

INNOVATION LAB

Environment degradation is the deterioration of the environment through depletion of the resources such as air, water and land, the destruction of ecosystems and the extinction of species. It is defined as any disturbance to the environment perceived to be undesirable. The degradation of the environment is a major topic which has been discussed for a long period of time, however even though many resolutions have been adapted none of them have accomplished the goals that have been set by themselves.

Governments around the world have tried to find a solution for this complicated topic. For example there was a time Bangalore was considered to be the closest you could get to heaven without dying, however now it seems as if the garden city has lost its fame for being the cleanest city in India. However there are many ways by which we can conserve our environment like trying to raise awareness among the people and much more. Climate change affects the Earth's water supply in a large number of ways. It is predicted that the mean global temperature will rise in the coming years due to a number of forces affecting the climate, the amount of atmospheric carbon dioxide will rise, and both of these will influence water resources; evaporation depends strongly on temperature and moisture availability, which can ultimately affect the amount of water available to replenish groundwater supplies.

Environmental impact or degradation is caused by the combination of an already very large and increasing human population whose demand for resources is never ending. Although scientists are trying their best to find alternatives to these resources due to the reason that they are not only harming the environment they are also affecting human health. Also another factor that has a quite strong effect on the environment is the continually expanding economic growth or per capita affluence and polluting technology. Environment degradation is one of the ten threats officially cautioned by the United Nations

The population on Earth is expanding rapidly which goes hand in hand in the degradation of the environment at large measures. The human's appetites for needs are disarranging the environments natural equilibrium. Our production industries are venting smoke and discharging chemicals that are polluting our water. The smoke that is emitted into the atmosphere holds unappealing gases such as carbon monoxide and sulfur dioxide. The high levels of pollution in the atmosphere form layers that are eventually absorbed into the atmosphere. Organic compounds such as chlorofluorocarbons (CFC's) have generated an unwanted opening in the ozone layer, which emits higher levels of ultraviolet radiation putting the globe at large threat. Changes in climate, especially the changes in precipitation and evapotranspiration predicted by climate models, will directly affect soil moisture, surface runoff, and groundwater recharge.

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Generally, an economy with a higher GDP per capita becomes more conscious of the environment. Bruce Yandle, Maya Vijayaraghavan and Madhusudan Bhattarai provide an informational [review](#) on the Environmental Kuznets Curve (EKC). An initial rise in GDP per capita results in environmental problems through higher air and water pollution. However, after a certain level of GDP per capita, environmental quality improves. Citizens start to worry about the environment after they are able to provide for their families. In economic terms, this results in an inverted U curve when pollution is plotted against GDP. Finance Minister Arun Jaitley has provided a budget that is ambivalent about the environment. He cut funding for the Ministry of Environment, Forests and Climate Change from “22.6 billion Indian rupees (\$360 million) to 16.8 billion rupees (\$268 million).” The Ministry of New and Renewable Energy also saw its budget pared by two-thirds. At the same time, Jaitley promised an increase in coal tax and has allocated the proceeds to “the National Clean Energy Fund to boost the development of clean fuels and renewables.”

Generally, an economy with a higher GDP per capita becomes more conscious of the environment. Bruce Yandle, Maya Vijayaraghavan and Madhusudan Bhattarai provide an informational review on the Environmental Kuznets Curve (EKC). An initial rise in GDP per capita results in environmental problems through higher air and water pollution. However, after a certain level of GDP per capita, environmental quality improves. The EKC argument is more complicated as GDP per capita could be substituted for property rights. When there is rule of law and property rights are more secure, people do not allow pollution to dilute the value of their property. This might lead to better environmental protection. The authors making the EKC argument conclude that better governance, rule of law and well-functioning markets could curb environmental degradation.

As with all economic literature, the issue of time is critical. Citizens are affected by pollution as it happens. Short, medium and long-term policies take time to come into effect. Jaitley could increase spending on research and development of renewable energy or on improving India’s energy efficiency. Yet by the time his policies bear fruit, millions of Indians will have diseases or be dead. The key challenge for Modi and Jaitley is to ensure that India’s economic growth is not achieved at the cost of the environment and the health of Indian citizens.

