

Soil Conservation in Physical Planning of a Watershed

A **comprehensive approach** is required that treats the **interdependent relationship** between the various components of watershed development :

Climate Hydrology Ecology Agriculture
Community Development

Main Principles of Soil Conservation

1. Soil conservation is an essential part of an overall approach to **watershed development**. Physical planning should include **soil conservation measures** to treat both the **uplands** as well as the **lowlands**.

Stages in Physical Planning of a Watershed

1. **Data collection** through **surveys** is essential to gain full knowledge and understanding of the **current conditions** existing in the watershed to be developed.

Data for **agricultural** land use-
soil properties, climatic conditions, irrigation water
quality, plant growth requirements

2. Evaluation of data from surveys

Land use suitability is the **main criteria** in physical planning for determining:

1. Land to be under **cultivation** or for other uses(forest, pasture)

2. Necessary **soil conservation measures** for each kind of land use.

Different Land Uses in a Watershed

Agriculture-row crops/orchards

Forest Land

Pasture Land

3. Design of soil conservation practices for different kinds of land use

Erosion Control

Drainage

Summary

1. **Good soil management** as part of **physical planning** is the key to effective soil conservation in watershed development.
2. **Land use suitability** based on data collection from surveys of the existing conditions is the **main criteria** for physical planning and for applying soil conservation practices in the watershed.
3. **Effective land use** depends on **proper design** and **application** of soil conservation measures.