

CONCEPT OF DEVELOPMENT

Aspects of development

- Raising people's living levels
- Creating conditions conducive to the growth of people's self-esteem
- Increasing people's freedom to choose by enlarging the range of their choice

Sustainable Development

- Used by Brundtland Commission
- Ability to meet the needs of the present while contributing to the future generation's needs.
- Environmental sustainability
- Economic sustainability
- Social sustainability
- Cultural sustainability

Water conservation

- Means reducing the use of the water & recycling of waste water
- Described in various ways
 1. Reduction in water loss
 2. Reduction in water use
 3. Improved water management practices

WATER CONSERVATION METHODS

- In household (indoors) application
 1. Verify your home is leak free
 2. Avoid flushing the toilet unnecessarily
 3. Turn off water while brushing teeth
 4. Use waste water of cloth cleaning to clean the floor
 5. Do not use running water for releasing ice from tray
 6. Do not use extra detergent in washing clothes
 7. Do not use shower/big bath tubs in bathrooms

Water conservation methods

- In commercial applications
 1. Waterless car washes
 2. Foot operated taps
 3. Pressurized water brooms
 4. Water saving steam sterilizers
 5. Rain water harvesting

Water conservation methods

- In outdoor/ agriculture applications
 1. Minimize grass lawns
 2. Do not over-water your lawns
 3. Water the lawns during early morning
 4. Check leaks in pipes
 5. Reduce evaporation losses in lakes
 6. Avoid over fertilizing your lawn

Watershed Management

- To conserve the most important recourse, many techniques are followed few on small scale like domestic/village etc. one technique established to achieve effective conservation of water

Causes of watershed deterioration

- Faulty agriculture, forestry and pasture
- Faulty road alignment & construction
- Industrialization
- Forest fires
- Apathy (less interest) of people

Effect of watershed deterioration

- Less production from agriculture, forest, grass land etc.
- Increase in erosion & decrease in biomass production
- Rapid siltation of reservoirs, lakes & river beds
- Less recharge of water & lowering of water table
- Poverty as a result of less food production

Treatment measure for watershed development

- Contour bunding
- Contour trenching
- Contour stone walls
- Bench terraces
- Land leveling
- Summer ploughing
- Agro forestry with suitable species
- Vegetative barriers
- Renovation of existing water bodies and inlet channels

Components of watershed development

- Human resource development
- Soil and land management
- Water management
- Crop management
- Afforestation
- Rural energy management

Rain water harvesting

- Method to collect, store, & conserve runoff water from surface

Methods of rain water harvesting

- Surface runoff harvesting
- Roof top rain water harvesting

Benefits

- Can provide plenty of drinking water and water for irrigation
- Ground water recharge is improved
- Helps to achieve greenery, enhances forestry, horticulture, etc

Components

- Catchment
- Transportation
- First flush
- filter

Precaution

- Roof should be clean, free from dust
- Roof should not be painted
- Do not store chemical, rusting iron on roof
- Nesting of birds on roof should be prevented
- Do not use polluted water to recharge ground water

Climate change