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Research Paper

The Deep Environmental Problems of India –Heading Towards Disaster

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ABSTRACT- *Piles of junk across the streets.Trees are all gone because of human greed.Rivers of life are now rivers of death.Will my children play on the fields of green.Seeing all these can we sit still? This paper reviews the major environmental challenges of India according to the author.First and foremost isIndia'sground water crisis. Water, water everywhere water but not a single drop to drink.According to Central Ground Water Board report the situation is more grim in Central and South India where storage is difficult due to hard rock terrain and inefficient rainfall. Secondly food insecurity. Wheat is the main cereal crop in India. Wheat grows well in cool temperatures. But rising global temperatures will stress wheat crops and lower their theiryields,This explains why, according to a December 2014 study that was published in Nature Climate Change , every 1 degree Celsius increase in global temperatures means a 6% fall in wheat production.Thirdly waste disposal is a serious problem in India.Overconsumptions of resources and tons of plastics are creating a major problem in India. Plastic, fast food, packaging and cheap electronic wastes are posing serious threats.Fourthly destruction of coral reefs. Rampant destruction of the reefs is likely to cause hunger, poverty and political instability in India as the livelihoods of millions of Indians is fishing and majority of Indians eat fish. Fifth is the threat from geneticallymodifiedcrops.Geneticallymodifiedcropscancauseseriousenvironmentalproblems. India is consuming bannedGM food owing to lack of regulations.Sixth is Outsourcingwhichis a major problem.Many foreign based factories are based in India.7.Encroachments on wetlands is a serious concern in India.8.Global warming-India is experiencing extreme weather events like the floods of Kerala and drought in Maharastra as a result of the global climatic changes.El Nino has been responsible for increase in cholera and diarrheal diseases.Pathogens have developed stress tolerance best example of which is the increase in the incidence of dengue fever. Last but not the least disruption in the natural process like pollination is crucial for the survival of the ecosystem.Decrease in migratory birds is a global indicator of all is not well. We are paying a heavy price for our rituals.By throwing idols in the river and untreated effluents we have converted rivers of life into rivers of death.*

KEYWORDS *: Water crisis, Food insecurity, Waste disposal, GM Crops, Coral reefs, Outsourcing, Global warming.*

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I. INTRODUCTION:

The major environmental challenges of India ranges from the water we drink, the food we eat, the waste we dispose, the crops we produce, the jobs we do, and make things for the rich nations, the encroached wetlands, the floods and droughts, dengue cholera, diarrhoea, and unknown fevers around, total disruption in the natural process like pollination, movements of the migratory birds- all speak volumes of the doomsday we are approaching. Even our rituals have converted the rivers of life into the rivers of death. So the following are the major environmental challenges India is facing today are…

INDIA'S GROUND WATER CRISIS: Population explosion, urbanization is to blame for the alarming decrease in ground water level in India. According to the Central Ground Water Board (CGWB), under the ministry of Water resources, urban areas are facing a threat of acute water shortage, especially in cities like Chandigarh, Mumbai, Bangaluru, Delhietc.

India is facing its worst water crisis in history. A study done by NITI AAYOG says that demand for potable water will outstrip supply by 2030 if steps are not taken. In the Central and Southern states of India the situation is more grim according to the CGWB report where ground water retention is little due to the heart rock terrain. There is maximumextraction of ground water because of agriculture. Beside ground water table decline is associated with nitrate pollution which is increasing the uranium level in the ground water which is fast becoming a challenge for India. There is a strong need therefore to monitor and regulate the ground water level throughout the country.

Despite electricity subsidies to the farmers, they are unable to bear the full costs of pumping due to declining ground water levels. Free electricity offers and incentive to the farmers for unchecked lifting of ground water but there are several other factors which influence farmers behavior towards extraction of ground water. The depletion of ourwaterresourcesismoreseriousthanthecurrentoildepletion.Therearesubstitutes for oil but nothing can replace our drinking water. Ground water depletion in India is worst in World, shows data from NASA's Gravity Recovery and ClimateExperiment (GRACE) satellites.

FOOD INSECURITY : Is the state of being without reliable excess to sufficient quantity of affordable nutritious food. More than 800 million people live everyday with hunger or food insecurity as their constant companion. Rice and wheat are the major cereals of the world. Therefore any climatic change which influences these two crops will have a profound effectonboth food and livelihood security because these two crops are not only the primary sources of food but also of employment. By 2025 India's production must increase by 25% to feed if increased population of 1.35 billion. Prediction are that by 2025 Punjab may not be able to produce even current levels of wheat and rice. The recent wave of uprisings across the Arab world and beyond claim that food insecurity is the reason behind political violence. There is food shortage and hi food prices have several causes including severe drought. Global warming and climate change, erratic rainfall patterns is frequently cited as threat to World peace. The implications of climate change as a result of deforestation, rising temperature as a negative effect on wheat and rice production in India.

