to universal moral values, has put 17 Sustainable Development Goals, which it plans to achieve until 2030, on its agenda in 2015.

The 17th of these 17 SDGs complements the other 16 goals and emphasize unity and solidarity for their realization. In this context, considering the effects of the Kovid-19 process that states in the international system are going through, the UN has published an important report on these targets in 2020. It is seen in this report that not only underdeveloped countries or societies, but also the whole world is negatively affected economically, commercially, socially and physically. Therefore, the most important thing to do in this process is to overcome all problems in unity and solidarity.

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THE THREATS OF RUNNING WATER WHILE MALCONSUMPTION

Hüseyin Çağatay ÇETİNKAYA[1]

World clean water resources are depleted rapidly due to natural and human factors. Rapid population growth, technological developments and negative effects of global warming are the main factors that accelerate this process. Water problems arise in urban areas such as drinking, using water deficiencies and water pollution. In the rural areas, as a result of unconscious excessive irrigation, the groundwater level is gradually decreasing, the chemical wastes used in agriculture contaminate the ground water by polluting the ground water and the evaporation caused by unconscious irrigation increases the water losses. These problems caused the water resources to become more important with each passing day.

Energy, in the process of its generating, delivering the consumer and using, forms environmental impact whatever source type is. Many problems like pollution, energy using, economic and social problems from energy supply and demand are came up as basic issues of environmental policy. These problems are the most political issues for governments both international and national level. In addition to this getting energy is the one of the most important problems at the governments' agenda. Because energy, which is important from executing production to daily life, cause important problems for governments both finding sources and getting. So, energy policy takes a significative role in the many issues like power, security, development at the national and international area for governments. Many problems like fossil resources which are non-renewable resources and nuclear energy and danger of fossil resources depletion, pollution, direct governments to alternative energy source. In addition to this water which is using for energy source ever since old times, are accepted renewable source. Early on especially water which is using for drinking water and irrigation start to use in

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generating energy with invention of mill and dam. But dams make environmental damages at the national, regional and global level. Loss of biological diversity, extinction, decreasing groundwaters, melting delta, deterioration of soil, economic and social. In spite of all these things, Hydroelectric Power Plant (HPP) is accepted dependable, cheap, clean and renewable energy source relatively. While HPP makes environmental damages, they have an important place at the governments' energy policy because of another speciality. Governments try to build new ones as well as present dams and HPP due to the population growth and development effort because they are cheap and renewable. Preferring to build HPP in despite of its environmental damages by governments who must realize energy offer with the urgent and compulsory economic reasons is presented dilemma at the economic and environmental problems clearly.

This study consists of literature review and it will include more perspective which is specifically related to running water focusing on human health and agriculture.

The control and usage of natural resources has shown us their indispensability and importance. For instance, the design and use of various structures contributing to the development and transformation of the society increase the importance of these units for human life by controlling hydrographic units (especially rivers), which are essential for life, (construction of dams and irrigation channels). Therefore, it can be said that dams are important factors for natural. The first priority of them in history was for drinking and irrigation water, though. After the revolution of industry, dams became more vital for human life because of the production of electricity. From aegis, people have been using waterpower for daily needs. On the other hand, with the design of water powered machines, industrial revolution got accelerated. Nowadays, any power cut or shortage (especially electrical) may cause really big problems and economical gaps. That is why dams have become essential and strategic constructions for us. There are more than 45,000 dams on the system of running water potential in the world right now. This also represents 15% of the world's river reserves (Nilsson and Berggren, 2000; Meybeck, 2003; Nilsson et al., 2005). The construction of dams and HPPs provides drinkable water and electricity for people. Thus, there have been a lot of cultural conflicts. We are all aware of human population being increased day by day. Because of this rapid growth, new HPP projects are also on the agenda. As an example, dams are being used daily in our country because of the cheap price and definitely providing a useful power. Although fossils are used by thermal power plants, waterpower is only used by HPP for production. However, %80 of required power in the world is still produces by fossils. In the past, power plants were served independently in

specific regions, while today these power plants work with an interconnected system. Basically, the principle of HPP is a conversion of potential energy to kinetic energy.

How about the investors who only try to make a good reputation and profit through new constructions? Their traditional way is 8-10 billion tons of water flow into the sea without any benefit. Of course, we must use the potential benefits providing by nature unless there is threat or risk for natural system.

Below is the review of some special topics putting both natural system and human health in danger.

Objective of Study

The benefit that we intend to get from this paper aims to study running water usage and the threats while mal consuming.

Research Methodology

Literature review will be the main focus of this study. In other words, A lot of research have been done on this topic in different countries and has been reviewed in this paper.

Different Usage of Running Water

Transportation; Public or commercial usage**.**

Industry; Raw materials, storage, power plants, etc.

Trade; Mall, hotel, restaurant, cafe, etc.

Residence; Park, garden, buildings, etc.

