

# Environmental Sustainability and Management in India

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## ABSTRACT

The world is changing swiftly owing to continued simmering pressures from human activities. Population explosion, industrial development and agricultural advancement are threatening environment. These human activating are causing climate change, biodiversity loss and environmental degradation and social injustice. The mother earth is sumptuously suffering from water pollution, air pollution, soil pollution, noise pollution, marine pollution, plastic pollution and medical waste pollution and these pollutions in turn have deleterious impact on precious water resources, human life and endangered species. We need to create and maintain a world exhilarating environment that is amply fit for future generations. Management and sustainable development are two intertwined concepts of the coin environment and these are related to methods of meeting human needs without damaging the environment. Environmental management focuses on maintaining natural resources such as timber, water and open land without diminishing or destroying them. Sustainable development seeks to meet human needs without depleting resources. Environmental sustainability focuses on the state of the planet and encourages individuals to live in a way that creates minimal waste and even regenerates some of the resources we use every day.

Sustainability and environmental management is the practice of managing the environment and its resources in a way that meets current needs without compromising the ability of future generations to meet theirs. It involves balancing ecological, economic and social goals. Environmental management is the practice of organizing human activities in order to limit their impact on the natural environment. It can encompass protection of the land, flora and fauna, bodies of pristine water and above all the planet's atmosphere. It is the need of the hour to set goals and strictly follow them like reducing carbon emissions, promote renewable energy, ensuring equitable resource access, protecting human health and above all maintaining economic growth. It is advised to stringently follow the strategies environmental regulations, international agreements, sustainable business management and sustainable value chain management. The present paper discusses how the environment is deteriorated, environmental impact on both human and natural resources and how to manage environment for sustainable development that allows humans to live in wholesome, healthy and hale environment.

**Key Words:** Environmental Sustainability, Management and Development, India

## INTRODUCTION

The idea of sustainable development was first brought to widespread attention as a global issue; however, it is increasingly being applied at more local levels down to that of individual companies. This raises the potential danger that sustainable development will come to be predominantly identified with the preservation of the organisation involved. A likely outcome is that management decision-making will tip the balance too far in favour of people-centred interests as against environmental interests. The study programme provides an understanding of best theories and practices for effective environmental management in the business world, public organisations and the broader society. The environmental management tools and relevant knowledge, and to find out-of-the-box solutions to environmental problems affecting society which include:

Environmental planning

Environmental management systems (EMS)

Corporate social responsibility (CSR)

Life cycle assessment (LCA)

Environmental assessments (EIA and SEA)

Eco-design

Environmental resource management is an issue of increasing concern, as reflected in its prevalence in several texts influencing global socio-political frameworks such as the Brundtland Commission's Our Common Future, which highlighted the integrated nature of the environment and international development, and the World Watch Institute's annual reports. The environment determines the nature of people, animals, plants, and places around the Earth, affecting behaviour, religion, culture and economic practices. Environmental resource management can be viewed from a variety of perspectives. It involves the management of all components of the biophysical environment, both living (biotic) and non-living (abiotic) and the relationships among all living species and their habitats. The environment also involves the relationships of the human environment, such as the social, cultural, and economic environment, with the biophysical environment. The essential aspects of environmental resource management are ethical, economical, social, and technological. These underlie principles and help make decisions.

The concept of environmental determinism, probabilism and possibilism are significant in the concept of environmental resource management. Environmental resource management covers many areas in science, including geography, biology, social sciences, political sciences, public policy, ecology, physics, chemistry, sociology, psychology, and physiology. Environmental resource management as a practice and discourse (across these areas) is also the object of study in the social sciences.<sup>2</sup> Sustainability in environmental resource management involves managing economic, social, and ecological systems both within and outside an organizational entity so it can sustain itself and the system it exists in.<sup>3</sup> In context, sustainability implies that rather than competing for endless growth on a finite planet, development improves quality of life without necessarily consuming more resources. Sustainably managing environmental resources requires organizational change that instils sustainability values that portrays these values outwardly from all levels and reinforces them to surrounding stakeholders. The result should be a symbiotic relationship between the sustaining organization, community, and environment.<sup>4</sup>