Bangalore generates 2500 tonnes of solid waste every day, and this waste is often disposed off in a very unscientific manner and this worsens the situation in the polluted garden city. The Karnataka state pollution control board has found that several industries and hospitals do not have a proper solid waste management system. The solution for this problem is that the government needs to take steps to ban all plastic bags that are less than 40 micron. The government has already placed many bans on plastic bags but they have not found a permanent solution. The best solution is to use cloth bags or jute bags instead of plastic bags. The government must provide awareness programs regarding proper disposal of plastic bags.

Statistics show that the ambient air quality in Bangalore is deteriorating rapidly. The amount of nitrogen dioxide in the air is 34 micrograms per meter cube of air, which is quite high. The amount of suspended particulate matter is 200 microns per meter cube

of air is quite high for world standards. There are also 44 microns of sulphur dioxide per meter cube of air another high statistic. Every year the numbers seem to go higher and higher and the average person inhales more and more impurities. Using cleaner grades of conventional fuels such as petrol and diesel, burning them efficiently and neutralizing the pollutants before they are released, are all parts of the Bharat 2 emission norms already followed by automobile manufacturers. The solutions are to limit driving by carpooling, using public transportation, cycling and walking. Keeping our automobiles well tuned and maintained.

With a population of 5,686,000, Bangalore is India's sixth largest city. As per the estimates of the Bangalore water supply and Sewerage board (BWSSB), the total demand of water is 840 million litres per day (MLD). Bangalore is prominent among the world's fastest growing cities. Due to unorganized and unscientific growth over the few years, drinking water has become a problem that has crossed dangerous limits. Everyday around 810 MLD Kaveri water is channeled to Bangalore. This journey of water lasts 120 Km, this costs nearly 500 crore rupees per year for electricity alone. Around 120 MLD from T.G Halli and 50 MLD from underground water resource is used up by Bangalore everyday. However the water from T.G Halli has considerably reduced and the chances of it drying up are foreseen. The solution is that the government should make serious efforts to promote rainwater harvesting not just among urban residents but also among farmers who should be encouraged to dig farm ponds to save water in their agricultural fields. The government should also take steps to restore lakes, tanks and canals through scientific measures. It is essential to rationalize the use of groundwater. Factors like community wastes, industrial effluents and chemical fertilizers and pesticides have polluted our surface water and affected the quality of the groundwater. It is essential to restore the water quality of our rivers and other water bodies as lakes is an important challenge. It is so finding suitable strategies for conservation of water, provision of safe drinking water and keeping water bodies clean which are difficult challenges is essential.

Bangalore could soon become a concrete city. Bangalore has lost around 50,000 trees in recent years to speed up development and nearly 300 more will soon go for the Metro rail project. Environmentalists and citizens fear that rampant felling could cost the city its "green heritage" tag. Their fear is supported by heaps of logs of axed trees and tree stumps dotting across Bangalore. As many as 279 trees will soon be axed down for "Namma metro" the upcoming metro rail in central Bangalore, especially near the legislative assembly building Vidhana Soudha and central college roads. In the past 2 to 3 years alone, Bangalore has lost around 50,000 trees, felled for developmental activities, states in a report of the Environment support group (ESG). If trees continue to be chopped rapidly, the city average temperature will rise by 2/3 degrees Celsius in the coming years.

Many of the lakes in the city have "disappeared" along with any evidence due to the rapid and unbridled urbanization here, a study said. The study published by the city-based institute for social and economic change (ISEC), paints a grim scenario with further worsening of the water bodies if the State government fails to get its act together. The report also points out that there has been an increase in flooding. Reclamation of lakes for various developmental activities has resulted in the loss of inter-connectivity in Bangalore district, leading to higher instances of floods

even during normal rainfall and not to mention the bad drainage that is not maintained. Many lakes were encroached for illegal buildings (54%). Field surveys (during July-August 2007) show that nearly 66% of lakes are sewage fed, 14% surrounded by slums and 72% showed loss of catchment area. Lake catchments were used as dumping yards for either municipal solid waste or building debris.

