Development Growth in a Secure Environment

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Introduction

The World,in a race to achieve progress and be called developed, has ignored the impact of industrialization and environmental degradation. Our State is also a party to it. It is the responsibility of everyone towards the planet, irrespective of where we live. We all belong to the earth first, and not that the earth belongs to us. Every citizen on this planet has a right to clean and green environment i.e. a right to access unspoiled natural resources that enable our survival.

Environmental movements were a reverberation of the industrial revolution. Increased use of fossil fuels, expansion of urban areas, and over-consumption of resources has led to swingeing changes in the environment. The first environment movement was concerned with wildlife protection and nature conservation. It paid little attention to the negative effects of human settlement and commerce. The rise of environmental movement is soldered with the phenomenon of globalisation, which has metamorphosed the international system. The phenomenon of globalization has led governments and individuals to realize the international and trans-boundary dimensions of environmental issues.

Stockholm Declaration

The UN Conference on the Human Environment which was held in Stockholm, Sweden in1972, considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment. It stated the common conviction that: “Humans have the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and a solemn responsibility to protect and improve the environment for present and future generations”.

Constitutional Provisions

India is a signatory to the Stockholm declaration and many other international treaties related to environment protection. The Constitution of India did not have specific mention relating to the environmental protection, but it does have a provision in the Directive Principles of State Policy. These guidelines are being implemented as and when the country faces various environmental problems. The Hon’ble Supreme Court has rendered various decisions in

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landmark cases related to the environment which are recognized under the ambit of the right to life in Art.21 of the Constitution of India. To mention a few,In *MC Mehta v. Union of India,*[3] the Supreme Court held that life, public health, and ecology have priority over unemployment and loss of revenue.It established a new concept of managerial liability – 'absolute and non-delegable'- for disasters arising from the storage of or use of hazardous materials in their factories.[4]The Precautionary Principle, the Polluter pay principle and the Doctrine of Public Trust have been accepted as a part of the law of the country after the Supreme Court rendered the decision in *Vellore Citizens Welfare Forum v. Union of India*.[5]Enunciating the Doctrine of 'Public Trust' in *MC Mehta v. Kamal Nath*,[6] the Hon'ble Supreme Court held that the resources such as air, sea, water and the forests hold such a great importance for the people as a whole that by leasing ecologically fragile land to the motel management, the State govt. had committed a serious breach of public trust.

Such wide interpretations of Article 21 by the Supreme Court has, over the years, become the bedrock of environmental jurisprudence and have served the cause of protecting India's environment and thus livelihoods based on the natural environment.

Nature's Fury

Though efforts are being made, they are proving to be less. The latest example of the devastating floods in Kerala should be taken as an eye opener.Over a period of time, denudation of hills, rising of dams, diversion of drainage lines,occupation of floodplains etchas turned God's own country into God's own curse. Water bodies like lakes and waterfalls are no more mesmerizing, but are intimidating. The Bellandur and Varthur lakes in Karnataka and the Arvalem Falls in Goa are a few examples. Nature's fury is not only faced locally, but across the globe. The melting of Sea Ice in the Arctic region, repeated occurrence of forest wildfires is the result of Global Warming;*the La Oroya case*[7] is another example of Environmental degradation.As a result of this mess, we have to fight for our basic Human Right of a clean and green environment.

Solutions to the Environmental Problems

The Government of India is working towards environment protection by implementing various policies, laws etc. As conventional sources has its own disadvantages, vizill effects

[3]1987 SCR (I) 819. (India).
[4]*Ibid.*
[5] AIR 1996 SC 2715 (India)
[6]1997 1 SCC 388 (India).
[7]Community of La Oroya v. Peru, Petition 1473-06, Inter-Am. C.H.R., Report No. 76/09, OEA/Ser.L/V/II., doc. 51, corr. 1 (2009) (Peru).

on environment, non-sustainability and cost factor, India is stressing policies to develop anduse nonconventional affordable sources which are environment friendly, sustainable, secured and renewable to balance the economic growth and environment stability.

Use of Solar Energy

India is perhaps the only country to have exclusive ministry for renewable energy. Since then the Ministry has been facilitating the implementation of broad spectrum programs such as harnessing renewable power, use of renewable energy to rural areas for lighting, cooking and in urban areas for industrial and commercial applications. The Government of India has introduced the concept of solar parks, organized RE-Invest 2015- a global investors' meet, launched massive grid-connected rooftop solar programmes earmarked Rs.38,000crore for a Green Energy Corridor, increased eight-fold in clean environment cess from Rs.50 per tonne to Rs.400 per tonne, launched solar pump scheme with a target of installing 100,000 solar pumps and programme to train people for solar installations under the Surya Mitra scheme, levied no inter-state transmission charges for solar and wind power, made compulsory procurement of 100% power from waste to energy plants etc. The other significant initiatives are launching of improved cook-stoves initiatives; initiating coordinated research and development activities in solar PV and thermal; second generation bio-fuels, hydrogen energy and fuel cells etc . As a result today 1.2 million households are using solar energy to meet their lighting energy needs and almost similar numbers of the households meet their cooking energy needs from biogas plants. Favourable regulatory policy initiatives such as Electricity Act 2003,[8] renewable purchase obligation scheme under which each state has to set a state level target for renewable energy purchase by 'Obligated Entities'. The obligation can be met by either ways i) by directly purchasing renewable energy ii) by generating renewable energy. Launching of The Jawaharlal Nehru National Solar Mission (JNNSM) in November 2009 was marked as the foundation stone in India's endeavour to solar energy, popularly known as 'Solar India'. The renewable energy sector has always been given a 'Priority Sector' status by the Reserve Bank of India for the purpose of providing loans through banks. It is to be noted that Kochi International Airport is the first airport in the country to run completely on solar energy.

