

**K.T.S.P. Mandal's
Hutatma Rajguru Mahavidyalaya,
Rajgurunagar.**

**T.Y.B.Sc. Botany
Semester – V (CBCS pattern)**

**Subject – Plant Ecology
(Paper IV: BO. 354)**

**Chapter 9
Topic – Ecological Management**

**Prof.P.D.Kad
(Assistant Professor, Department of Botany)
Hutatma Rajguru Mahavidyalaya
poojakad92@gmail.com**

Ecological management:

Ecosystem management is an approach to natural resource management that aims to ensure the **long-term sustainability and persistence of an ecosystems function and services** while meeting socioeconomic, political, and cultural needs.

Sustainable development

Sustainable development can be defined as **development that meets the needs of the present without compromising the ability of future generations to meet their own needs.**

- In other words it is improving the quality of life of the present generation without excessive use or abuse of natural resources, so that they can be preserved for the next generation.
- The term was first coined in 1972 at the United Nations Conference on Human Environment at Stockholm.
- The most important piece of writing on Sustainable development is in the publication by the World Commission on Environment and Development (WCED) in 1987 titled "Our Common Future".
- Sustainable development is often referred as the marriage of economy and ecology. i.e. to attain economic development without compromising the ecological balance.
- It can be attained by rigorous policy change, taking action and altering practices.

- There are three aims of sustainable development :- a) Economic- to attain balanced growth b) Ecological- to preserve the eco system c) Social-guarantying equal access to resources to all human communities

Need for sustainable development:

- There are several challenges that need attention in the arena of economic development and environmental depletion.
- Hence the idea of Sustainable development is essential to address the following issues.
- To curb or prevent the environmental degradation
- To ensure a safe human life
- To check the exploitative technology and find alternative sources
- To check the over exploitation and wastage of natural resources
- To regenerate renewable energy resources

The concept of Sustainable development is based on following principles

Integration of environment and economic decision

Stewardship or humans as the caretaker of the environment

Shared responsibility, accountability and decision making

Prevention and mitigation Conservation

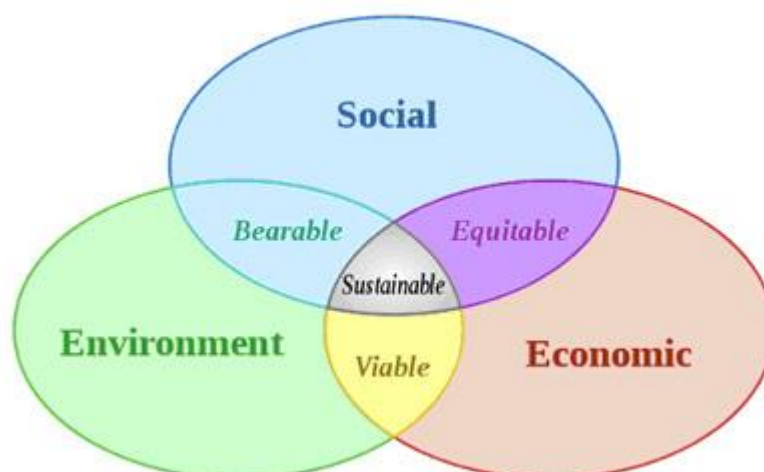
Waste minimization

Enhancement of productivity, capability, quality of nature and human life

Rehabilitation and reclamation

Components of sustainable development:

- The components are broadly divided into three elements namely social, economic and environmental.
- Economic Social Environment
- **a) Social components-**
 - Workers health and safety
 - Impact on local communities, quality of life
 - Benefits to disadvantaged groups
- **b) Economic components:**
 - Creation for new markets and opportunities for sale growth
 - Cost reduction through efficiency and improvements and reduced energy and raw material inputs
 - Creation of additional value
- **c) Environmental components:**
 - Reduce waste, effluent generation, emission into environment
 - Reduce impact on human health
 - Use of renewable raw material
 - Elimination of toxic substances



Goals of Sustainable development:

- The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

- The 17 SDGs are integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability
- Countries have committed to prioritize progress for those who're furthest behind. The SDGs are designed to end poverty, hunger, AIDS, and discrimination against women and girls.
- The creativity, know how, technology and financial resources from all of society is necessary to achieve the SDGs in every context.

The 17 sustainable development goals (SDGs) to transform our world:

GOAL 1: No Poverty

GOAL 2: Zero Hunger

GOAL 3: Good Health and Well-being

GOAL 4: Quality Education

GOAL 5: Gender Equality

GOAL 6: Clean Water and Sanitation

GOAL 7: Affordable and Clean Energy

GOAL 8: Decent Work and Economic Growth

GOAL 9: Industry, Innovation and Infrastructure

GOAL 10: Reduced Inequality

GOAL 11: Sustainable Cities and Communities

GOAL 12: Responsible Consumption and Production

GOAL 13: Climate Action

GOAL 14: Life Below Water

GOAL 15: Life on Land

GOAL 16: Peace and Justice Strong Institutions

GOAL 17: Partnerships to achieve the Goal



SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD



References:

1. [http://aditi.du.ac.in/uploads/econtent/FC_Sem_2_SUSTAINABLE DEVELOPMENT CONCEPT AND COMPONENTS.pdf](http://aditi.du.ac.in/uploads/econtent/FC_Sem_2_SUSTAINABLE_DEVELOPMENT_CONCEPT_AND_COMPONENTS.pdf)
2. <https://www.un.org/sustainabledevelopment/blog/2015/12/sustainable-development-goals-kick-off-with-start-of-new-year/>
3. <https://www.undp.org/sustainable-development-goals>