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Origin of sustainable development, current and future policies of India

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ABSTRACT

India has played a major role in the sustainable development of the world and has always been committed to the sustainable development goals. This paper deals with the true sense of the term “Sustainable development” for developing and developed countries and to different sectors of society. Sustainability must be goal and action oriented, beyond technical fixes, integrative, and in-cooperative of all the sectors of society. It also includes the origin of concern for the need of change in the current policies of the time during the Brundtland report, “Our common future” and the concerns, institutional changes, solutions highlighted by it. The need of sustainable development for the world and especially for India is also highlighted.

The major challenges faced by the Indian government, and the recent steps taken by the government along with the methods devised to approach sustainability and accelerate the process have also been noted. The involvement of various sectors of society including women, youth, indigenous communities, scientists and technologists etc. as well as the role of government, private, local sectors and non-governmental organizations. Here we also mention the tools that are required to achieve and mark the progress in sustainable development. The process requires the strengthening of major groups of society. This paper concludes with providing a solution to achieve sustainable development with all its characteristics. Achieving the goals of sustainable development is an enormous task, a different and innovative form of interactive cooperation between public, government and society to achieve the goal.

Keywords : Sustainable development, India, Our common future, Governmental policies for climate change.

1. Introduction

One depend on a single biosphere for sustaining our well being in multiple ways. Despite that each and every individual, community and country, strives only for its own survival and prosperity with little care for the impact its behaviour has on others. Some of us consume the resources at such a rate that would ultimately leave very little for our future generations. Others, consume so little that they live with hunger, squalor, disease and early death [1]

The earlier aspects of development come with the

threat of war, pollution and depletion of resources. So, the idea of sustainable development was introduced to meet the needs of the present developing countries without destroying the resource availability for future generation.

The basic premise of sustainable development includes equal distribution of resources among the developed and developing countries and between the poor and rich by equitable distribution of opportunity and resources.

Our common future was published in 1987 and it

was the stepping stone of discussion about the future of the earth (environmentally) and the development and governance of different countries. The report by Gro Harlem Brundtland enlightens and highlights the problems faced during that time and provides a pragmatic response. The goals were analyzed, their process of their implementation was argued by the critics, renewal for different fundamental laws in developing countries for ecological conversation without compromising economic growth and various institutions supporting sustainable development.

India has been acting as a nation that is fully committed to the goals of sustainable development and believes in the co-operative efforts of all the segments of society.

2. Concept of Sustainable Development

The term sustainable development holds a different meaning and value to different people. There is no exact fit for all definition that can be assigned. The vagueness around the term has lead to many political and academic debates around the credibility of the idea of sustainable development and sustainability. However, leaving the term open for its own interpretation has its own advantages. The absence of a precise definition for sustainable development opens an important political opportunity.

If sustainability is to be defined it can be called as a concept that integrates social dimension of sustainability along with the biophysical dimensions. This was the key concept of the Brundtland report of 1987, and if the developments in the past decades are considered it holds as much value now as it did then. It is now getting evident that a solution that holds only either of economic, social or environmental concern is deemed insufficient.

What is needed is a form of trans-disciplinary thinking that focuses on the connections among fields as much as on the contents of those fields; that involves the development of new concepts, methods and tools that are integrative and synthetic, not disciplinary and analytic; and that actively creates synergy, not just

summation[2]. The period since 1950's has seen major transformation in both developing countries and developed countries. In developed countries the rate of growth of industries increased about forty folds, leading to higher standards of living.

However, this growth has threatened the future of humankind. Rapid industrialization and very high economic growth comes at its own high cost and has led to resource depletion. In developing countries, the onset of industrialization increased global food production that satisfies the continuously multiplying population. There is an evident increase in life expectancy and decrease in infant mortality rate.

The agriculture system in industrialized west is very protected and subsidized. These parts of the world have also seen an increase in the production of food. Whereas in developing countries the farmers are neither protected nor are provided with any subsidy.