Culture and Education; Festivals and concert areas, museums, parks, children's playgrounds, sports fields, exhibition areas.

Sports; Swimming, diving, canoe races, fishing, boat trips, hiking, picnic areas.

Within the scope of this research, there will be some assessments about HPP and dams which can be risky potential for human and nature health. As it is known, running water is common for many nations. Therefore, it should be used in the best way for general developing and sustainability.

Power Production

With the increasing of human population all over the world, many problems occur day by day especially the power problems. Countries are trying to discover new resources power. Besides,

if the resources are not used in a right way. The natural system may fall in serious danger. According to the BP Statistical World Review of Energy's data; the average of power usage is the same with 13 billion tons petrol yearly. As mentioned before, fossils make %80 of this power source. Petrol, natural gas and coal are the main materials for production. It is believed that there will not be more advantage in future for us. The deadlines for these materials are petrol 2050, natural gas 2070, coal 2150. Furthermore, countries have started to talk about power stocks and also this topic has become the first priority of governments as politic.

Another type of energy usage is nuclear energy. Nuclear energy and its resources are all required serious financial investments. Any blowing into the atmosphere, gas leakage / release may lead in danger and cause great risks (1986 Chernobyl disaster and March 2011 Japan earthquake) Moreover nuclear weapon can be made by different nations.

Within the framework of all these definitions, it seen that, countries are looking for “alternative energy sources” which is why they tend to use natural energy sources such as wind, wave, geothermal, tidal and solar energy as sustainable energy sources. Especially in countries which rich running water systems, Hydroelectric power plants (HEPPs) is the classical energy production.

Transboundary Waters

The running water flows from a country to another. Today, there are 261 transboundary river basins in the world constituting 45% of the earths land area. Globally, 19 basins cross 5 countries or more, including the Mekong, the Nile, the Niger and the Rhine. The Danube, for example, flows adjacent to or through 18 countries. Only in Europe, 20 countries dependent to more than 10% of their water resources on neighbouring countries and 5 European countries draw 75% of their resources from upstream countries. Consequently, this issue is really controversial for many countries in the world. If we want to see sustainable and secure world in the future, everyone has to be sensitive about the usage of naturel running water.

Threats

The International Network of Rivers compares streams to veins in our body, and water to our blood, which gives life to our bodies. Let's take a look at what kind of difficulties made by an unconscious natural obstacle that can be placed in front of streams such as the distress caused by any disruption in our blood circulation in our body.

- HPP and dams built for power production on running water canal can change the naturel ecosystem as a climate condition. Therefore, many flora and fauna that living in these environments can be effected negatively.
- Basicly erosion is defined the transportation soil particles by running water naturally. We erosion can be devided into two catagories as natural erosion and accelerated erosion. Natural erosion occurs under natural conditions and is necessary for nature to continue its functioning. The dangerous type of erosion is accelerated one, which happens as a result of human activities and causes nature destruction. In natural process, these particles are being transported and collected. This location creates qualify agricultural lands called 'Delta and Lowland' If the running water is blocked by a dam, the natural balance will be broken, and the particles will remain behind the dam and the advantages will be lost.
- In the lake which created by artificial process, microorganism such as bacteria or fungal populations increase at first. After a while, oxygen level increases and anaerobic environment is formed. Water becomes blurred and stinky. Macroflora start to develop on the surface. Consequently, the evaporation is accelerated.
- As a result of particles block, sea water can raise into the canal and agricultural lands become useless.
- Generally, running water mixes with ground water which is drinkable There are three different and significant threat here; firstly, if sea water raises and presses the running water, it can be mixed with the drinkable water. Secondly, pesticides filtered by soil get mix with running water. This is the normal and natural process for eliminating, if they flow speed is to be enough, pesticides go into the sea directly. But if they are flown slowly with HPP project, percentage of getting mix with drinkable water increases and this can be big threat for human health. The last and the third one is drained water which is used in daily life. Sewage treatment is very expensive and difficult process and people do not care about this topic as well. Especially water by the seaside is more likely to take dirt into the sea. Running water is the transportation. If the speed of the water is decreased the dirt can be mix with drinkable water again, which is really harmful for human health.
- The last one is humidity. Consequently, climate change on surrounding area. there can be many epidemic varieties which can be disappeared with this climate change. Furthermore, this varieties may be essential for medicine in the future.

Conclusion

There is natural system for sustainability in the world. there are 8 billion people population right now and 3 billion of them are under poverty limit. Adoption, implementation and dissemination of sustainable development goals have to be the first priority. No matter where you live and what you are, to create a peaceful world, you have to improve yourself and your environment at the very first step.

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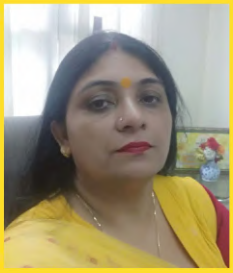
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