

## Management of Environmental Change and Emerging Issues for Sustainable Development

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### Abstract

More often than not, we think of the state of the environment as we see it at a moment in time. We actually miss the bigger picture of the environmental change and its impact on our livelihood, in terms of food security, forest cover, pollution, and the like. It is even more difficult to conceive of the environment as a series of dynamic and interconnected process and planetary system changing and interacting over time, even at times when change and movement is not noticeable. A review of the changes that have taken place since the 1992 Rio- Earth- Summit illustrate the significance of the shift from static to dynamic perspective. Even several years is very short time to judge environmental change, and few comprehensive reports exist to document such change at global level.

Scientists have recently uncovered new systems of planetary stress and assessments have clarified and confirmed known or suspected problems.

There are encouraging signs that environmental management efforts are bringing concrete improvements. In this paper, the authors attempt to explore and present the new developments since Rio summit. The authors further attempts an illustration of how our environments, our perceptions of related climatic problems and response of the society are dynamic and changing. There is a need for proper coordinating, planning, controlling, directing , assessing, organizing and implementing the entire process of climate change globally if we have to hope for a better world tomorrow. This is where the need for sound Environmental management becomes crucial.

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## Introduction

That the earth's environment has drastically changed is a noticeable reality that does not need a rocket scientist to decipher. As a result of environmental changes a number of related issues have emerged which need to be keenly scrutinized and properly managed.

The word "**environment**" imply *–the aggregate of social and cultural conditions that influences the life of an individual or community.*

Environment is the complex of social, chemical and biotic factors (as climate, soil and living things) that act upon ecological community and ultimately determine form and survival

**Sustainable Development** on the other hand means *making effort to achieve ecological balance; SD imply rational and careful utilization of environmental resources* as well as maintaining the resources is what we refer to as **Sustainable development**.

## Emerging Environmental Issues

Environmental are numerous .Some of the emerging issues include;

- **Sustainable Development** – refers to continued use of resources indefinitely without depleting the energy or material source on which man depends.
- **Trade and Environment issues;**
- **Consumption Patterns** – Reducing consumption
- **Demography** –Exceeding carrying capacity
- **Health** –Growing disease problems, Antibiotic resistance, environmental pollution Hormone Disruptions, Declining sex ration, Chemical interaction, Air Pollution and health; Noise Pollution; Electromagnetic Radiation.
- **Human Settlements** – Disaster threats; Kosovo Conflicts; Iraqi war; War in Afghanistan and the related military pile stock dumping
- **Development Issues** – refers to the continued improvement of living standards by economic growth. It is the art of making purposeful changes to improve the quality of human life. Thus Scientists, Policy makers, Economists, Planners and Managers arrived at the idea of sustainable development.
- **Atmosphere** – Interacting problems, Climate Change, Energy, Risks from New Technologies, Ozone, Depletion, Damage to the ozone layer, New Air Pollution, Nitrogen
- **Forests** – The loss of forest and forest cover through indiscriminate cutting of trees without proper tree planting plan. Forest fires over grazing which leads to soil erosion hence results to forest loss.

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- **Desertification** –Land degradation.
- **Agriculture** –Food Security, is a serious concern all over the world today.
- **Biodiversity**- Cartagena Protocol on Biodiversity, Invasive Species for example: locusts ,arm- wars, Tiger Crisis, Biodiversity Assessments;
- **Biotechnology** –Threats of Un intended gene Transfers
- **Ocean** –Widespread coral bleaching, Coral reefs under pressure, Coastal Threats, Crisis in ocean fisheries, Small Islands.
- **Fresh Water** – Fresh Water Assessments
- **Toxic Chemicals** – Heavy metals POPs
- **Hazardous Wastes** –Weapons as wastes, Implementation of “Basel” Convention
- **\*\* Solid Waste/Sewerage** –Waste disposal and reduction; Space junk, We don’t need to go too far, we need to begin with correcting the mess at Madurai corporation itself where waste disposal is a serious menace that needs to be fixed urgently today itself if not tomorrow The solid waste management menace which is a big head in many cities today !
- **Radio Active Waste** – Military waste problems, Civilian Radio- active Waste

## **Southern Asia - State of the Environment**

We cannot think of Southern Asia in terms climate change, sustainability and management in exclusion of the sub-continent of India which is relatively very crucial and thus requires close scrutiny in this regard.

### **Key environmental Issues in India**

Regional Resource Center for Asia and the Pacific (RRCAP) at the Asian Institute of Technology – AUNEP Collaborating Centre stipulates the key- environmental concern areas for India as:

- Land Degradation,
- Biodiversity,
- Air Pollution,
- Management of fresh Water
- Hazardous waste

## **Conclusion**

All said and done, there is no substitute to sound management of the environmental change for sustainable Development if we have see a better tomorrow!

There is even a more urgent ned to have proactive, and qualified environmental managers who will strive to implement so many unimplemented environmental policies which are gathering dust in shelves waiting to be implemented

## **Land Degradation**

India's total geographical area of 328.73 million hectare (mha) 304.89 mha comprise reporting area and only 264.4 mha is under use for agriculture, forestry, pasture and forms of production since 1970/74. The net area shown has remained around 140 mha. (Ministry of Agriculture 1992 puts it at 142.22 mha during 1998/99)

- India supports approximately 16% of the worlds' woman population and about 26% of the world livestock on mrerely2.5 percent of the worlds' geographical area.

The steady growth of *humans as well as livestock population*

- The widespread incidence of *poverty* and the current phase of *economic and trade liberalization* are exerting pressure on India's limited land resources for competing use in forestry , Agriculture, pastures, Human settlement, - this has led to very significant land degradation!.
- Pressure- land in India suffer from varying types of degradation-mainly from unstable use and inappropriate management practices , loss of vegetation cover, *Human settlements*,

## **Biodiversity**

Biodiversity is defined as the " Variability" among living organisms from all sources including terrestrial, marine and other aquatic ecosystem and ecological complexes of which they are a part; this includes diversity within species and eco-systems.

- Biodiversity is part of our daily livelihood, and constitutes resources upon which families, communities nations and future generations depend
- Every country has the responsibility to conserve, and sustainably the biological biodiversity within its jurisdiction
- India is one of the 12 mega-diversity countries of the world
- The innumerable life-forms harbored by forests, deserts, mountains other lands, air and oceans provide food, innumerable species, the potential of which is not yet known!

## **Air Pollution**

With specific reference to vehicular pollution in urban areas, pollution is a menace to the health of human beings, marine -life, plants and livestock, there is an urgent need to manage air pollution.

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