

# **Environmental Degradation and Global Health**

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# Chapter 13

## Impact of Environmental Degradation on Fisheries

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### ABSTRACT

*Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil; the destruction of aquatic ecosystem. As humans dump waste products, use chemicals, and over fish in the aquatic water bodies, areas of beauty such as beautiful aquatic plants and animals are damaged. At times the destruction is so great that is cannot be reversed. We are killing our planet and the consequences are tremendous. Now a day's freshwater resources at high risk. Vast areas of fisheries have been lost. Aquatic plant and organism continue to suffer degradation, and the total fish available for catching is declining. Not only is the degradation causing aquatic resources to be lost, but this issue holds large economic problems. When there are not enough fish to catch, fishermen are without income to support themselves and their families. In this area various livelihoods such as fishing, vegetable production and traditional betel leaf farming are facing one of the worst crises ever. Therefore, it is a prime time to discuss and solve the water crises for fisheries as well as economic problems.*

**Keywords:** Fisheries, Water resources, Environmental degradation, Climate change.

### Introduction

Environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil the destruction of ecosystem. It is



defined as any change to the environment perceived to be undesirable (Johnson *et al.*, 1997). Climate change affects the Earth's water supply in a large number of ways. Our land, water and soil are compromised when people exhaust resources or release harmful chemicals into the air. Deforestation, wasting resources, and pollution all add to the demise of an environmentally-sound and safe planet. One major component of environmental degradation is the depletion of the resource of fresh water on Earth. Approximately only 2.5 per cent of all of the water on Earth is fresh water, with the rest being salt water. 69 per cent of the fresh water is frozen on Antarctica and Greenland, so only 30 per cent of the 2.5 per cent of fresh water is available for consumption. Fresh water is an exceptionally important resource, since life on Earth is ultimately dependent on it. Water transports nutrients and chemicals within all forms of life, sustain both plants and animals, and mould the surface of the Earth with transportation and deposition of materials (Young *et al.*, 2004).

The available fresh water being affected by climate is also being stretched across an ever-increasing global population. It is estimated that almost a quarter of the global population is living in an area that is using more than 20 per cent of their renewable water supply; water use will rise with population while the water is also being aggravated by decreases in stream flow and ground water caused by climate change. Even though some areas may see an increase in freshwater supply from an uneven distribution of precipitation increase, an increased use of water supply is expected. The issue of the depletion of fresh water can be met by increased efforts in water management (Young *et al.*, 2004). While water management systems are often flexible, adaptation to new hydrologic conditions may be very costly Ragab and Christel (2002). Preventative approaches are necessary to avoid high costs of inefficiency and the need for rehabilitation of water supplies (Young *et al.*, 2004) and innovations to decrease overall demand may be important in planning water sustainability (Tilman 2011).

Water supply systems, as they exist now, were based on the assumptions of the current climate, and built to accommodate existing river flows and flood frequencies. Reservoirs are operated based on past hydrologic records, and irrigation systems on historical temperature, water availability, and crop water requirements; these may not be a reliable guide to the future. Re-examining engineering designs, operations, optimizations, and planning, as well as re-evaluating legal, technical, and economic approaches to manage water resources are very important for the future of water management in response to water degradation. Another approach is water privatization; despite its economic and cultural effects, service quality and overall quality of the water can be more easily controlled and distributed. Rationality and sustainability is appropriate, and requires limits to overexploitation and pollution, and efforts in conservation (Young *et al.*, 2004).

## Observation and View

Water is the essential part of our life as well as of the environment. When factories produce harmful chemicals and toxic waste into bodies of water, humans suffer. Pesticides and fertilizers can also get into a region's water system and pollute it; drinking water is contaminated. Some residing in third-world countries are highly



affected by the degradation of our planet and these unhealthy practices cause *viz.* Illnesses, Death in children and Death in adults. In the Chhatarpur district here freshwater resources at high risk. Vast areas of water bodies have been lost. Adverse effect of environment, climatic changes, increasing water temperature (Parihar and Dubey, 1995), declining water level (Dubey *et al.*, 2011), tremendous use of pesticide and xenobiotic compound (Dubey, 1995), Heavy metals (Yusuf *et al.*, 2014) routines dumping of city garbage and garlanding in the aquatic bodies affected the fisheries productivity hence decreasing the number of aquatic organism specially fish species in the aquatic ecosystem. Aquatic plant and organism continue to suffer degradation, and the total fish available for catching is declining. Not only is the degradation causing aquatic resources to be lost, but this issue holds large economic problems. When there are not enough fish to catch, fishermen are without income to support themselves and their families.

## Conclusion

In this area various livelihoods such as fishing, vegetable production and traditional betel leaf farming are facing one of the worst crises ever. Therefore, it is a prime time to solve the water crises for fisheries as well as economic problems by safe step taken for water conservation.

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