The lack of advancement in technology is also not helping the cause.

The story of the farmers in countries like India remains unheard and they are forced to grow crops in marginalized lands.

2.1 The World Commision on Environment and Development, 1987 (WCED)

The concept of sustainable development emerged in the early and mid 1980s [2,3] as an attempt to bridge the gap between environmental concerns about the increasingly evident ecological consequences of human activities and socio-political concerns about human development issues [4].

The idea of sustainable development is a very singular concept to develop and grow in a way so that future generation doesn't suffer from the resource depletion. Food is one of the vital needs of human kind as it is prerequisite for the sustainable growth of the country. The overall food production has increased in recent years but so has the population.

India suffer major crisis in meeting the energy requirements of its population.

2.2 Major Concerns According to WCED

According to WCED the major concerns in the environmental and developmental sustainable growth in various population of world can be broadly classified into 6 major concerns

The first concern was the fulfillment of energy requirement. The present energy sources are unsustainable and there is an urgent need to change the policies related to energy.

The present environment is also not capable to cope with the after effects of using fuel wood as the primary source of energy.

The next concern is the security of food. The developed countries have seen an enormous increase in the last 40 years. However, it comes with a price to pay and has led to degradation of soil, pollution of groundwater, and loss of employment due to technology and modernization of agricultural techniques.

The other problems include increasing population growth, loss of species and genetic resources, industrialization, human settlement.

2.3 Solution of the WCED Concern Given by the Panels

The advisory panel on energy stresses emphasized to tackle the fuel wood problem of developing world, as half the human population is using fuel wood as its primary energy source. This would require massive investment of finance in renewable energy source.

The panel for food security decided that the problem with developing countries can only be solved if the terms and conditions are in the favour of the small farmers. The farmers in developing countries are provided with required technology and subsidy and the developed country do not dump the surpluses on developing world and alter their agricultural system.

2.4 Institutional Changes According to WCED

WCED suggested 6 institutional changes that need to be undertaken by international and national institutions for the successful attainment of sustainable

development.

- 1 Economical and ecological stability of all ministry and agencies needs to be ensured by the government. All major international and regional agencies are also responsible for the assurance of their project promoting the idea of sustainable development.
- 2 UN to strengthen its environmental development program and all governmental and international agencies should reinforce power in their environmental department.
- 3 Investment in organizations whose role is to identify and evaluate then report the factors that might damage the ecosystem.
- 4 The involvement and roles of ordinary people and NGO's should be expanded in the prospect of sustainable development by increasing their rights.
- 5 International law declaration by UN and responsibility of government to fill the gaps between the major laws for environmental protection.
- 6 The World Bank, International banks and Regional banks should commit themselves to the goal of sustainable development as it requires huge capital investment in long run.

The work of the UN Commission on Environment and Development[1], focused on socio-political and distributional issues and also less inclined to argue for drastic changes in behavior and priorities. In keeping with its mandate to look at both environment and development issues, the Commission focused a good deal of attention on social and economic conditions in developing countries, and their connection to environmental degradation[4].

2.5 Need of Sustainable Development

In 1992, 27,423 people in 22 countries, from India to Russia and Canada to Uruguay were interviewed in order to examine public perceptions and opinions about environmental problems, these are few of the statistics obtained.

- a) Most of citizens believed environmental problems were the most important problem in their country.

- b) In 11 countries, people ranked environmental problems as 1 of the 3 top national problems.
- c) Most respondents in 12 countries considered environmental problems to be very serious.
- d) More than 75% in 12 nations had at least a fair amount of personal concern.
- e) Most people in 9 countries deemed the quality of their country's environment bad.
- f) Most respondents in all nations believed that environmental problems currently affected their own health and will affect the health of their children.
- g) The richest nations were less likely to perceive local environmental conditions as very serious.
- h) Developing countries ranked sewage as a very serious local problem.
- i) People in India tended to believe too many people was a very serious problem locally.
- j) Both the wealthy and poor nations were concerned about global environmental problems especially ozone depletion and loss of rain forests.
- k) Majority of countries believed overpopulation to be responsible for environmental problems in developing countries.
- l) 20 nations preferred protecting the environment over economic growth.
- m) Most respondents in 16 countries were willing to pay higher prices to protect the environment. Respondents tended to actively promote environmental protection in their consumer behavior, political action, and group membership.

