

Water Budgeting (Harvesting)

- [WatrPlan.xls](#)

Watershed division (Hydrology)

▶ Run-off zone

High slopes more 15%

- Nonstructural (vegetation management) practices
- **NO Structural (engineering) practices**

▶ Recharge Zone

Mild slopes from around 5 to 15%

- Soil conservation practices
- Land use planning
- Agro-forestry practices
- Building dams

▶ Storage zone

Low slopes less than 5%

- Farm ponds
- Percolation tanks

Appropriate Structures



Contour trenching on Run-off Zone for soil conservation

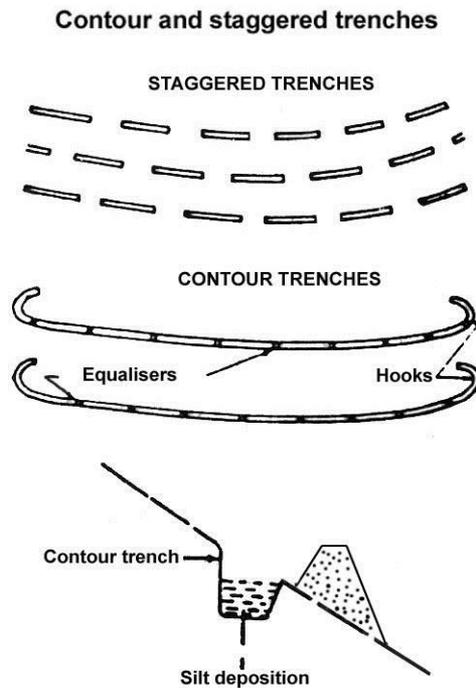


Check Dams on recharge zone Water

Run-off zone (Structures)

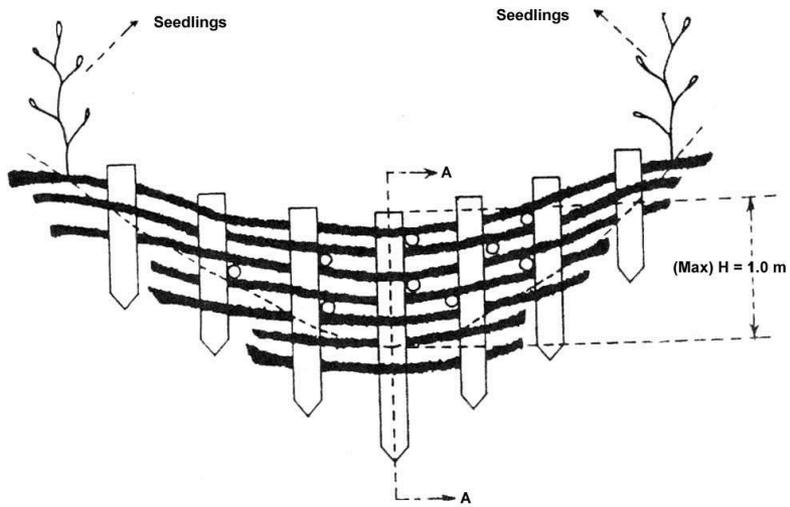
- **Continuous contour trenches (CCT)**
- **Staggered contour trenching**
 - Help to retain soil cover
 - Reduce run-off velocity
 - Plantation to stabilise the soil
- **Earthen Gully Plugs /Stone gully plugs**
 - Constructed across the ill defined gullies
 - Are meant to stabilise gullies and reduce the velocity
- **Water absorption Trenches (WAT)**
- WAT are constructed at the bottom of foothill. Slightly oversized , to arrest the water finally.