Climate change is among the leading causes of rising global hunger according to a new report release by the United Nation Food and Aggricultural Organization (FAO). Paris aggrement and the 2030 agenda for Sustainable Development have already acknowledge the link between hunger and climate change as well as the need for urgent action to protect the most vulnerable community. Intergovernmental Panel on Climate change (IPCC) report of 2007 says that every winter a rise in temperature by 0.5 degree Centigrade, is likely to reduce wheat production by 0.45 tones per hector in India. Acute water shortage and rising temperature will effect rice productivity seveorly. Wheat and rice in highly sensitive to climate change.

WASTE DISPOSAL:

Indians consumes 12 million tones of plastic, 11 million tones of paper and 2 million tones of glass each year. 185 million trees (the size of Sundarban National Forest) is cutdown every year. With rapid urbanization the country is facing massive waste management challenge. Over 377 million urban people living 7935 town and cities and generate 62 million tones of municipal solid waste per annum. The key to waste management is to ensure segregation of waste at source and to ensure that the waste goes through different treems of recycline and resource recovery.

Electronic Waste is one of thefastest growing waste in the World. Computers account for 50 million tones of waste annually. Electronics contain over 1000 different materials many of them are toxic. In US used electronics end up land fills or are exported to developing countries. Developing countries are the World dumping grounds for electronics waste. Heavy metals leach into the ground water. Incineration makes hazardous materials airborne. Acid baths are dangerous and cause water and soil contamination. Most e- waste goes to China, Africa and India. Soil air and water all contents high levels of metal like led zinc nikel copper markari cadmium polychlorinated by phenyls, polycyclic aromatic hydrocarbons, anddioxin.

Plastic Waste- Globally the volume of plastic wave has grown over the years and also in India.According to Bhattacharya et.al (2018) only 60% of this waste get recycle. The major challenging segregation at source. We don't know what to do with the 15342 tones of plastic wastegenerated every day. Delhi, Kolkata, Ahemadabad are the top 3 plastic waste generating cities in India. Plastics are dumped in the land fills where it leaches into the soil and makes its way to the food chain. Plastic burning releases green house gas emission into the atmosphere. Plastic are thrown into the sea which kills marine species and habitat. The seas near Mumbai, Kerala and Andaman and Nicober Island are among worst polluted in the World. Governemt should levy high fine on plastic usage. Researches are finding success with bio plastic made from organic bio mass.

THREAT FROM GENETICALLY MODIFIED CROPS:- Throughout the history of plant breeding new technologies like change in chromosome number,addition and deletion of chromosomes,treatments to induce mutations, chromosomes rearrangements ,tissue culture have improved the yield of crops.Scientific advances in cell and molecular biology have resulted in the genetically modified crops or GM crops.There are many ecological impact of GM crops.GM crops may lead to the development of resistant varieties of pathogens.GM crops may lead to contamination and interbreeding withthe wild type or sexually compatible relatives. GM crops also leads to competition with naturalorganisms.They may become invasive and spread into new habitats and cause ecological and economic damage. According to Anthony et.a (2003) there is a risk of ecosystem damage anddestruction.Itis impossible to follow up GM crops introduced plants and often difficult to distinguish with conventionally bred species.They may invade natural habitat and destroy the bio diversity of the region.Gene flow indices gives an indication of the likelihood of a given species to hybridise with wild relatives and the impact it may have. According to Dhan et.al (2011) there are serious concerns that the release of GM crops will result in such plants becoming agricultural weeds.

DESTRUCTION OF CORAL REEFS-Coral reefs are called the rain forests of the sea. Coral reefs are the most biodiverse and productive ecosystem on earth. They are home to more than a quarter of all marine species: crustaceans, reptiles, seaweeds, bacteria, fungi and over 4000 species of fish make their home in coral reefs. Coral reefs provide food and resources for more than 500 million people. But the coral reefs are in danger. They are threatened by over fishing, pollution and careless tourism, warm seas and increasing level of carbon di oxide in the water. According to Reefs At Risk Revisited ,a report by the World Resources Institute,75% of the world's coral reefs are at risks from local and global stresses.90% of coral reefs will be in danger by 2030, and nearly all of them by 2050.Atmospheric carbon di oxide concentration is to exceed 500 partsper million and global temperatures to rise at least 2 degree centigrade by 2050 to2100. Global warming and ocean acidification is dangerously damaging the coral reefs. Ocean acidification is causing severe bleaching of the coral reefs. Severe bleaching was reported from Western India. Death of the coral reefs indicates the collapse of the oceanecosystem.