3. Sustainable Development and India

India's national policy mirrors the international rules set for sustainable development naturally so, as India has played a major role in shaping the sustainable development of the world and has effectively committed to sustainable development goals.

To achieve these goals at a faster speed a draft has been released by the Indian government for three years

2017-2020. The goal of sustainable development is one of the highest agenda in the highest levels of Indian government and that is the reason multiple forums are organized for example the summit organized in 2017-South Asian speaker summit. These forums majorly focus on different ways to eradicate poverty, inequality, changes in climate and effective use of resources. Several programs have been launched by the Indian government like the Pradhan Mantri Jan Dhan Yojna (PMJDY) it is a crosscutting initiative project and it is the largest inclusion programme. By increasing the efforts put into PMJDY and Aadhaar system. The government paid a total amount of 1.62 trillion to 329 million different beneficiaries via direct benefit transfer. This has increased the efficiency of government programs.

Many different efforts have been made to strengthen the structure of federal government through federalism. State government also plays an important role in developing the agenda of the development of nation. The recommendations of Chief Ministers of States include the Swachh Bharat Abhiyan (clean India movement) and skill development in various sections of society has played a major role that helped in shaping policy decisions at the national-level. National Institution for Transforming India (NITI Aayog) is responsible for watching over the implementation of sustainable development goal which is chaired by the PMO India. The organization has already mapped the goals and target of all the ministries

Government of States are also involved in developing road maps for obtaining the Sustainable development goals and some of them have already published their plans. SDG's indicators for tracking the goals are developed and are placed in the public's reach by the Ministry of Statistics and the Programme are implemented for increasing the scope of constitution.

3.1 Need of Sustainable Development in India

All the indicators employed by the Indian government point to the fact that the current conditions need to be changed. Around 10% of countries wildlife is under the threat of extinction and natural ecosystems

are depleting at a high rate, more than half the water bodies are polluted beyond the scope of drinking or being used for irrigational purposes [4]. Chemical and electronic wastes are produced at higher rates than the capacity to recycle and dispose as to not harm the environment. Agricultural biodiversity in certain regions have declined by more than 90% in certain regions. Many cities in India are ranked with one of the worst cases of environmental pollution. Most of the land is left sub-optimal for any use as two-thirds of the land is degraded.

3.2 Steps Taken by Indian Government Ratifying the Paris Agreement

The Paris agreement was concluded after negotiations by parties to adopt the agreement as post-2020 actions for change. This protocol will universally succeed the Kyoto protocol and will also provide the framework of action for all the countries. The Paris agreement places importance on sustainable lifestyle and the actions to be taken for climatic change. It brings together all the nations for a common cause.

3.3 Introduction of Project for Clean Development Mechanism in India

1593 out of 7685 projects that are registered by the CDM EB are from India (4th January, 2016) making it second highest in India. These projects are in the field of renewable energy, energy production and utilization efficiency, urban solid waste, industrial processes, fuel switching and forestry sectors and are spread in the entire country.

3.4 State Action Plans on Climate Change

The State Action Plans on Climate Change (SAPCC) aim to create institutions and implement activities to address the change in climate. These plans basically focus on adaptation of techniques that as an additional benefit reduce the severity of problems such as energy water, tourism, agriculture forestry, habitat and transport. Till now, 2 states and 5 union territories have their SAPCCs submitted to the MoEF & CC.