Bangalore's population has increased tremendously since 2011. The population in Bangalore in 2011 was 8,425,970 while in 2016 the current population has now been estimated to be 11,556,907. The growth rate in Bangalore is now 46.68% and it houses 15.69% of the state's population. This has been mainly caused due to the large illiterate population of Bangalore. Most of the poor and illiterate people in Bangalore either do not know or do not care about the environmental degradation in Bangalore. Due to which a large amount of the population engages in harmful and dangerous disposal of waste which can alter the environment around us in a bad way. Most of the poor people either do not believe in or understand what the government has been trying to do for us and Bangalore. While the literacy rate of Bangalore (that is 89%) has increased a large amount of the population is still unaware of the situation around them. The government must try to hold daily or weekly awareness programs to educate the people about this impending issue and must also try to do their share of work to spread the widely known method of family planning in Bangalore.

It is generally accepted that environmental degradation, rapid population growth, and stagnant productivity are the causal factors for acute poverty in many countries of Asia (Senuguptha 2005; Saxena 2006; Sainath 2007). Most of India's poor live in rural areas and are engaged in agriculture (Senuguptha 2005). The efficacy of government intervention through various schemes implemented under Five Year Plans to eradicate poverty and provide employment is a matter of debate (Senuguptha 2005). Nevertheless, the poverty ratios in India have been reduced over time. Traditionally the problem of poverty and unemployment was rampant in rural India but conditions in urban India were better; hence, due to rural influx into cities during recent decades, there has been a continuous rise in urban population and further it is accumulating in class I cities. The rural-urban migration is mainly a result of rural failure and urban success: increased urban growth has resulted in uncontrolled migration into cities, which has created an unhealthy growth of cities. Further, the poor quality of urbanization has led to land degradation and air and water pollution in urban areas.

The Bangalore government is trying to expand Bangalore to accommodate the flow of tourists into Bangalore (which is also decreasing due to degradation of the environment). In recent years, the creation of SEZ and population growth have resulted in diversion of huge tracts of agricultural land for non-agricultural purposes like construction of new industrial estates, peripheral roads, dams, railway lines, and residential use. Diversion of considerable agricultural land for SEZ (Special economic zones) in the name of promoting exports through increased industrial development threatens biodiversity, and causes eco-degradation in the countryside. At present out of the total 329 MHA of land, only 266 MHA possess any potential for production. Of this, 143 MHA is agricultural land nearly and 85 suffer from varying degrees of soil degradation. Of the remaining 123 MHA, 40 are completely unproductive. The remaining 83 MHA is classified as forest land, of which over half is denuded to various degrees. Nearly 406 million head of livestock have to be

supported on 13 MHA, or less than 4 per cent of the land classified as pasture land, most of which is overgrazed. Therefore, of 226 MHA, about 175 MHA or 66 per cent is degraded to varying degrees. Water and wind erosion causes further degradation of almost 150 MHA. Nearly 27 per cent Indians live in urban areas. Urbanization and industrialization has given birth to a great number of environmental problems that need urgent attention. Over 30 per cent of urban Indians live in slums. Out of India's 3,245 towns and cities, only 21 have partial or full sewerage and treatment facilities. Hence, coping with rapid urbanization is a major challenge.

Although many people are trying their best to help the environment in any way they can, not all of them are unified under the same thought. Some are doing it for the credit or the money while others are doing it for a noble cause. However there are a number of ways by which we can save the environment like finding different ways of dumping the waste without it affecting any living beings. We can also begin to use different materials that don't harm the environment. Recently the bangalore government has banned the use of any plastic bags and has ordered forThe urbanization effect on natural resource degradation and resulting environmental pollution in the western and northern regions are much higher than in other regions. Even the north-eastern region has experienced environmental degradation due to urbanization, though at a relatively lower level. The degree of environmental degradation due to urbanization is relatively moderate in the central and eastern regions, and comparatively low in the north-eastern and north regions. The huge shrinkage of agricultural land coupled with increase in population in the central and eastern regions has had a greater impact on their natural environment, as manifested in the reduction of bio-diversity in these regions. Rapid population growth is directly responsible for higher environmental degradation in the central, eastern, and northern regions as compared to the other regions. paper bags to be used instead. We can also start encouraging the people to contribute not only money but their time and effort to change the environment. There are a number of children out there that have their own marvelous or wonderful ways to save the environment ,although many of their ideas are not practical there is a chance of a viable idea to be found.

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Websites used are :-

1. my Bangalore
2. wikipedia
- 3.

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