Green Building Projects

Energy conscious architecture has been promoted which includes the use of solar passive design concept, use of eco-friendly and less energy intensive building materials, integration

[8] The Electricity Act 2003, No 36, Acts of Parliament, 2003 (India).

of renewable energy and energy efficiency, water conservation, waste recycling etc. A GRIHA rating system has been developed in collaboration with The Energy and Resources Institute (TERI).

Check on Air Quality

The Government of India is focusing on bringing down soaring pollution levels by launching India's first National Air Quality Index in April 2015. The Indian Institute of Technology, Kanpur, will house the main server of the NAQI which will monitor air quality levels in 10 cities across the country. The NAQI will simplify air quality rendition and will help raise awareness about alarming levels of air quality across the country.

Use of Geo-Thermal Energy

Geothermal power is considered to be a sustainable, renewable source of energy because the heat extraction is small compared with the Earth's heat content. The greenhouse gas emissions of geothermal electric stations are on average 45 grams of carbon dioxide per kilowatt-hour of electricity, or less than 5 percent of that of conventional coal-fired plants.

Use of Hydroelectricity

The cost of hydroelectricity is relatively low, making it a competitive source of renewable electricity. The hydro station consumes no water, unlike coal or gas plants. The average cost of electricity from a hydro station larger than 10 megawatts is 3 to 5 U.S. cents per kilowatt-hour. With a dam and reservoir it is also a flexible source of electricity since the amount produced by the station can be changed up or down very quickly to adapt to changing energy demands. Once a hydroelectric complex is constructed, the project produces no direct waste, and in many cases, has a considerably lower output level of greenhouse gases than fossil fuel powered energy plants.

Use of Tidal Energy

Although not yet widely used, tidal energy has potential for future electricity generation. Tides are more predictable than the wind and the sun. Among sources of renewable energy, tidal energy has traditionally suffered from relatively high cost and limited availability of sites with sufficiently high tidal ranges or flow velocities, thus constricting its total availability. However, many recent technological developments and improvements, both in design and turbine technology, indicate that the total availability of tidal power may be much higher than previously assumed, and that economic and environmental costs may be brought down to competitive levels.

Use of Wind Energy

Wind power, as an alternative to burning fossil fuels, is plentiful, renewable, widely distributed, clean, produces no greenhouse gas emissions during operation, consumes no water, and uses little land. The net effects on the environment are far less problematic than those of non-renewable power sources.

Use of Wave Power

Wave power is the capture of energy of wind waves to do useful work – for example, electricity generation, water desalination, or pumping water. A machine that exploits wave power is a wave energy converter (WEC).Wave power is distinct from tidal power, which captures the energy of the current caused by the gravitational pull of the Sun and Moon. Waves and tides are also distinct from ocean currents which are caused by other forces including breaking waves, wind, the CoriolisEffect, cabbeling, and differences in temperature and salinity.Wave-power generation is not a widely employed commercial technology, although there have been attempts to use it since at least 1890. In 2000 the world's first commercial Wave Power Device, the Islay LIMPET was installed on the coast of Islay in Scotland and connected to the National Grid. In 2008, the first experimental multi-generator wave farm was opened in Portugal at the Aguçadoura Wave Park.

Use of Biofuels

The Ministry of Renewable Energy has been supporting renewable energy programmes for rural areas of the country by deploying renewable energy systems such as family type biogas plants. Biogas is a clean cooking gaseous fuel, produced when biodegradable organic wastes are subject to a process called anaerobic digestion. At the end of the process organic enriched bio-manure is produced simultaneously as by-product from this process. The anaerobic digestion process is a low carbon generating technology for efficient management of organic wastes and sanitation. Biogas, thus produced, can be used for cooking, heating, generating electricity etc. The MNRE is implementing the UnnatChulhaAbhiyan (UCA) Programme for the promotion of improved biomass cook stoves in the country. Household biogas plants in addition to replacing the need of LPG, helps in reducing the pressure on forests and other conventional fuels like coal and kerosene. Small and marginal farmers benefit from biogas plants providing digested slurry with high quantity and quality of Nitrogen, Phosphorus and Potassium (NPK) for use as organic bio-manure, which helps not only in sustaining soil health but also providing nutrients for obtaining higher crop yields. The biogas plants are thus potential source of helping farmers in adopting both conventional and organic farming

without affecting environment.In India, the first ever commercial plane that runs on bio-fuel has started its services.