3.5 National Adaptation Fund for Climate Change

NAFCC was founded with a budget of ₹350 crore for the year 2015-2016 and 2016-2017. The aim is to assist the cost of adaptation measures in the area most vulnerable to the changes in climate at both national and state level faced by communities, sectors and states that are not covered under the ongoing scheme. And hence, it reduces the risk of community and sector vulnerability. Until now, the NSCCC has approved six project reports having a total cost of ₹117.98 crore.

4. Major Challenges in India

The period around 1970's was the time when the first ecological problems started to surface. The main reason for the emergence of these problems was discovered to be growth and the quality of growth. Hence, growth was deplored. However sustaining growth is not an option for developing countries like India. Economic growth is necessary to provide employment and eradicate poverty to feed the 60 million new mouths every year. The poor and undernourished cannot put their resources, time and money into sustainable development.

4.1 Poverty

One of the major challenges is poverty. There are more poor people now on the planet than there were before. There is an rapid increase in the number of people living in slums.

However, poverty is not universal; some countries have experienced an increase in the per capita income while those which are developing have suffered only losses.

Most of the developing countries like India are dependent on seasonal agricultural products, whose rates are controlled by industrialized countries. Therefore, the profits are usually fluctuating and often declining. So, any attempt of the developing country to diversify their economy is nullified and not much is left for considering the protection of environment.

The developing countries, to increase their income mindlessly use the limited resources provided to them,

they use forest lands for cultivation, which leads to over-exploitation.

4.2 Population

Over exploitation combined with continuously multiplying population and unequal distribution of resources leads to increasing environmental stress. The scale of these problems is enormous. Each year another 6 million hectares of productive dry land turns into worthless desert, usually because of over-cropping and overgrazing. More than 11 million hectares of tropical forest are destroyed each year in a process that extinguishes species, many of them of possible benefit to humankind, and impoverishes the genetic diversity of the planet[5].

4.3 Over Development

Industrialization although comes with significant gains but it also creates problems that are unsolved till date for instance acidification of soil and water, green house effect, ozone depletion , pollution by nuclear and chemical wastes.

4.4 Militarily Security Growth

Large sum of resources are spent on armory for the reason of security from nuclear attacks. Many countries spend a lot on creating nuclear weapons to plan destruction of nuclear weapon plants.

4.5 Approach to Sustainability

There is neither a possibility nor coherent need to attain a single conceptual methodological way of attaining sustainable development.

The need of the hour is to make sustainable development an integrating agenda across governments, private sectors monitored by NGO's and support of civil society along with change in political constituency, a market for different products and their consumption pattern, and social acceptance of actions taken by different sectors to achieve this goal. This partnership must also constitute of scientific researchers and teachers. These fields are needed to work simultaneously

at various scales to ensure sustainable development.

Instead there is need for a new form of social learning. In a recent study of the management of global environmental risk in the UK, argue that social learning should be seen as a process of moral and cultural development as well as cognitive change, which focuses attention on institutional cultures and relationships[6]. This allows integration of sustainable development approaches into diverse socio-political and environmental circumstances.

5. Acceleration of Sustainable Development

- Creation of a global partnership in which goods that are made in developing countries find a market globally without barriers and a fair price.
- Access of poor to free education and health care, equal opportunities to women and indigenous people and employment to youth to eradicate poverty. Access to safe water and resources like land, obtained from restoration of degraded resources.
- Bringing out new concept of life style and resource consumption that are less dependent on the non-renewable resources of the earth. The traditional methods utilize finite resources which are now being transformed by different social researchers and policy makers.
- Development and implementation of policies and rules for population control in different countries as the economic growth is directly dependent on the country's population. Steps for reduction in infant mortality rate along with decrease in rate of increase in population.
- Providing all the individuals with basic health needs and environmental health services.
- Housing and settlements for rural urban migration by providing safe water, cheap housing, public transportation, improved living conditions and employment in rural areas.
- Development of infinite, renewable energy resources along with efficiency and constraints in energy production and utilization respectively.

