

**GEN 214: Introduction to Development Studies**

**Module 4:  
Environment and  
Sustainable Development**

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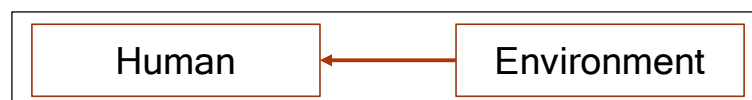
**Key Concepts**

## Environment

- 'Environment' means, simply, 'nature'
- Living and non-living things



## Environmental determinism:



- Human behavior is determined by physical environment
- Example: people from temperate region naturally “better” than those from the tropical zones

### **Sustainable development**

- Development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED 1987)
- **Environmentalism**
- Political and ethical movement that seeks to improve and protect the quality of the natural environment

Source: <https://www.britannica.com/topic/environmentalism>

### **A. Modernization approach to the environment**

- Mobilizing technology to use resources efficiently
- **Natural resources as inputs into a human-devised system**
- **Little attention:** potential environmental damage or long-term sustainability

## Case: Dust Bowl



Source: Alexander, R., Nugent, C., & Nugent, K. (2018).

### *Dust Bowl (cont.)*

- 1930s: southwestern Great Plains region
- Overfarmed and overgrazed land
- Nineteen states in the heartland of the United States became a vast dust bowl
- Migration: farm families abandoned their homes and land, fleeing westward to become migrant laborers.

*Dust Bowl (cont.)*



Source: <https://drought.unl.edu/portals/5/images/DB6.png>



Source: <https://cdn.britannica.com/61/79961-050-9979947B/farmstead-wind-erosion-effects-Dust-Bowl-Okla-1937.jpg>

- **Example from Global South:**
  - To achieve economic growth and development: long-term environmental problems disregards
  - Large-scale projects (top-down) are promoted as a best route of development: dam building, mining, industrialization and rapid mechanization of agriculture
  - Approach: grow now, clean up later

**Case:**  
**Destruction of Sundarban mangrove forest in Bangladesh**



Source: [https://www.thethirdpole.net/content/uploads/2018/03/IMG\\_4001.jpg](https://www.thethirdpole.net/content/uploads/2018/03/IMG_4001.jpg)



Source: <https://www.thestatesman.com/wp-content/uploads/2020/01/sunderbans-1024x683.jpg>

**Case: Green Revolution**

- Modernization approaches to agriculture
- Scientific principles to improve agricultural yields in the South
- Elements:
  - HYVs: maize, wheat, rice and barley
  - developments in fertilizers, herbicides and pesticides

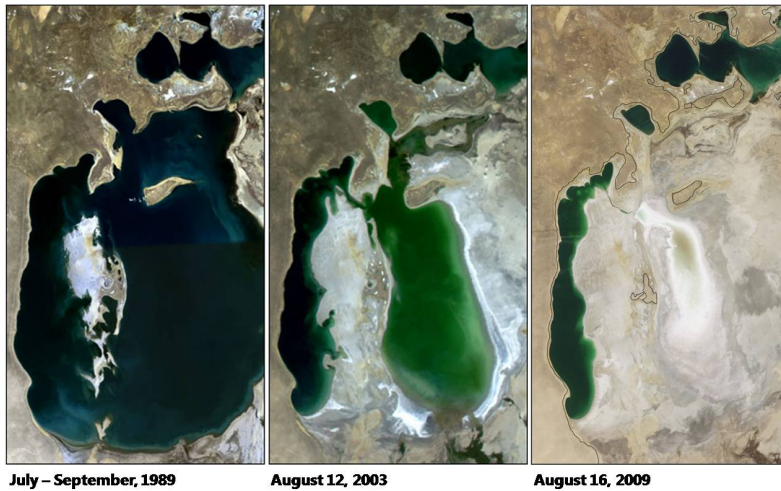
## Case: Green Revolution

- Positive:
  - India (wheat), Indonesia (rice)
- Negative:
  - Environmental impacts: reduced genetic diversity, increased water demand, agrochemicals pollution
  - Social impacts: inequality in society, autonomy of farmers

## B. Socialist approaches to the environment

- Modernist aims of many communist or socialist governments: environmental destructions
- Largest development projects: Centrally-planned (infrastructure successes)
- Example:
  - Mega projects in USSR: Virgin Lands Scheme (1950s)

## Case: Aral Sea



Source: <https://kenkenkenkenkenkenkenken.wordpress.com/2015/10/05/aral-sea/>

## Case: Three Gorges Dam

- Yangtze River in China (Hubei province)
- Centrally planned
- Social problem due to relocation (1.3 million people) not reported