Support Programmes Information and Public Awareness Programme

Public awareness programmes are conducted to inculcate the importance of renewable energy amongst masses. The information is spread through a variety of media like electronic, print, exhibition etc. It also brings to the fore benefits, technological developments and promotional activities taking place in the renewable energy arena from time to time.

Use of Electric Vehicles

Electric Vehicles release no tail pipe air pollutants at the place where they are operated. They also typically generate less noise pollution than an internal combustion engine vehicle, whether at rest or in motion. The energy that electric and hybrid cars consume is usually generated by means that have environmental impacts. Nevertheless, adaptation of EVs would have a significant net environmental benefit, except in a few countries that continue to rely on older coal fired power plants for the bulk of their electricity generation throughout the life of the car. There are special kinds of electric vehicles named SAFA TEMPO in Nepal that help lower the pollution created by vehicles. These vehicles are powered by electricity - usually charged batteries - rather than oil or gas and currently heavily promoted by the government to facilitate environmental and vehicle management issues. Electric motors don't require oxygen, unlike internal combustion engines; this is useful for submarines and for space rovers. A study by Cambridge Econometrics shows the potential air pollution benefits of EVs. According to one of the scenarios in the study, Europe would be on track to reduce CO2 emissions from cars by 88% by 2050. The associated technology improvements would cut toxic nitrogen oxides (NOx) from cars from around 1.3 million tonnes per year to around 70,000 tonnes per year.

Implementation of the HLWG Report

The Ministry of Environment and Forests constituted a High Level Working Group (HLWG) to suggest an all-round and holistic approach for sustainable and equitable development while keeping in focus the preservation and conservation of ecological systems in Western Ghats. The HLWG recognized that the proposed non-permissible activities may not be enough to fully manage the environmental fallout of development. However, it is also clear that management through prohibition and fiat is often detrimental to the interests of the very people and environment policy is aiming to protect. Therefore, we need a balanced and nuanced approach to say no to the most damaging and high impact activities and at the same

time working of systems to incentivize environmentally sound development that benefits local livelihoods and economies. It is important to note that the Western Ghats even in the areas, categorized as natural landscapes, is inhabited. It is not wilderness area, but the habitat of its people, who share the landscape with biological diversity. It is not possible to plan for Western Ghats, only as a fenced-in zone, with no human influence. This is the difference between the natural landscapes of a highly populated country like India, against the wilderness zones of many other countries.

Within the area defined as ESA, there are some 4156 villages. The villages included have 20 per cent of more of ecologically sensitive area within their boundary. The people living in these settlements have undoubtedly built a deep relationship and coexistence with the natural environment. However, these practices need to be supported and incentivized. People living within the rich biodiversity have nurtured nature. They must benefit from conservation. This should be the aim of future programmes.

Role of United Nations

The United Nations has also played a significant role to implement various policies and plans of sustainable development. In 2010 the United Nations General Assembly endorsed the human right to safe and clean drinking water and sanitation.[9] The resolution 64/292 speaks to the importance of equitable, safe and clean drinking water and sanitation as an integral component of the realization of all human rights and links the right to water to achievement of the Millennium Development Goals and the Plan of Implementation of the World Summit on Sustainable Development. The important first operative paragraph of the resolution "declares the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights." In April 2018, the experts convened by UN DESA and the Boao Forum Secretariat came together to discuss the advancements to the 2030 agenda and the sustainable development goals.

Conclusion

The term sustainable human development may be defined as the capacity of all human communities, including the most deprived, to meet their fundamental needs for accommodation, drinking water, food, satisfactory conditions of health and hygiene, participation in decision-making, social cohesion, a social fabric, cultural and spiritual expression, etc. This entails the adaptation of technologies and lifestyles to the social,

[9] UNGA Res. A/64/292, A/64/L.63/Rev.1, GA (Jul. 26, 2010).

economic and environmental potential of each region, internalising costs and establishing systems that are compatible with the biosphere.

Such an approach makes sustainable human development a multifaceted process. It seeks a balance between the ecological, economic and social spheres, while also taking account of political (participation and democratisation), ethical (responsibility, solidarity, social justice and sufficiency) and cultural (local diversity and artistic expression) considerations.

Sustainable human development also calls for a fundamental re-evaluation of our basic principles and lifestyles, and of the way our societies function, particularly regarding production and consumption. This implies significant changes in attitudes and behaviour, in which an awareness of living in a common space, individual responsibility for actions, and learning to identify long-term perspectives and partnership between players in different regions of the world, including governments, international institutions, business and civil society, take precedence over material factors.