- Enforcement of laws and regulations for the sustainable and efficient utilization of land. The government should take into consideration the needs and interests of local population. Methods for restoration of already degraded land should be devised.
- Restriction of use of forest for agricultural and commercial purpose. Conservation and planting of forests by business sector, NGO's and government departments
- More in-depth research about the principle of weather forecasting, re-vegetation, afforestation and checking for the presence and reversal of soil erosion and other measures should be taken to combat drought.
- Conservation of fragile ecosystem by creation of wild life sanctuaries and national parks. Provide incentives to people for the conservation and set rules and regulations and punishment on violation. New methods devised to prevent soil degradation and species extinction.
- Increase in the per-capita income, national GDP and food production with the help of rural farmers, public sector, business firms and governmental sectors along with financial institutions. Promote eco-friendly technology and agro farming.
- Development of research in biotechnology by setting up institutions that are well equipped and the human capacity for those institutes to put the work in.
- Awareness of the benefits of the ocean as a resource and the harm the human kind is causing to the oceanic resource. Programs for maintenance and prevention of further degradation of marine resources.
- Security of fresh water resource availability for future growth of population and devise methods for purification of water resources.
- Use of safer chemical pesticides, use of alternate chemicals that are non-toxic to reduce risks, development of a standard system to label and decompose chemically hazardous

substances. Introduction and development of cleaner production methods and recycling.

- Minimization of waste and evaluation of complete life cycle of product. Provision of providing incentives for recycling wastes. Energy production from waste, irrigation using water treatment plant treated water.
- Minimizing the production and utilization of radioactive waste and devise full proof methods for storage, disposal, transportation, processing and conditioning.

5.1 Strengthening of Major Groups

The different groups in the society play very different but very crucial role in the prospect of sustainable development

5.2 Women

The government should make policies to provide girls with equal opportunity to obtain education, health-care systems should be responsive to the requirement of females; increase in the social aspect, cultural aspect, and public life of women .The role of the concerned gender in ecosystem management at national and international levels to control the degradation of environment should be encouraged by the government. Awareness regarding the right to property, right to work on agricultural lands and the right against any type of violence should be created.

5.3 Children and Youth

More gender balanced youth should have the opportunity to obtain secondary education. Youth should be given the opportunity to participate in social events regarding the conservation of environment and the sustainable development. The participation of the future generation in international conference and affairs should also be encouraged.

5.4 Partnership with NGO's

The non-governmental organizations should be involved in the framing rules and regulations and must

be used as a unit to regulate and keep in check the information and utilization of resources. Laws should be created that enables the NGO's to take legal action that helps in the protection of the rights of the general public.

5.5 Workers and Traders

Industries, public sectors and governmental sectors should work on the agenda of providing full employment and better working conditions by active participation of the workers and the trade unions which helps them to develop skills that are useful in developing sustainable standards of living and promote the rights of the workers. The formation of joint unions for environmental conservation at national and international level is also encouraged.

5.6 Scientific and Technology

The government should realize that the scientists can help to foster new ideas for easy sustainable development by developing new technologies.

The research of scientist should be easily and openly available to other fellow researchers and scientist should be encouraged to write papers in a format that is understandable by the common population.

5.7 Farmers

The government should collaborate with various international and national research centers and the non-governmental organization to develop sound and environmental friendly farming techniques. One should work on developing new farming techniques and work with farmers to develop new techniques along with ensuring equal distribution of the resources and help farmers use the resources efficiently, less use of chemical pesticides, use of treated water. The use of low-input and low energy techniques of agriculture are also promoted.

6. Business and Strategic Development

Unlike the approach of early environmentalist, who believed in the notion that sustainable development

can only be approached in a no-profit, no-growth and anti-industry manner, it has been quite evident that the business sector has to play a huge role in the environmental sustainability. One must hope that business people will be actively involved in shaping and implementing such projects. In contrast to the anti-industry, anti-profit, and anti-growth orientation of much early environmentalism, it has become increasingly clear that business must play a central role in achieving the goals of sustainable development strategies. This emerging fact of business life is recognized in a number of recent publications, including the report of the Business Council for Sustainable Development (BCSD), entitled Changing Course [7].

