



FACULTY OF AGRICULTURAL SCIENCES & ALLIED INDUSTRIES

Rainfed Agriculture and Watershed Management

Lecture -12

Principles of watershed management

- Utilizing the land based on its capability
- Protecting the fertile top soil
- Minimizing the silting up of the reservoirs and lower fertile lands
- Protecting vegetative cover throughout the year
- Insitu conservation of rain water
- Safe diversion of surface runoff to storage structures through grassed water ways
- Stabilization of gullies and construction of check dams for increasing ground water recharge.
- Increasing cropping intensity through inter and sequence cropping.
- Alternate land use systems for efficient use of marginal lands
- Water harvesting for supplemental irrigation
- Ensuring sustainability of the ecosystem
- Maximizing farm income through agricultural related activities such as dairy poultry, sheep, and goat farming
- Improving infrastructural facilities for storage transport and agricultural marketing
- Setting up of small scale agro industries and
- Improving socio-economic status of farmers

Action plan for watershed development (steps in watershed management)

Identification and selection of watershed: The boundary of the watershed has to be marked by field survey starting from the lowest point of the water course and proceeding upwards to the ridge line. The area may vary as low as 100 ha to as high as 10000 ha.

Description of watershed.

- Basic information has to be collected on
- Location
- Area, shape and slope

- Climate
- Soil - geology, hydrology, physical, chemical and biological properties, erosion level
- Vegetation-native and cultivated species
- Land capability
- Present land use pattern
- Crop pattern, cropping system and management
- Farming system adopted Economics of farming Man power resource Socio economic data
- Infrastructural and institutional facilities