Many drivers compel environmental resource management to take sustainability issues into account. Today's economic paradigms do not protect the natural environment, yet they deepen human dependency on biodiversity and ecosystem services. Ecologically, massive environmental degradation and climate change threaten the stability of ecological systems that humanity depends on.<sup>5</sup> Socially, an increasing gap between rich and poor and the global North–South divide denies many access to basic human needs, rights, and education, leading to further environmental destruction. The planet's unstable condition is caused by many anthropogenic sources.<sup>6</sup> As an exceptionally powerful contributing factor to social and environmental change, the modern organisation has the potential to apply environmental resource management with sustainability principles to achieve highly effective outcomes. To achieve sustainable development with environmental resource management an organisation should work within sustainability principles, including social and environmental accountability, long-term planning; a strong, shared vision; a holistic focus; devolved and consensus decision making; broad stakeholder engagement and justice; transparency measures; trust; and flexibility.

## ENVIRONMENTAL SUSTAINABILITY

Environmental sustainability refers to the responsible management of natural resources to fulfil current needs without compromising the ability of future generations to meet theirs. It aims to balance ecological, economic

and social goals, such as reducing carbon emissions, promoting renewable energy and ensuring equitable resource access. Every year across the world on April 22, **Earth Day** is a time to bring people together to focus on a common goal: sustainability. According to the Earth Day site, 2024's theme is "Planet vs. Plastics." The non-profit aims to shine awareness on environmental sustainability and to unite businesses, governments and citizens to create "a partnership for the planet," as outlined on the official site.

### Meaning of Environmental Sustainability

The United Nations (UN) defines sustainability simply as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." "I like this definition," said Mike Weinstein, PhD, director of sustainability at SNHU who established the university's internationally accredited Arboretum. With over a decade of teaching experience and a PhD in environmental studies and sustainability, Weinstein is well-versed in examining complex environmental issues. He said that the definition challenges us to consider two questions: what are our needs, and what is life beyond ourselves? He described "needs" as clean water, healthy food and stable housing and points out that billions of people still lack access to some combination of those needs. For instance, about one in four people worldwide, or 2.2 billion people, lack access to safe water in 2024, according to Water.org, a global non-profit organization (Water.org PDF source).

The United Nations Educational, Scientific and Cultural Organization (UNESCO), a specialized agency of the UN, reported that the global urban population facing water shortages is expected to increase significantly, potentially doubling from 930 million in 2016 to between 1.7 and 2.4 billion people by 2050. In light of this growing issue, Pamela Beckvagni, assistant director of sustainability programs at SNHU, noted the importance of responsible resource management. "Environmental sustainability refers to the responsible and balanced use of natural resources to meet the present needs without adversely compromising the ability of future generations to meet their own needs," she said. With over 25 years of experience in program leadership, sustainability and environmental management, Beckvagni has long focused on environmental issues such as this. She highlighted the benefits of maintaining environmental balance. "The ultimate positive result to environmental stability is ensuring long-term ecological stability and life," she said.

### Importance of Environmental Sustainability

Environmental sustainability is important to preserve resources like clean air, water and wildlife for future generations. Another important sustainability definition that Weinstein likes is: "Ensuring that human society operates with ecological borders." This definition is known as the Planetary Boundary (PB) concept. It was introduced in 2009 to define where humans can operate safely within the environment's constraints, according to Science.org, an online research organization. It's important to understand that humans do have boundaries, and it's important to understand where those are to maintain sustainability. Although, most of the world is very disconnected from the basic functioning of the planet and it's easy to lose sight of essential factors, according to Weinstein. For example, humans are members of Earth and live in the same spaces as the rest of the living beings on the planet. "Our current economic activity ignores these boundaries," Weinstein said. Above all environmental sustainability is vital because human survival depends on it.

### Achieve Environmental Sustainability

Environmental regulations come from organizations like the United States Environmental Protection Agency (EPA). The EPA has congressional authority to write rules that lead to the implementation of laws. According to the EPA, these regulations are mandatory and can apply to:

Businesses

Individuals

Nonprofits institutions

State or local governments

These regulations create accountability, but they need to be both strict and strictly enforced, Weinstein said, if they are to succeed in creating environmental sustainability. The challenge is, he said, that the EPA is backlogged, and current public infrastructures are failing to create accountability. It may feel frustrating, but there are ways everyone can begin to make a difference. So, how can you help achieve sustainability? The UN offers 17 goals for sustainable development that act as the path to achieving a more sustainable future.<sup>11</sup> These goals address global challenges like:

