

An aerial photograph of a village built on stilts over a body of water. The houses have rusted metal roofs. In the foreground, there are large, rectangular floating gardens filled with green plants. The sky is blue with some clouds.

# SUSTAINABLE DEVELOPMENT PRINCIPLES



# Lesson Learning Goals

At the end of this lesson you should be able to:

- Define sustainable development and list at least five core themes
- Explain the 'precautionary principle'
- Name at least six areas of concern in the Mekong River Basin
- Give examples of winners and losers in the traditional ways of development



# Lesson Learning Goals (Cont'd)

At the end of this lesson you should be able to:

- Describe the links between unsustainable development, poverty, hunger, and disease
- List principle development requirements for healthy communities and indigenous peoples
- Summarise requirements for sustainable development of land and water resources
- Draw a hierarchy of waste management options

# Definitions of Sustainable Development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs

*(Brundland Commission - Our Common Future, 1987)*

A sustainable society enables its members to achieve a high quality of life in ways that are ecologically sustainable

*(United Nations)*

# A Goal for Sustainable Development

To enable each individual to live life to  
their full potential physical, mental, and  
spiritual development

*(1992 Earth Summit - Agenda 21)*

# Some Core Themes of Sustainable Development

- We do not inherit the earth from our ancestors, we are borrowing it from our children
- Awareness leads to appropriate action
- Prevention of pollution
- Conservation of natural resources (i.e., preserving natural capital)
- Systems thinking - interdependence of all life

# More Core Themes of Sustainable Development

- Those who reap the benefits of development must bear the costs
- Those who bear the costs of development should share in the benefits
- Those affected by development must participate in decision making
- Engineering 'fixes' alone do not constitute sustainable development
- Precautionary principle

# Precautionary Principle

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation

*(Agenda 21)*



# 1992 Earth Summit Agenda 21 Themes

- Economic, social, and ecological factors must be integrated in political and business decision making - they are surely integrated in workings of the natural world
- Institutions must move out of their narrow, specialised 'niches' to integrate and interact with one another
- Decentralise management of resources; empower local communities

# Areas of Concern in Agenda 21 and the MRB

- Poverty alleviation
- Human consumption patterns
- Demographics and human settlements (e.g., population growth)
- Human health
- Biodiversity
- Freshwater and coastal resources
- Land resources, especially forests

# More Areas of Concern in Agenda 21 and the MRB

- Mountainous areas
- Agriculture and rural development
- Toxic chemicals and hazardous wastes
- Solid wastes
- Protecting the atmosphere
- Women, children, youth, indigenous people
- Institutional and legal frameworks

# Development, Poverty and Hunger

- Poverty and ecosystem degradation result from externalised environmental and social costs of market transactions
- Some groups are enriched at the expense of the environment
- Key criterion for sustainable development is whether the needs of the least advantaged, most vulnerable members of society are met

*(United Nations Environment Program, 1995)*

# Development, Poverty and Hunger (Cont'd)

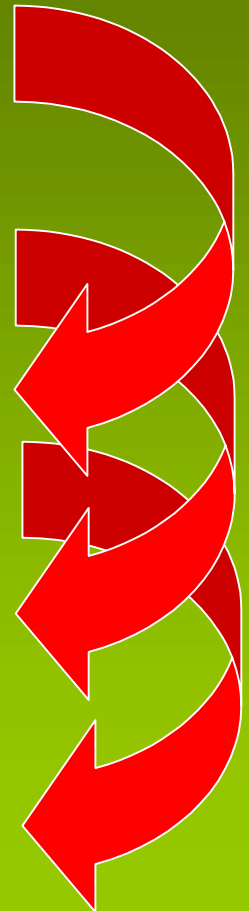
Poor people have limited access  
to resources

Preoccupied with immediate survival,  
not long-term conservation

Increased pressure  
to exploit marginal environments

More environmental degradation

More poverty





# Development, Poverty and Hunger (Cont'd)

- Environmental conservation policies must not aggravate poverty and hunger
- Any development which significantly impacts natural resources can create poverty
- Excessive and wasteful use of resources leads to poverty and hunger
- Human population numbers, their distribution, and their consumption of resources create poverty and hunger

# The Poor and Environmental Degradation

- Environmental degradation affects poor people most through:
  - » polluted and unsafe water
  - » inadequate sanitation
  - » erosion, flooding
  - » exposure to toxic waste
  - » loss of local resources - food, fuel

# The Poor and Environmental Degradation (Cont'd)

Reducing poverty is a prerequisite for sustainable development

# Environment and Health

## Some environmental causes of ill health:

- Water pollution from humans and industry
- Overcrowding, especially in urban centres
- Unhealthy working conditions
- Modifying the natural environment, e.g:
  - » schistosomiasis, malaria, Japanese encephalitis from reservoirs, irrigation
  - » pesticide contamination from agriculture
  - » air pollution from vehicles in big cities

# Creating Health Communities

Sustainable development must contribute to:

- physical, social, spiritual, and economic well-being
- safe drinking water and sanitation
- safe, nutritious food, and overall hygiene
- adequate housing
- health care services and health education
- disease control
- lower infant mortality and longer life



# Development and Indigenous Peoples

Development has often caused native peoples to lose:

- Means of livelihood
- Ancestral land, traditions, cultural values, self-determination, dignity

Frequently the outcomes of development are:

- Unemployment
- Increased poverty, ill-health, societal breakdown, crime

# Land Use and Forestry

- Conduct land use planning on a watershed (basin-wide) basis
- Integrate traditional with modern methods of land use
- Preserve ecosystem values in mountains and lowlands
- Prevent unsanctioned conversion of forest lands to other uses
- Promote multiple use of forests

# Waste Management for Sustainable Development

Eliminate waste at source

Prevention in process

Reduction, minimization

Recycle, re-use

Treatment

Disposal



Decreasing preference

# Freshwater Resources

- Less than 1% of the water on earth is freshwater
- Sustainable development requires:
  - » Adequate supplies of good quality water
  - » Preservation of hydrological, biological, chemical functions of ecosystems
  - » Staying within limits of water systems' capacity
  - » Control of water-borne disease vectors

*(Agenda 21)*

# The Sustainable Development Journey

Sustainable development is a  
journey, not a destination...  
and there are no short cuts



# Vehicles for the Sustainable Development Journey

- Visionary policies
- Cross-sectoral legislation and institutions
- Integrated Resource and Environmental Management (IREM)
- Cumulative Effects Assessment (CEA)
- Strategic Environmental Assessment (SEA)
- Environmental awareness and public participation in decisions

# Concluding Thoughts

Important points to remember are:

- Sustainable development must respect the rights and dignity of all human beings and the environment
- Core themes are pollution prevention, conservation, equitable sharing of benefits, stakeholder input to decisions
- Sustainable development can succeed only if it addresses poverty, hunger, disease, and illiteracy

# Concluding Thoughts (Cont'd)

Additional points to remember are:

- Economic, social, and environmental factors must be integrated and equitable
- Sustainable development becomes more precarious as the number of disadvantaged people increases
- Sustainable development depends on preserving healthy land and water resources