ENCROACHMENT ON WETLANDS -4.7% of the total geographical areas of India is wetland. Wetlands are amongst the most productive ecosystems on the earth. They are responsible for carbon sequestration, flood control, ground waterrecharges ,toxic retention, andbio diversity maintenance. As per the Ramsar Convention definition most of the natural water bodies such as lakes, rivers, lagoons, mangroves, peat lands and coral reefs and man made wet lands such as ponds, irrigated field in India constitutes the wetlands of India. Only 26 wetlands have been designated as Ramsarsites(Ramsar 2013).However according to the Central Pollution Control Board 2008 there are many wetlands which are threatened. Wetlands are important breeding grounds of wild life and provide refuge to migratory birds. In India 6 million people are dependent on inland fisheries for their livelihood.61% of fish production is from inland water bodies.

Rapid urbanization, drainage to agricultural use, pollution from industrial effluent and agricultural run off and climate change. Irrigation in large scale have have altered the flow of water into many water bodies. According to Central Water Commission ,2010 about 276 major and 1000 medium irrigation projects were completed in 2007 only. Indian wetlands are having a direct effect of global climate change. Intense rainfall has increased but the total amount of precipitation has decreased due to green house gases (Bates et.,al 2008).High altitude wetlands and coastal wetlands are the most sensitive wetlands affected by climate change. According to Blankespoor India is going to loose about 84% of coastal wetlands and 13% of saline wet lands with climate change induced rise in sea water level.

OUTSOURCING-About4 out of 5 of the World"s largest companies outsource their work to India.Wealtheir countries outsource their carbon emissions to developing nations. A new study finds that the products imported by the developed countries of Western Europe,Japan and the United States cause great emmissions in other countries especially China and India.The developed countries import steel, cement,,from factories in China and India rather than producing it domestically. About 20% of Indiasemmissions in 2015 came from making stuffs from other countries.India has to stop this outsourcing business verysoon.

GLOBAL WARMING-As a result of rise in temperature extreme weather events like drought and floods are taking place.Some places are getting intense rain whereas others are not getting any rain.Public health are at risk.Incidence of cholera and dengue ,unknown fever have increased.Bacteria have developed newer strains of resistant varieties.Despite the fact that the disease burden from vector borne and diarrhoeal diseases is very high in urban slums and tribal areas of India, this area was overlooked when the original National Action Plan for Climate Change(NAPCC) was formulated. The Ministry of Health is currently formulating a National Mission for Health under NAPCC looking at the close relationship between climate change and infectitiousdiseases.

II. CONCLUSION

It is clear from the above discussions that every drop of water counts, rampant use of ground water has to be stopped. There will be no place left for India to dump the increasing volumes of municipal solid waste. We have to think twice before we release the GMcrops. Stringent laws against wetland encroachments and coral reef destruction should be made. Governments should levy Carbon Tax on countries outsourcing pollution and lastly all measure shave to be taken to stop global warming immediately.

REFERENCES

[1]. AnthonyJ.Conner,TravisR.Glare,andJan.P.Nap (2003). The release of geneticallymodified crops into the environment,The Plant Journal,33 :19-46.
[2]. Bates B.C.,KundzeZ.W.,WuS.,PalutikJ.P.(Eds.)(2008).Climate Change and Water.Technical Paper VI,Intergovernmental Panel on Climate Change, Geneva. Retrieved from Google Scholar.
[3]. Bhattacharya,R.N.,Chandrashekhar,K.,Deepthi,M.V.,Roy,P.,Khan,A.,Pandey,S.(2018).Challenge s and Opportunities- Plastic waste management in India .Retrieved from https://www.researchgate.net
[4]. DhanP.,Verma s., Bhatia R.,Tiwary B.N.(2011).Risk and Precautions of Genetically Modified Organisms, International Scholarly Research Notices,13:13.
[5]. https://www.downtoearth.org.in6.https://www.fao.org/state-of-food-security-nutrition/en
[6]. http://www.downtoearth.org.in/blog/waste/india-s-challenges-in-waste-management-56 8.https://news.stanford.edu.march
[7]. Sinha,S.K.,Swaminathan,M.S.(1991).Deforestation, Climate Change and Sustainable Nutrition Security: A Case Study of India.In Myers N.(eds)Tropical Forests and Climate.Springer, NewYork.