

Concept of Sustainability & International Efforts for Environmental Management



Presented by-
Anamika Das
Assistant Professor,
Department of Agriculture,
Netaji Subhas University, Jamshedpur

Concept of Sustainability

- **Sustainability** is the ability to exist and develop without depleting natural resources for the future.
- **Sustainable development** - development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
- It assumes that **resources are finite**, and so **should be used conservatively and carefully** to ensure that there is enough for future generations, without decreasing present quality of life.

Why is Sustainability Important?

- We cannot maintain our Earth's ecosystems or continue to function as we do, if more sustainable choices are not made.
- We will run out of fossil fuels, huge numbers of animal species will become extinct, and the atmosphere will be irreparably damaged.
- Clean air and non-toxic atmospheric conditions, growth of resources that can be relied upon, and water quality and cleanliness, are all benefits of sustainability.

Three Pillars of Sustainability

- The concept of sustainability is composed of three pillars:
economic, social and environmental.
- Also known informally as
profits, people and planet.



Pillars of Sustainability

1. Economic development-

- A business must be **profitable and produce enough revenues** to be continued into the future.
- The challenge with this form of sustainability is achieving an **equilibrium**.
- Rather than making money at any cost, companies should attempt to generate profit in accordance with other elements of sustainability.

Pillars of Sustainability

2. Social development

- It is about **treating employees fairly** and ensuring responsible, ethical, and sustainable treatment of employees, stakeholders, and the community in which a business operates.
- This may be achieved through more responsive benefits, like better **maternity and paternity benefits, flexible scheduling, and learning and development opportunities**.
- For example, business should operate using sustainable labour, which involves fairly-paid, adult employees who can operate in a safe environment.

Pillars of Sustainability

3. Environmental protection

- It is concerned with the reduction of carbon footprints, water usage, non-decomposable packaging, and wasteful processes as part of a supply chain.
- These processes can often be cost-effective, and financially useful as well as important for environmental sustainability.

Emergence of Environmental Issues

- Environmental issues can be defined as the harmful effects of human activities on the earth's environment.
- **Climate Change-** the long-term warming of the planet's overall temperature brings in changes in the climatic conditions. It has significantly increased in the last hundred years due to the burning of fossil fuels.
- **Global Warming-** The emission of greenhouse gases due to human activity causes global warming, which in turn causes an increase in temperature that then leads to rising sea levels, melting of polar ice caps, flash floods and desertification.

- **Pollution-** Pollution of the air, water and soil caused by toxins such as plastics, heavy metals and nitrates, caused by factors such as toxins and gases released by factories, combustion of fossil fuels, acid rain, oil spill and industrial waste.
- **Deforestation-** Loss of trees in order to make space for residential, industrial or commercial projects means that less oxygen is produced, and temperature and rainfall are affected.
- **Overpopulation-** We are facing a shortage of resources such as food, water and fuel to sustain the rising global population, particularly in developing countries. Intensive agriculture attempting to lessen the problem actually leads to more damage through the use of chemical fertilizers, pesticides and insecticides.

- **Waste disposal**

An excessive amount of waste is produced and dumped in the oceans. Nuclear waste is particularly dangerous, as well as plastics and electronic waste.

- **Ocean acidification**

The increase in the production of carbon dioxide by humans causes the oceans' acidity to rise, which has a negative impact on marine life.

- **Loss of biodiversity**

Species and habitats are becoming extinct due to human activity. This causes an imbalance in natural processes like pollination and poses a threat to ecosystems.

- **Acid rain**

Pollutants in the atmosphere such as sulfur dioxide and nitrogen oxides cause acid rain, which has negative consequences for humans, wildlife and aquatic species.

- **Public health issues**

Lack of clean water is one of the leading environmental problems currently. Pollutants in the air also cause issues such as respiratory disease and cardiovascular disease.

- **Ozone Layer Depletion-** Pollution caused by chlorofluorocarbons (CFCs) in the air creates a hole in the ozone layer, which protects the earth from harmful UV radiation.

International Agreement on Environmental Management

- International environmental agreements (IEAs) are treaties negotiated, signed, and ratified by individual nation-states to address trans-boundary environmental issues.

List of Some Important Environmental Agreements

Environmental Conventions	Adopted in	Remarks
Convention on international trade in endangered species (CITES) of wild fauna and flora	1973	Convention on international trade in endangered species of wild fauna and flora
Convention on Biological Diversity (CBD)	1992	convention for the Conservation of biological diversity.

Environmental Conventions	Adopted in	Remarks
Vienna Convention	1985	convention for the Protection of Ozone Layer
Montreal Protocol	1987	protocol on substances that deplete the Ozone Layer.
Kyoto Protocol	1997	protocol to reduce greenhouse gas emissions
Minamata Convention	2013	to protect health and the environment from the adverse effects of mercury.

Prepare a list of 10 international conventions, with their adopted year, year of coming into effect on environmental protection or management.

Thank You