**Clean water and sanitation:** Such as learning to avoid wasting water.

**Climate action:** Acting now to stop global warming.

**Life below water:** Avoiding the use of plastic bags to keep the oceans clean.

**Life on land:** Planting trees to help protect the environment.

**Responsible consumption and production:** Recycling items such as paper, plastic, glass and aluminium.

**Sustainable cities and communities:** Biking, walking or using public transportation.

Sustainability goes beyond nature itself. “We have to simultaneously recognize that oppressed communities are more severely impacted by environmental degradation,” Weinstein said. You can’t truly achieve sustainability, he said, until everyone has safe, healthy and happy communities that operate with future generations in mind. The United Nations (UN) defines sustainability simply as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” The Six key factors of sustainability are

Optimize your current use of fossil fuels.

Eliminate waste.

Recycle.

Recover energy.

Save time.

Reduce Pollution.

### **Cs of sustainability**

The "5 Cs of Sustainability" – Clean, Community, Culture, Care, and Corporate Governance – present a comprehensive framework to guide us towards a more sustainable 2030 and beyond

### **Six principles of environmental sustainability**

The '6 Rs' are Reduce, Reuse, Recycle, Refuse, Rethink and Repair. These are all terms related to ways we can lead a more sustainable life and lessen our impact on the environment: Reduce – Reduce refers to cutting down the number of materials we consume.

### **The concept of sustainability**

In the broadest sense, sustainability refers to the ability to maintain or support a process continuously over time. In business and policy contexts, sustainability seeks to prevent the depletion of natural or physical resources, so that they will remain available for the long term

### **The top 3 environmental issues**

The UN system has adopted international frameworks for environmental issues in three key issues, which has been encoded as the "triple planetary crises": climate change, pollution, and biodiversity loss

### **The Rs of sustainability**

One simple framework to guide us is the 6 Rs of sustainability. These Rs are Reduce, Reuse, Recycle, Rethink, Refuse, and Repair. Each R represents a different action we can take to lessen our impact on the environment and promote sustainable living

The concept of environmental sustainability is a broad term which includes “the condition of resilience, balance, and connection to allow society (humans) to meet its requirements without surpassing the capacity of its supporting ecosystem to keep continue the regeneration of the services without harming the biological diversity” (Vinod, 2007).

## **PRINCIPLES OF ENVIRONMENTAL SUSTAINABILITY**

Environmental sustainability is a conservation concept which is the meeting of services and resources of present and future generations without affecting the health of the ecosystems that provide them. The principles for Strategy of environmental sustainability are

Biodiversity conservation: this is the preservation of biodiversity and energy resources.

Social needs: the availability of basic needs, products, and services for present and future generations. Support local employment, fair trade and environmental attributes of raw material.

Regenerative capacity: protect the depletion of natural resources and keep the harvest rate of renewable resources within the capacity of regeneration.

Reuse, recycling: support the reuse, recycling practices to reduce waste, emissions, and cost and improve product efficiency.

Limitations of non-renewable resources and waste generation

The human economic system should be within the carrying capacity, the emissions should be within the assimilative capacity of the ecosystem, prioritize low-impact transportation, and effective decisions on environmental quality (Morelli, 2011).

### **Environmental Management System (Ems)**

The Environmental Management System (EMS) provides a framework for continually improving our environmental performance across the group while reducing our negative impacts and increasing our positive impacts on the environment.

### **Environmental Sustainability Policy (Policy Statement)**

Coventry University Group (The Group) has campuses in Coventry, Scarborough and London, as well an established international presence with staff based around the globe. Our impact on the environment, local and global communities can be significant. This document sets out the principles by which the Group manages these impacts. The Group commits to protecting the environment for future generations<sup>14</sup> by: minimising environmental risks and impacts, and preventing pollution enhancing our positive environmental impacts complying with relevant legislation and compliance obligations continual improvement of our Environmental Management System (ISO14001)



The Group has made a commitment through its 2030 Corporate Strategy to ‘Creating Better Futures’, including embedding Sustainable Development as an enabler across our key activities and work towards Clean Growth and a zero carbon future. The key areas within which the Group seeks environmental improvements are:

Energy, carbon and water management in the aim to achieve net zero carbon

Waste prevention and recycling and circular economy.

