Sustainable Development

Meaning

The great challenge that lies ahead with sustainable development is not only the need to educate it to the people, but to first define it in a way people will understand it. The concept of sustainable development is one that arguably is multi-disciplinary, complex, and systematic, yet defining the concept is without a doubt a great task. Sustainable development was a term first coined in 1980, when the intent of the concept was merely basic. The concept of sustainable development was described by the 1987 Bruntland Commission Report as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

"Sustainable development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs." In other words, Sustainable development can be defined as an approach to the economic development of a country without compromising with the quality of the environment for future generations.

There are four dimensions to sustainable development – society, environment, culture and economy – which are intertwined, not separate. Sustainability is a paradigm for thinking about the future in which environmental, societal and economic considerations are balanced in the pursuit of an improved quality of life. For example, a prosperous society relies on a healthy environment to provide food and resources, safe drinking water and clean air for its citizens.

Sustainable Development Goals

- To promote the kind of development that minimises environmental problems.
- To meet the needs of the existing generation without compromising with the quality of the environment for future generations.

Achieving Sustainable Development

Sustainable development can be achieved if we follow the following points:

- It can be achieved by restricting human activities.
- Technological development should be input effective and not input utilising.
- The rate of consumption should not surpass the rate of salvation.
- For renewable resources, the rate of consumption should not surpass the rate of production of renewable substitutes.
- All types of pollution should be minimised.
- It can be achieved by sensible use of natural resources

Indicators of Sustainable Development

Sustainable development indicators are statistics that are used to measure social equity, economic growth, institutional capacity, and environmental protection to ascertain the different dimensions and levels of sustainable development. With the endorsement by national governments in the 1992 United Nations Conference in Rio de Janeiro, the international action plan "Agenda 21" urges that "indicators of sustainable development need to be developed to provide solid bases for decision-making at all levels"

Some of the key indicators of Sustainable development are provided in the following table:

Broad Indicators

Social	Environmental
Education	Freshwater/groundwater
Employment	Agriculture/secure food supply
Health/water supply/sanitation	Urban
Housing	Coastal Zone
Welfare and quality of life	Marine environment/coral reef protection
Cultural heritage	Fisheries
Poverty/Income distribution	Biodiversity/biotechnology
Crime	Sustainable forest management
Population	Air pollution and ozone depletion
Social and ethical values	Global climate change/sea level rise
Role of women	Sustainable use of natural resources
Access to land and resources	Sustainable tourism
Community structure	Restricted carrying capacity
Equity/social exclusion	Land use change
Economic	**Institutional**
Economic dependency/Indebtedness/ODA	Integrated decision-making
Energy	Capacity building
Consumption and production patterns	Science and technology
Waste management	Public awareness and information
Transportation	International conventions and cooperation
Mining	Governance/role of civic society
Economic structure and development	Institutional and legislative frameworks
Trade	Disaster preparedness
Productivity	Public participation

Sub-theme Indicators

SOCIAL		
Theme	**Sub-theme**	**Indicator**
Equity	Poverty (3)	Percent of Population Living below Poverty Line
		Gini Index of Income Inequality
		Unemployment Rate
	Gender Equality (24)	Ratio of Average Female Wage to Male Wage
Health (6)	Nutritional Status	Nutritional Status of Children
	Mortality	Mortality Rate Under 5 Years Old
		Life Expectancy at Birth
	Sanitation	Percent of Population with Adequate Sewage Disposal Facilities
	Drinking Water	Population with Access to Safe Drinking Water
	Healthcare Delivery	Percent of Population with Access to Primary Health Care Facilities
		Immunization Against Infectious Childhood Diseases
		Contraceptive Prevalence Rate
Education (36)	Education Level	Children Reaching Grade 5 of Primary Education
		Adult Secondary Education Achievement Level
	Literacy	Adult Literacy Rate
Housing (7)	Living Conditions	Floor Area per Person
Security	Crime (36, 24)	Number of Recorded Crimes per 100,000 Population
Population (5)	Population Change	Population Growth Rate
		Population of Urban Formal and Informal Settlements
ENVIRONMENTAL		
Theme	**Sub-theme**	**Indicator**
Atmosphere (9)	Climate Change	Emissions of Greenhouse Gases
	Ozone Layer Depletion	Consumption of Ozone Depleting Substances
	Air Quality	Ambient Concentration of Air Pollutants in Urban Areas
Land (10)	Agriculture (14)	Arable and Permanent Crop Land Area
		Use of Fertilizers
		Use of Agricultural Pesticides
	Forests (11)	Forest Area as a Percent of Land Area
		Wood Harvesting Intensity
	Desertification (12)	Land Affected by Desertification
	Urbanization (7)	Area of Urban Formal and Informal Settlements
Oceans, Seas and Coasts (17)	Coastal Zone	Algae Concentration in Coastal Waters
		Percent of Total Population Living in Coastal Areas
	Fisheries	Annual Catch by Major Species
Fresh Water (18)	Water Quantity	Annual Withdrawal of Ground and Surface Water as a Percent of Total Available Water
	Water Quality	BOD in Water Bodies
		Concentration of Faecal Coliform in Freshwater
Biodiversity (15)	Ecosystem	Area of Selected Key Ecosystems
		Protected Area as a % of Total Area
	Species	Abundance of Selected Key Species

