

A Study on Environment and Health: Issues and Challenges

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Abstract

This Paper present the Environment and health influences of energy are discussed according to the time scale at which they occur. About half of the world households use solid fuels (biomass and coal) for cooking and heating in simple devices that produce large amount of air pollution. Pollution that is possibly responsible for 4-5 percent of the global freight of disease. The chief ecosystem influences relay to charcoal production and fuelwood harvesting. At the workplace scale solid fuel cycles create significant risks for workers and have the largest impacts on populations among energy systems. In communities fuel use is the main cause of urban air pollution through there is extensive difference among cities in the relative contributions of vehicles and stationary causes. Diesel fuelled vehicles, which are more protruding in developing countries, pose a growing challenge for municipal health. The chief ecosystem influences result from large scale hydropower projects in forests though surface mining causes significant damage in some areas. At the regional scale fine particles and ozone are the most widespread health damaging pollutants from energy use, and can extend hundreds of kilometres from their sources. Such deposition is associated with damage to forests, soils, and lakes in various parts of the world. At the global scale, energy system accounts for two-thirds of human-generated greenhouse gas increases. Thus energy use is the human activity most closely linked to potential climate change. Climate change is feared to have significant direct impacts on human health and on ecosystem.

Keywords: Pollution; Health; Ozone; Climate change; Diseases; Environment

Introduction

Environmental health refers to aspects of human health (including quality of life) that are determined by physical, chemical, biological, social and psychosocial factors in the environment. Environmental Health is the branch of public health concerned with all aspects of the natural and built environment affecting human health [1]. Human activities scatter a wide variety of biologically and climatologically active elements and compounds into the atmosphere, surface waters, and soil at rates far beyond the natural flows of these substances. The results of these alterations include a 10-fold increase in the acidity of rain and snow over millions of square

kilometers and significant changes in the global composition of the stratosphere (upper atmosphere) and troposphere (lower atmosphere). The importance of energy supply systems, both industrial and traditional, in the mobilization of such toxic substances as sulphur oxides and particles as well as in the release of carbon dioxide, the principal greenhouse gas [2]. Also shown is the human interruption catalogue for each substance, which is the ratio of the amount released by human activities to natural issues. This shows that together with other human activities, energy systems are significantly moving the cycling of important chemical species at the global scale. Although by themselves these catalogs do not validate that these insults are interpreted into negative impacts, their magnitudes provide threatening that such impacts could be substantial. In the past hundred years most of these phenomena have grown from local agitations to universal disturbances [3].

The environmental transition of the 20th century-driven by more than 20-fold growth in the use of fossil fuels and increased by a tripling in the use of traditional energy forms such as biomass—has amounted to no less than the emergence of civilization as a worldwide environmental and geochemical force. The influences from energy systems has occur from the household to the universal rule [4]. At every scale the environmental effects of human energy production and use account for a significant serving of human influences on the environment. Environment and Health observes the invectives and effects of energy systems according to the rule at which the principal subtleties occur-meaning the rule at which it makes the most logic to display, estimate, and regulate the invectives that lead to conservational effects. Impacts are divided into two broad categories: Those directly disturbing human health (Environmental health impacts) and those indirectly distressing human wellbeing through effects on the natural environment (ecosystem impacts). Because of their ubiquity and magnitude, energy systems impact nearly every category of environmental offense and impression [5]. The air we breathe contains emanations from automatic vehicles, industry, heating, and commercial sources, as well as tobacco smoke and house hold fuels. Air pollution harms human health, particularly in those already susceptible because of their age or prevailing health problems. Environmental health consists of preventing or controlling disease, injury, and disability related to the communications between people and their environment [6].

National burden of disease from household solid fuel use in india

A large serving of the Indian population is possibly bare to inside and outside levels of pollution bent by cooking stoves. Based on menaces derivative merely from studies of the health effects of individual diseases occurring in biomass-using households in developing countries, many in India itself, it is possible to evaluation the total national burden of disease in India from use of these fuels:

Acute respiratory infection

This infection is more than a dozen studies around the world have found that domestic use of solid fuels is allied with severe respiratory infection in young children. Acute respiratory infection is the principal cause of death of the world's children and the largest group of ill health in the world in terms of disease burden [7]. Almost 9 percent of the universal burden of ill health and 12 percent of India's is due to severe respiratory infection. Severe respiratory infection related to solid fuel use is estimated to cause 290,000–440,000 untimely deaths a year in Indian children.

