Environmental Risk Assessment

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**Introduction**

Risk refers to the dire consequences of an event that is a consequent outcome of an action. It incorporates the assessment of threats that are a direct result of exposure. Environmental risks deal with the likelihood of an event causing an unanticipated impact on the environment. Environmental risk assessment thereby deals with quantitative aspects of evaluation of such risks. The Environmental risk assessment helps better understand the severity of the effect on the environment. The environmental risks include environmental health issues such as clean drinking water, sanitation, air quality, management of waste, noise, toxic hazards, food safety, and natural calamities. The environment health issues inquire and establish the link between the health and environment. The World Health Organisation reports deaths of three million children per annum due to the environmental factors (WHO, 2005). Air pollution is one such menace, air pollution caused by excessive existence of toxic gases and particles in the air. Air pollution is one of the accelerating global health issues, WHO states that one in nine deaths around the world is due to Air pollution (WHO, Air quality and health, 2012). Air pollution is a leading cause of many chronic diseases of lungs and respiratory. This shows the depths the environmental pollution and degradation has to in the world today. The environmental risks vary from one country to another, However, the developing countries face an increased risk the most. Countries like India are exposed to environmental risks due to an accelerated passion for growth economic development and the persistence of poverty. The gap between the two highlights the dire consequences involved with such high-risk levels. Air pollution in India is a serious concern as it continues to affect populations gravely. Air pollution is caused by many social, political and institutional factors. The United Nations Sustainable Development Goals are potentially set to advance towards a sustainable level of health and equity by 2030.

**Discussion**

India is an emerging economy and with high economic passion in the country, there is a higher level of environmental risk that dominates it. This could consequently lead to higher environmental hazards. Environmental hazards raise the dangers of human life to operate effectively in everyday life. The air pollution leads to poisonous and toxic gases which are released in the air due to the burning of fuel and biomass, automobile fume emission and fuel adulteration. The fumes which are released into the biosphere are particulate, dust, sulphur oxide. Nitrogen, ammonia, chlorine, lead and carbon mono oxide.

**Factors**

The economic activities are an imminent and direct source of ofair pollution. It reflects upon the practices of industries that run by burning fuel and that release harmful and toxic gases in the environment. The manufacturing industries in India contaminate air by releasing fumes in the air. They are a major source of air pollution in the country. The fumes from industries which produce pesticides, paints, colours, nourishment and other pollutants subsequently refer top the contamination in the air. There are a number of social factors that add to the air pollution in India, the fumes from the automobiles and vehicles and the adulteration by. The traffic congestion in India is commonly observed, hence science suggests that vehicles moving on slower speed burn fuel wastefully and affect air quality. Traffic jams in Delhi are a common theme (Gridlocked Delhi: six years of a career lost in traffic jams., 2010). Moreover, the adulteration of fuel is done by mixing diesel with gasoline. These blends of fuel when burnt create harmful emissions in the air (The World Bank, 2002). The existence of thermal power stations located in Uttar Pradesh and Madhya Pradesh burn coal extensively contaminate the air. Moreover, certain political entities and their inefficient regulation and policies let industries and many other individuals to operate illicitly, degrading the environment putting ecological sustenance in jeopardy (Manisha Rana, 2017).

**Effects**

The impact of air pollution is stark and prevalent all across India. It extends from infant mortality to deaths in adults and lowers life expectancy rates. The World Health Organisation notes that out of the 20 most polluted cities in the world, 13 are in India (WHO, 2016). The air pollution leads to affliction globally. Direct exposure to contaminated and polluted air leads to life-threatening diseases. It particularly affects the respiratory, lung and heart function in the human body. Air pollution is the largest risk factor contributing to the burden of disease in India (Collaborators, 2018). Human health, when exposed to the toxins in the air, can bear dizziness, headache, irritation, chest pain, allergies, coughing and sore throat initially. Such symptoms can later develop into chronic diseases. The increase in contact with excessively pollute air space and give birth to diseases like asthma, bronchitis, pneumonia and many cardiac diseases. Moreover, The Infant Death Syndrome (SIDS) is associated with polluted air atmosphere (MacDonald, 2018). Air pollution has by far marked 620,000 early deaths and happens to the fifth largest cause of death in India ( Global Burden of Disease Study, 2010). The smog in November 2016 was a threatening consequence of air pollution due to the emission from rice straw being burnt by the farmers and releasing fumes in the air, creating visual and respiratory issues (Butchaiah Gadde, 2009).