The new demands of the life cycle of products and specific and changing needs of the customer has led to a new concept in the world of business called "corporate environmentalism"

6.1 Tools of Implementation Financing Sustainability

The UNCED realized that sustainable development is a pipe dream if poverty cannot be eradicated from the developing countries. This process will require presence of consistent source of financial aid and the initial phase of sustainable development can be headed by promise of substantial income in the future [8].

6.2 Technology Transfer

The concept of introducing new technologies and know-how to developing countries will bring the developed countries to them. The introduction of technologies and methodologies convert developing to developed country. The transfer of technology is however followed religiously by international code of conduct.

6.3 Requirement of Science

The fundamental principle of the environmental protection of the earth is linked to the economic developmental growth of the nation by means of science. There is an urgent need of development of tools by countries: education, economy, quality-of-life

indicators covering health, the state of environment and social welfare. Use of studies related to the effect of environmental degradation of the human health and what are the positive benefits that you receive by adapting to develop sustainably. Awareness about the new techniques and the mapping of the different pathways of sustainable development would be used in different regions to cater to their needs. The public should be involved in devising of the various techniques for sustainable development.

6.4 Creating Scope for Sustainable Development

The major problem with India is setting up priority; one should set up our challenges and priorities such that long term problems can be solved rather than focusing on immediate concerns. The government of India should consider the influence of project on various factors of development when the project is its approval form. The know-how of this and the techniques used can come from United Nations, NGO's, business, private sector, research institute and universities.

6.5 National and International Laws

The countries should come into an agreement on role of each country, according to their status work of sustainable development.

6.6 International Laws

The main aim of international laws for sustainable development should include formation of agreements that are negotiated universally to create standards for environmental protection that are effective .use of international court of justice to notify and talk about the issues that might create conflict. Measures to avoid and settle any disagreement in the field of sustainable development.

6.7 Information for Decision

The government should be held responsible for making sure that indigenous and traditional knowledge is applied, providing local communities and resource user to get skills and information that is needed to

manage the resources and the environment sustainable. Calls should be made to the government for information regarding the population, condition of air, land, soil degradation, health, condition of indigenous groups, women, people, victims of environmental degradation, youth, fresh water, urbanization, desertification, depletion in biodiversity, poverty and the upper atmosphere.

Current system of national accounting considers the cost of sustainable development as external costs. It is important to internalize these costs and development of indicators to analyze the true rate of sustainability achieved.

7. Conclusion

The idea of sustainable development is different in minds of different communities and different factors, approaches, and people play role in different ideas to pave the path of making India developed economically and sustainable ecologically. But, what is common is the agreement of the need of sustainable development and the need of society to change. The usual model of sustainable development consists of 3 major rings social, economic, and ecological. The facts are that human population depends on the resources provided by the environment. The society exists within the human population, and is again dependent on both the environment and the economy which exists within society Humanity is dependent on environment and for its well-being and hence it cannot be ignored. There are growing evidences that humans are the reason for climate change via both scientific study and various anecdotes. The only effective way to solve the current issue at hand is to adopt a development path that is sustainable by focusing on technologies that are more environmentally sustainable and by promoting efficient production and utilization of energy by use of renewable sources of energy, conservation of forests and water , actively participating reforestation.

Shepherding the country towards the goals of sustainable development is a huge task whose prerequisite is the involvement of each and every level as well as sectors of society. The model set by

industrialized country can be used as a pilot by India to show the opportunities the platform of sustainable development can create for the people that can help us to build a very efficient and lasting partnership philanthropically. India being a developing country (on the verge of climatic vulnerability) has a very important role in the formation of successful and equitable response related to climate change.

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