Quality education and world-leading research – developing the knowledge and innovation for a sustainable future

Sustainable and low-carbon travel management

Responsible and low-carbon procurement practices

Green, healthy and efficient buildings and Clean Growth

Enhancing local biodiversity

Community – maximising benefits for our local communities and generating social benefit.

The Group has also signed up to the sector-based ‘SDG Accord’, to deliver the UN Sustainable Development Goals through our teaching, research, operations and administration. The Sustainability Strategy and Environmental Action Plan set detailed targets and objectives, which are reported annually to senior management, along with the Annual Sustainability Report. The Group also participates in sector benchmarking activities to measure and support continual improvement of environmental and sustainability performance.<sup>15</sup>

## OXYGEN BARS

Generally we go to bar for beer and bevy/alcohol drinks. On the contrary, the developed countries have set up oxygen bars for relaxation of people with fresh and fragranced air masks and allow the clients to sit for set time. It is further stated that the number of people going to such oxygen bars is immensely increasing. Finally it is suggested to set up such oxygen bars in highly polluted areas like Delhi, Kanpur, Kolkata in particular and the other areas where the levels of pollution are above the prescribed limits.

## CONCLUSION

Sustainability is ultimately about the interplay between people and ecologies. We constantly seek to maintain or enhance our quality of life - a rich mix of basic and more abstract needs. Our fundamental task in the coming decades is to redesign our socio-political-economic system in ways that reintegrate the dependencies between people and our underpinning ecological systems. In the context of globalization, establishment of interactions between socio-economic development plans and natural spaces, and taking natural and cultural compounds into consideration as a whole are a starting point for developing the concept of countrywide physical plan.

This relationship contains a diverse range of research, analysis and planning processes at different levels. Furthermore, geographical space analysis will lead to the collection of data about ecosystems and will bring about the management and sustainability of ecological and economic resources in the planning process of national, regional and local areas. The only way forward, in order to assure that resources and environmental systems will keep sustaining life in this urban environment, is through sustainable development. Development programmes should give special attention to human needs, and the distribution of development benefits, rather than focus all efforts on economic development. A more people-orientated development should empower people to take greater control over all aspect of their lives: social, political, economic and ecological.

## REFERENCES

### Brundtland Commission

1. ahl-Wost, C. (2007), The implications of complexity for integrated resource management, *Environmental Modelling and Software*, 22 (5): 561–569.
2. World Commission on Environment and Development (1987), "Our Common Future, Report of the World Commission on Environment and Development". Development and International Co-operation: Environment. United Nations. General Assembly document A/42/427.
3. Levy, David L (1997), Environmental management as political sustainability, *Organ. Environ.*, 10 (2): 126–147.
4. Prasad, Pushkala and Elmes, Michael (2005), In the name of the practical: unearthing the hegemony of pragmatics in the discourse of environmental management, *Journal of Management Studies*, 42 (4): 845–867.
5. Gvery, Gayle C. and Bergsteiner, Harald (2010), *Honeybees and Locusts: The Business Case for Sustainable Leadership*. Allen & Unwin. ISBN 978-1-74237-393-5.
6. Dunphy, Dexter Colboyd; Griffiths, Andrew and Ben, Suzanne (2007), *Organizational Change for Corporate Sustainability: A Guide for Leaders and Change Agents of the Future* (2nd ed.), Taylor & Francis, ISBN 9780415287401.
7. Costanza, Robert (1991), *Ecological Economics: The Science and Management of Sustainability*, Columbia University Press. ISBN 978-0-231-07563-3.
8. Water.org PDF source
9. Science.org
10. UN Global Compact (2010), 'Blueprint for Corporate Sustainability Leadership', "UN Global Compact", UN Global Compact Office, pp. 2 – 12.
11. Vinod (2007), *Biological Diversity: Current Status and Conservation Policies*, Research Gate, : Agro Environ Media, Publication Cell of Agriculture and Environmental Science Academy, 86, Gurubaksh Vihar (East), Kankhal, Haridwar 249408, Uttarakhand, INDIA
12. Morelli, J. (2011), Environmental Sustainability: A Definition for Environmental Professionals, *Journal of Environmental Sustainability*, 1, Article2.  
<https://doi.org/10.14448/jes.01.0002>
13. Coventry University Group (The Group), Scarborough and London.
14. 'SDG Accord', UN Sustainable Development Goals UNEP, United Nations Environmental Program (2002), "Integrating Environment and Development: 1972 – 2002", United Nations.