ECONOMIC		
Theme	**Sub-theme**	**Indicator**
Economic Structure (2)	Economic Performance	GDP per Capita
		Investment Share in GDP
	Trade	Balance of Trade in Goods and Services
	Financial Status (33)	Debt to GNP Ratio
		Total ODA Given or Received as a Percent of GNP
Consumption and Production Patterns (4)	Material Consumption	Intensity of Material Use
	Energy Use	Annual Energy Consumption per Capita
		Share of Consumption of Renewable Energy Resources
		Intensity of Energy Use
	Waste Generation and Management (19-22)	Generation of Industrial and Municipal Solid Waste
		Generation of Hazardous Waste
		Generation of Radioactive Waste
		Waste Recycling and Reuse
	Transportation	Distance Traveled per Capita by Mode of Transport
INSTITUTIONAL		
Theme	**Sub-theme**	**Indicator**
Institutional Framework (38, 39)	Strategic Implementation of SD (8)	National Sustainable Development Strategy
	International Cooperation	Implementation of Ratified Global Agreements
Institutional Capacity (37)	Information Access (40)	Number of Internet Subscribers per 1000 Inhabitants
	Communication Infrastructure (40)	Main Telephone Lines per 1000 Inhabitants
	Science and Technology (35)	Expenditure on Research and Development as a Percent of GDP
	Disaster Preparedness and Response	Economic and Human Loss Due to Natural Disasters

Policy issues for sustainable development

Following are the policy issues for sustainable development:

1. **Reducing poverty**: The foremost policy is to reduce poverty. The projects with greater employment opportunities for poor should be started. Investments in civic amenities e.g. supply of drinking water, sanitation facilities etc. will improve environment of country.

2. Removal of subsidies: To reduce environmental damages, the subsidies given for use of resources as electricity, fertilizers, pesticides and diesel etc. should be removed. These subsidies lead to their wasteful use. These also generate environmental problems.

3. Market based approaches: These are urgent need for adopting market based approaches for the protection of environment. They aim at pointing to the consumer and industries about the cost of using natural resources on environment. The market based instruments approach is the best policy. These instruments are in the form of environmental taxes which include pollution charges and user charges.

4. Economic incentives: Economic incentives regarding price, quantity and technology can also help to greater extent. Incentives are usually giv6n in the form of variable fees to resource users for the quantity of pollutants in air, water and land use. They are given rebates if less waste or pollution is generated than the standards laid down by the Government.

5. Public awareness: Public awareness and participation are quite effective to improve environmental conditions. Formal and informal education programmes relating to environment management should be conducted. Public participation can render useful assistance in afforestation, conservation of wildlife, management of parks etc.

6. Participation of Global environmental efforts: It is felt that participation in global environmental efforts can help to minimise damages made by degradation of environment. So efforts should be made to make agreements on environmental protection.

7. Trade Policy: Trade policy stresses on the establishment of less polluting industries away from the cities and the use of environmental friendly processes for polluting industries by adopting cleaner technologies.