Watershed

Every body of water (e.g., rivers, lakes, ponds, streams, and estuaries) has a watershed. The watershed is the area of land that drains or sheds water into a specific receiving water body, such as a lake or a river. As rainwater or melted snow runs downhill in the watershed, it collects and transports sediment and other materials and deposits them into the receiving water body.

Watershed can be defined as a **geo-hydrological unit draining to a common point** by a system of drains. All lands on earth are part of one watershed or other. Watershed is thus the land and water area, which contributes runoff to a common point.

A watershed is an area of land and water bounded by a drainage divide within which the surface runoff collects and flows out of the watershed through a single outlet into a lager river/lake.

Watershed Management

Watershed management is a term used to describe the process of implementing land use practices and water management practices to protect and improve the quality of the water and other natural resources within a watershed by managing the use of those land and water resources in a comprehensive manner.

Watershed development and management implies an **integration of technologies within the natural boundary of a drainage area** for optimum development of land, water and plant resources, to meet the people's basic needs in a sustained manner. A watershed is an area from which runoff resulting from precipitation flows past a single point into a large stream, river, lake or pond. Each watershed is an independent hydrological unit. It has become an acceptable unit of **planning for optimum use and conservation of soil and water resources.**

The concept of integrated watershed development refers to the development and management of the resources in the watershed to achieve higher sustainable production without deterioration in the resource base and any ecological imbalances. This concept requires the formulation and implementation of a package of programmes with activities for optimum resource use in the watershed without adversely affecting the soil and water base or life supporting system. The concept assumes more importance in the context of planning for sustained development. Watershed development aims at preventing watershed degradation resulting from the interaction of physiographic features. It eliminates unscientific land use,

inappropriate cropping patterns and soil erosion, thereby improving and sustaining productivity of resources leading to higher income and living standards for the inhabitants in the watershed area. It therefore involves **restoration of the ecosystem, protecting and utilizing the locally available resources** within a watershed to achieve sustainable development.

Major components of watershed

- Soil and water conservation
- Water harvesting and management
- Alternate land use system.

Objectives of watershed management

1. To control **damaging runoff and degradation** and thereby conservation of soil and water.

2. To protect, conserve and **improve the land of watershed** for more efficient and sustained production.

4. To protect and **enhance the water resource** originating in the watershed by Rain water Harvesting etc .

5. To **check soil erosion** and to reduce the effect of sediment yield on the watershed.

6. To **rehabilitate the deteriorated** landscape.

7. To **moderate the floods** peaks at downstream areas.

8. To **increase infiltration of rainwater** and recharging of groundwater.

9. To improve and increase the production of timbers, fodder and wild life resource.

10. To promote and facilitate water dependent recreational activities.

Integrated Watershed Management Programme (IWMP)

Till 1.4.2008, Department of Land Development implemented 3 watershed programmes viz

- Integrated Wastelands Development Programme
- Drought Prone Areas Programme
- Desert Development Programme.

Since then, they have been brought under a comprehensive programme named Integrated Watershed Management Programme (IWMP) to be implemented under Common Guidelines on Watershed Development,2008.

The main objectives of the IWMP are :

- To restore the ecological balance by harnessing,
- conserving and developing degraded natural resources such as soil, vegetative cover and water.
- The outcomes are prevention of soil run-off, regeneration of natural vegetation.
- Rain water harvesting and recharging of the ground water table .
- This enables multi-cropping and the introduction of diverse agro-based activities
- Helped to provide sustainable livelihoods to the people residing in the watershed area.