Contour and Staggered trenches



A brushwood Check dam

A brushwood checkdam



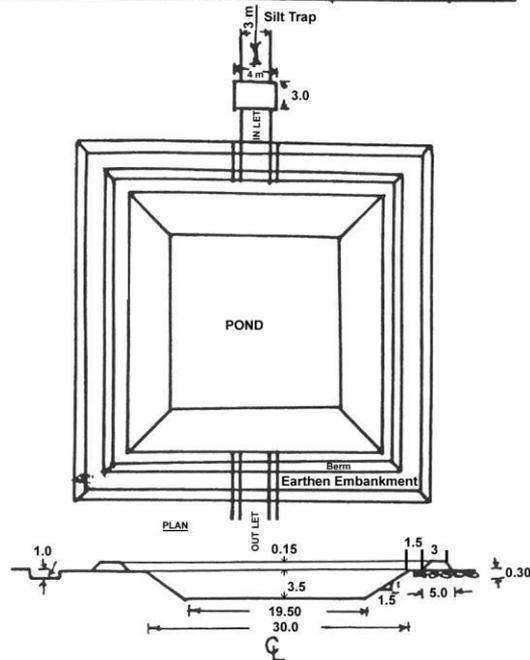
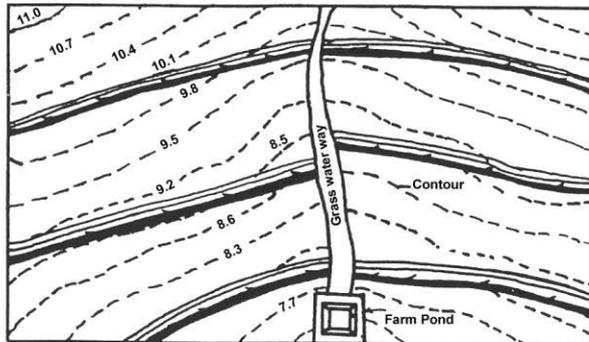
Recharge zone (Structures)

- **Farm Bunds** serve combined purpose of soil and water conservation in-situ in the farm lands.
- **Compartment bunds** Division of large land pieces in to small compartments. Use full in soil water conservation
- **Nalla Bunds** serve combined purpose of soil and water conservation



Farm pond for run-off harvesting

Farm pond for runoff harvesting

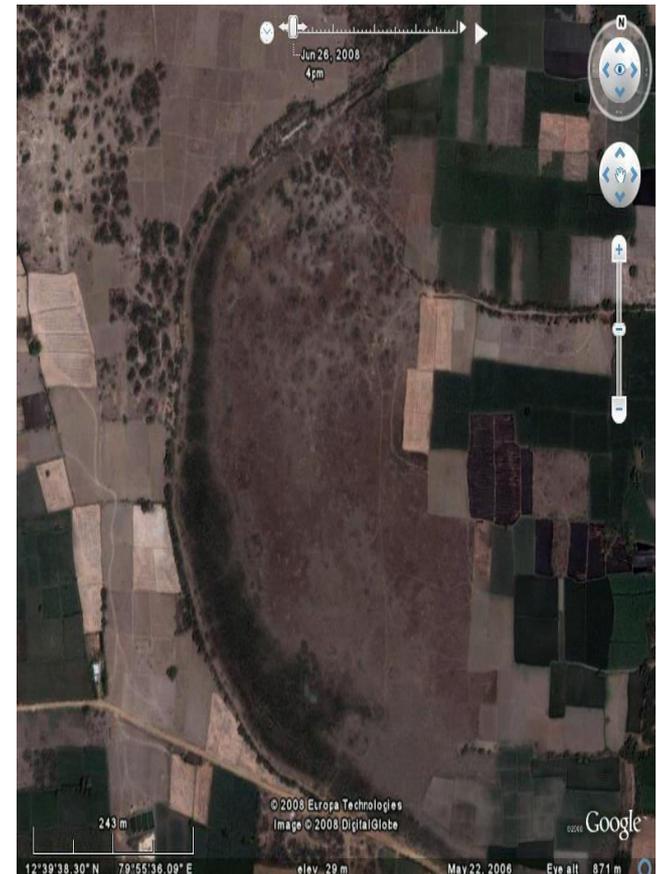


Not to scale



Storage zones (Structures)

- **Percolation Tanks**
 - Normally constructed on the mildly sloping lands.
 - Advantage is increased storage
 - It also helps in recharge
 - Could be used for the protective irrigation in case of dry spells



Check dams with RCC



Vented Dams good for high rainfall areas.