Tuberculosis

It has been related with household solid fuel use in a national survey in India concerning nearly 90,000 households as well as in smaller studies. Although this relationship is not yet recognized with complete inevitability, it would be highly significant because tuberculosis is on the rise in many evolving countries due to HIV infection and the increase in drug impervious strains. In India 50,000–130,000 cases of tuberculosis in women under 15 are related with solid fuel use [8].

Chronic respiratory disease

The disease such as chronic bronchitis, is almost completely due to smoking in the industrialized world. But studies in Asia and Latin America have found the chronic respiratory disease develops in women after long years of cooking with solid fuels [9]. In India 19,000-34,000 women under 45 suffer from chronic respiratory disease allied to compact fuel use. Lung cancer, which is also conquered by smoking in developed countries, has been found to result from long-term exposure to cooking with coal in more than 20 studies in China. In India 400–800 women under 45 suffer from lung cancer connected to solid fuel use; the number is small because households rarely use coal.

Cardiovascular (heart) disease

Although there are seemingly no studies in biomass-using households, studies of city air pollution suggest that in India 50,000-190,000 women under 30 suffer from pollution-related heart disease. Miscarriage and low birth weight have been allied with solid fuel use by pregnant women in Latin America and India. Low birthweight is a big tricky in emerging countries because it is a hazard factor for a variety of health problems. In India, however, there are too few studies to calculate the

influences of solid fuel use on hostile pregnancy outcomes. Because there is more uncertainty in the evaluations for tuberculosis and heart disease, only the low ends of the appraised choices are used. In India 410,000-570,000 premature deaths a year in women and children, of 5.8 million total, appear to be due to biomass fuel use. Given the age distribution of these deaths and the associated days of illness involved, 5-6 percent of the national load of disease in women and young children can be credited to biomass fuel use in households. For assessment, about 10 percent of the Indian national load of disease is ascribed to lack of clean water and hygiene [10].

Environmental health issues

Drinking water, basic sanitation and nutrition, these are a major health hazard for the mainstream of children in the world. The effects of environmental issues, such as global warming on health is a major health issue in the world. Another universal health urgency we recognized was the connection between our health and the environment we live in, from the water we drink, to the air we breathe, to the food we grow and eat. More than three million children under the age of five die each year from environment-related causes, such as polluted indoor and outdoor air, dirty water and lack of passable health. WHO's programmes and initiatives on water and sanitation, vector-borne diseases, indoor air pollution, chemical safety, transport, ultraviolet radiation, nutrition, occupational health, food safety and injury prevention all address issues dangerous to improving environmental health [11]. The Healthy People 2020 Environmental Health objectives focus on 6 themes, each of which highlights an element of environmental health:

- Outdoor air quality
- Surface and ground water quality
- Toxic substances and hazardous wastes
- Homes and communities
- Infrastructure and surveillance
- Global environmental health

Creating healthy environments can be complex and relies on continuing research to better understand the effects of exposure to environmental hazards on people's health.

The most important environmental challenges faced by India

It is essential to make the public cognizant of the challenging penalties of the Environmental Deprivation, if not responded and reformative measures undertaken would result in the destruction of life. We are facing various environmental challenges. It is essential to get the country aware with these challenges so that their acts may be eco-friendly. Some of these challenges are as under:

- Increasing Population
- Poverty
- Agricultural Growth
- Need to Ground Water
- Developments and Forests
- Degradation of Land

- Reduction of Genetic Diversity
- Evil Consequences of Urbanization
- Air and Water pollution

Increasing Population: A population of over thousands of millions is growing at 2.11 per cent every year. It puts substantial pressure on its natural resources and diminishes the gains of development. Hence, the greatest challenge before us is to limit the population growth. Although population control does not automatically lead to development, yet the development leads to a decrease in population growth rates.

Poverty: India has often been described a rich land with poor people. The poverty and environmental deprivation have a connection between them. The huge mainstream of our people are unswervingly dependent on the nature resources of the country for their basic needs of food, fuel shelter and fodder. About 40% of our people are still below the poverty line. Environment deprivation has adversely affected the poor who depend upon the resources of their direct surroundings. The challenge of poverty and the challenge environment degradation are two facts of the same challenge. The population growth is essentially a function of poverty. Because, to the very poor, every child is an earner and helper and universal concerns have little relevance for him.