Source: <https://www.britannica.com/topic/Three-Gorges-Dam>

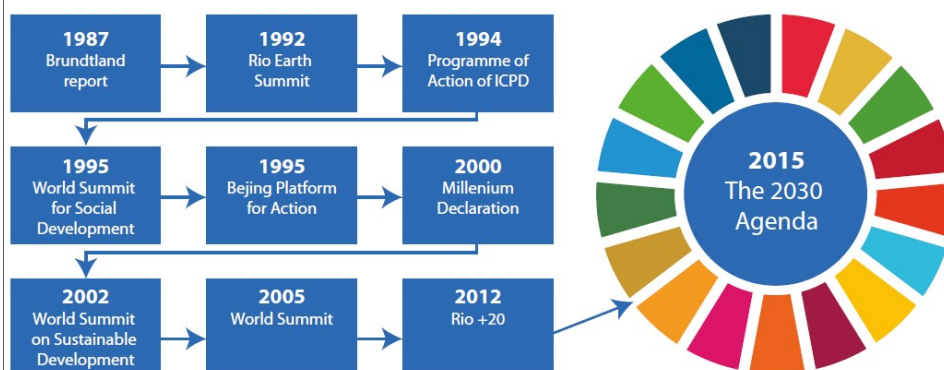


# Sustainable development and climate change

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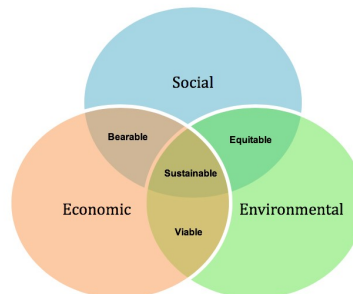
## Sustainable development

World Commission on Environment and Development (WCED): Chaired by Gro Harlem Brundtland (Norway).



Source: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=SDG\\_-\\_Introduction](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=SDG_-_Introduction)

### Pillar of sustainable development



Source: <https://www.futurefitouts.com.au/three-pillars-of-sustainability-explained/>

- **“intergenerational” justice**: impossible to achieve in the absence of **present-day social justice**, if the economic activities of some **groups of people continue to jeopardize the well-being** of people belonging to other groups or living in other parts of the world.

### What are the Sustainable Development Goals (SDGs)?

- Sponsor: United Nations-sponsored
- common set of **development goals**
- deadline for **attainment: 2030**.
- U. N. General Assembly: Summit on **Sustainable Development** from **25-27 September 2015** adopted SDGs.
- SDGs replaced MDGs: January 2016.

- **Seventeen goals**
- **169 targets and indicators**
- To **end poverty**, **fight inequality and injustice**, and **tackle climate change** by 2030.



## The 17 goals

- Goal 1: End poverty in all its forms everywhere
- Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3: Ensure healthy lives and promote well-being for all at all ages
- Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5: Achieve gender equality and empower all women and girls
- Goal 6: Ensure availability and sustainable management of water and sanitation for all
- Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

- Goal 10: Reduce inequality within and among countries
- Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12: Ensure sustainable consumption and production patterns
- Goal 13: Take urgent action to combat climate change and its impacts
- Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Goal 16: Promote peaceful and inclusive societies for sustainable accountable and inclusive institutions at all levels
- Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

### Sustainable Development Goals: Challenges for Bangladesh

- **End of poverty in all forms and end of hunger** : eliminate poverty in all areas of Bangladesh.
- **Achievement of gender equality**: give women equal rights in economic resources as well as ownership and control over land and forms of property. Changes in law of inheritance, besides eliminating all harmful practices such as child, early and forced marriage etc.
- Ensure availability and sustainable management of **water and sanitation for all**: heavy investment with infrastructure build up and technological innovations.
- Make **cities and human settlements** inclusive, safe, resilient and sustainable

- **Promote peaceful and inclusive society**: access to justice for all and build effective, accountable and inclusive institutions at all levels.
  - **To achieve this goal**: efforts and visible indications to significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen goods and combat all forms of organized crime.
- **Political systems**: political leadership in Bangladesh must be committed and dedicated to attaining these targets. The present political system in the country might not be capable of achieving these goals where *hartal* and blockade are treated as normal political course.

## Climate change

- Global south will affect disproportionately:
  - Extreme rainfall, frequent cyclone, drought



Source: <https://www.unicef.org/press-releases/climate-change-threatens-lives-and-futures-over-19-million-children-bangladesh>

## Response to climate change:

- Adaptation:
  - Adjusting to current expected climate change
  - Early warning, use of drought resistant seeds, strengthening of coastal defense
- Mitigation:
  - attempting to limit future climate change: measure to reduce GHG
  - Adopt clean technologies (solar power)
  - Focus on international negotiations

NOTE: These solutions are technocratic, do not consider the social, political and economic causes of vulnerability

- **Reference**

Willis, Katie. 'Environment and development theory' in *Theories and practices of development*. Taylor & Francis, 2011.

Alexander, R., Nugent, C., & Nugent, K. (2018). The dust bowl in the US: an analysis based on current environmental and clinical studies.