Community Participation

- Stake holders should well aware about water literacy.
 - Rainfall pattern
 - Ground water recharge
 - Water availability
 - Withdrawal for domestic and irrigation purposes

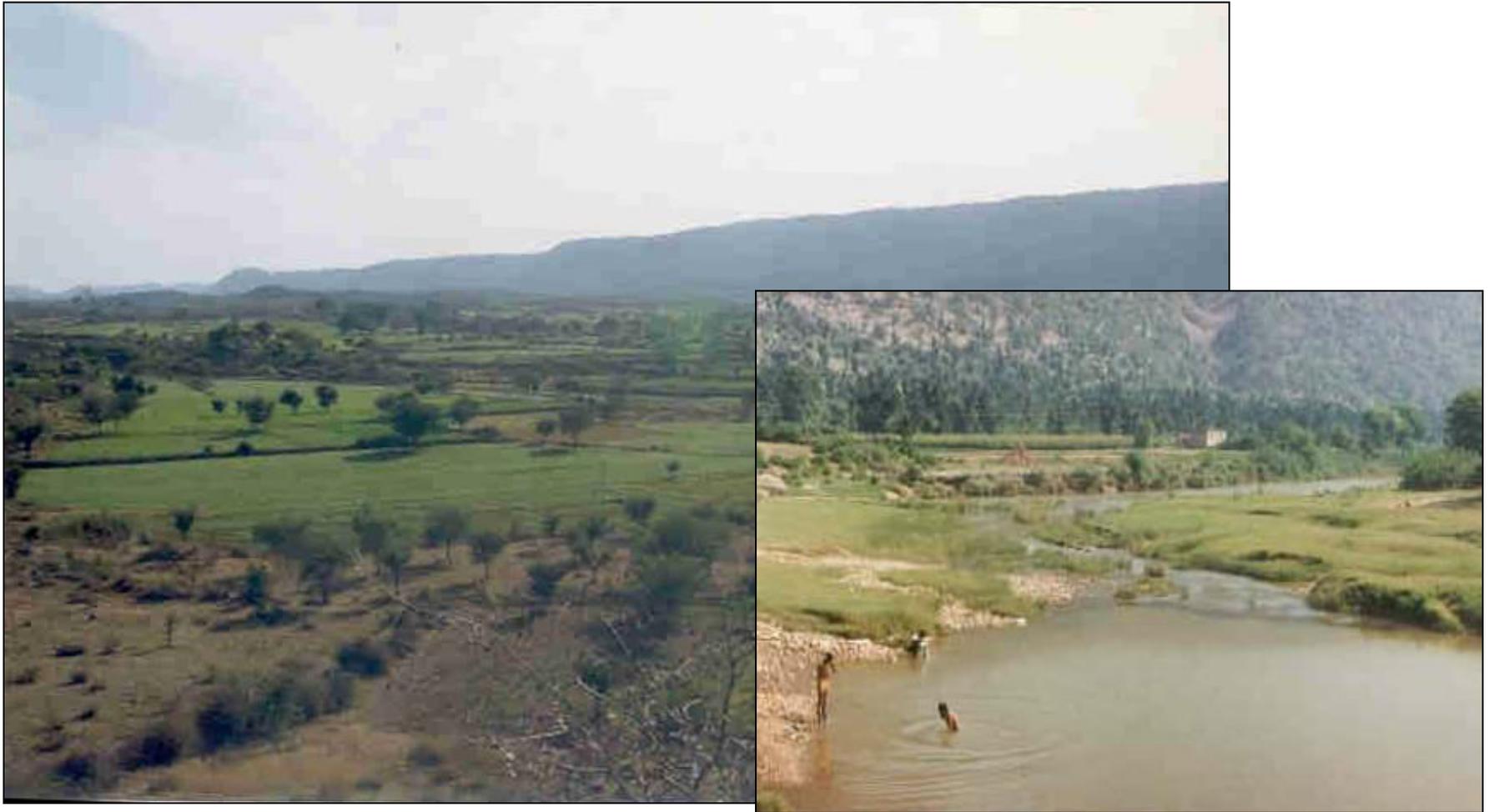
Consistent efforts and capacity building leads community for their participation in the programme.



Lack of integrated approach.



Result of Integrated Approach



- ▶ By working in concert with nature in this way, we shall manage resources in an integrated fashion which shall avoid some of the past failures that were not considered for the larger-scale impacts.

Thank you