Agricultural Growth: The people must be acquainted with the methods to sustain and increase agricultural growth with damaging the environment. High yielding varieties have caused soil salinity and damage to physical structure of soil.

Need to Ground Water: It is essential of rationalizing the use of groundwater. Factors like community wastes, industrial effluents and chemical fertilizers and pesticides have polluted our surface water and affected quality of the groundwater. It is essential to restore the water quality of our rivers and other water body as lakes is an important challenge. It so finding our suitable strategies for consecration of water, provision of safe drinking water and keeping water bodies clean which are difficult challenges is essential.

Development and Forests: Forests assist catchments for the rivers. With increasing claim of water, plan to harness the vast river through large irrigation projects were made. Certainly, these would immerse forests; displace local people, damage vegetation and wildlife. The dams on the river Narmada, Bhagirathi and somewhere else have become areas of political and scientific deliberation. Forests in India have been shrinking for several centuries owing to pressures of agriculture and other uses. Vast areas that were once green, stand today as wastelands. These areas are to be brought back under vegetative cover. The ethnic communities inhabiting forests respects the trees and birds and animal that gives them sustenance. We identify the role of these people in restoring and conserving forests. The modern knowledge and skills of the forest department should be united with the traditional knowledge and experience of the local communities. The strategies for the joint management of forests should be evolved in a well planned way.

Degradation of Land: 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 mha 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 uncovered to various degrees. Nearly 406 million head of livestock have to be braced on 13 mha, or less than 4 per cent of the land classified as meadow land, most of which is overgrazed. Thus, out of 226 mha, about 175 mha or 66 per cent is tarnished to varying degrees. Water and wind erosion causes further degradation of almost 150 mha.

Reduction of Genetic Diversity: At present most wild genetic pillories have been disappearing from nature. Wilding including the Asiatic Lion are facing problem of loss of genetic diversity. The protected areas network like sanctuaries, national parks, biosphere reserves are isolating populations. So, they are decreasing changes of one group breeding with another. Remedial steps are to be taken to check decreasing genetic diversity.

Evil Consequences of Urbanization: Nearly 27 per cent Indians live in town areas. Development and automation has given birth to a great number of environmental problems that need crucial devotion. Over 30 per cent of urban Indians live in favelas. Out of India's 3,245 towns and cities, only 21 have fractional or full sewerage and treatment facilities. Hence, coping with rapid urbanization is a major challenge.

Air and Water Pollution: Majority of our industrial plants are using out-dated and population technologies and crude facilities lacking of any provision of treating their wastes. A great number of cities and industrial areas that have been identified as the worst in terms of air and water pollution.

Acts are enforced in the country, but their implement is not so easy. The reason is their implementation needs great resources, technical expertise, political and social will. Again the people are to be made aware of these rules. Their support is indispensable to implement these rules.

Conclusion

Sustaining a healthy environment is central to increasing quality of life and years of healthy life. Globally, 24% of all deaths and 27% of deaths among children under age 5 are due to avoidable environmental factors. Environmental factors are diverse and far reaching. They include: Exposure to hazardous substances in the air, water, soil, and food, Natural and technological disasters, Climate change, Occupational hazards, The built environment. Poor environmental quality has its greatest impact on people whose health status is already at risk. Therefore, environmental health must address the societal and environmental factors that increase the likelihood of exposure and disease. The chief ecosystem impacts result from large scale hydropower projects in forests although surface mining causes significant damage in some areas. At the regional scale fine particles and ozone are the most widespread health damaging pollutants from energy use, and can extend hundreds of kilometres from their sources. Such deposition is associated with damage to forests, soils, and lakes in various parts of the world. At the global scale, energy system accounts for two-thirds of human-generated greenhouse gas increases. The causes of air

pollution in developing country cities are much more varied than in industrialised countries. Although automobile ownership rates are much lower, there tend to be many other types of vehicles as well, including two- and three-wheelers using highly polluting two-stroke engines. There also tend to be larger portions of light-duty and heavy-duty vehicles using diesel rather than gasoline. In addition to power plants and large industries with limited pollution controls, developing country cities tend to have large numbers of small boilers, engines, and open fires in the commercial and light-industry sectors, as well as in informal sectors such as street food. These enterprises tend to rely on the most inexpensive and thus dirty fuels in inefficient applications without pollution controls—and so have high emissions per unit of useful energy. Thus energy use is the human activity most closely linked to potential climate change. Climate change is feared to have significant direct impacts on human health and on ecosystem.

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