**Analysis**

**Who gets affected**

The groups who are vulnerable and are most affected by the air pollution are significantly infants, children under 4, women who are bearing children and the men have who direct contact with the atmosphere. WHO reported that about 2 million premature babies and 4360 children died in 2016. The general mortality and death rates in adults have proportionally risen with the rise in air pollution (Michael Greenstone R. H., 2014).This also refers to the distinction and inequalities of status which make some groups in society more prone to air pollution than others. Hence the victims of air pollution can are linked to power relations and inequalities in society. The effects of air pollution, therefore, are more evident in the poor, which consequently makes it difficult for them to seek health services (A J McMichael, 2008). Those who can afford air conditioners and air purifiers can escape the menace of air pollution however those who are subject to harsh working conditions, and spend their time out, are more prone to having dire impacts on their health. Such groups are unaware of the severe outcomes and diseases they might be prone to when they inhale the toxins around them. Lastly, the smog due to the burning of field residue impairs vision and create respiratory problems for its affectees. (Butchaiah Gadde, 2009).

**Policy Initiatives**

The government of India has registered the issue of air pollution and has planned to curb the acceleration and its negative impacts on the environment. The government of India has induced an Odd-Even rationalising rule to reduce the traffic congestion in Delhi. The rules state that the number of plates ending with odd numbers can be run on certain days while those with even numbers on others. India has also launched the National Clean Air Program to programs to fight 20-30 per cent of air pollution by 2024. The Graded Response Action Plan also works independently to reduce air pollution. Many non-governmental along with the civic society render to the restoration of the environment by containing and limiting their actions. The citizens and

**Recommendations**

The recommendation to make the efforts to limit and contain escalations can be initiated amongst the society to curb and eliminate air pollution effectively. The transportation can be run on clean fuel, differential and alternative routes can be introduced. Fuel adulteration does not ruin the environment but it also damages the vehicle. Awareness campaigns can be introduced amongst who are exposed to the entirety of the situation. Precaution measures such as air purifiers, air conditioners and covering the face to limit the particulates from entering the body, can be taken. The environmentally degrading industries can be heavily taxed and penalized for restoring the environment by planting more trees and making contributions to those who are suffering from such illnesses. Strict action to be taken against those who encourage and practices such as attitudes and behaviours by initiating legislation can be averted. The impacts of Air pollution and awareness amongst the people can save their physical health and future. Lastly, enforcing pollution standards and maintained by controlling them (Michael Greenstone, 2017).

 **Conclusion**

With the advent of technological advancements, the common use of vehicles and the emergence of economic growth, environmental risk has also increased. The air pollution in India today, is frustratingly diminishing the status of good health and living standards. The increase in the toll of deaths due to air pollution has gravely haunted the ecological system in the country. Therefore the government of India has incorporated the Sustainable development goals to provide it public with a clean and healthy life (WHO, Air quality and health, 2012). Although India aspires to comply and achieve SDGs, it is, however, not completely there with the appropriate policies to meet the goals. (Peter Rafaj, 2018). The inclusion of such policies and reduce the burden of disease and health from the economy (Organisation., 2016). An intense and all-inclusive policy to restore the environment is required to overcome air pollution in India. The environmental sustainability shall be coherently prioritized along with the economic growth to gain a globally healthy environment.

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