Soil & Water Conservation

Community Led Landscape Management Project

Contour Trenches

- The rain water does not immediately run off the hill,
- Water does not evaporate uselessly
- The water balance is enhanced
- Crops do not suffer later on from water shortage,
- Fertile soil particles are not lost by water and wind erosion.

Contour Trenches

Field Bunds

- Bunds (also called teras) are small barriers to runoff coming from external catchments (and possibly to a field where crops are to be grown). Bunds slow down water sheet flow on the ground surface and encourage infiltration (groundwater recharge) and soil moisture.
- Bunds are not generally built to eventually extract water, but rather to add soil moisture or contribute to groundwater recharge.
- Locate bunds in natural runoff areas, preferably in sites already shaped by topography – indicators include seeing where water flows during flood times, and soil / vegetation types.

Field Bunds

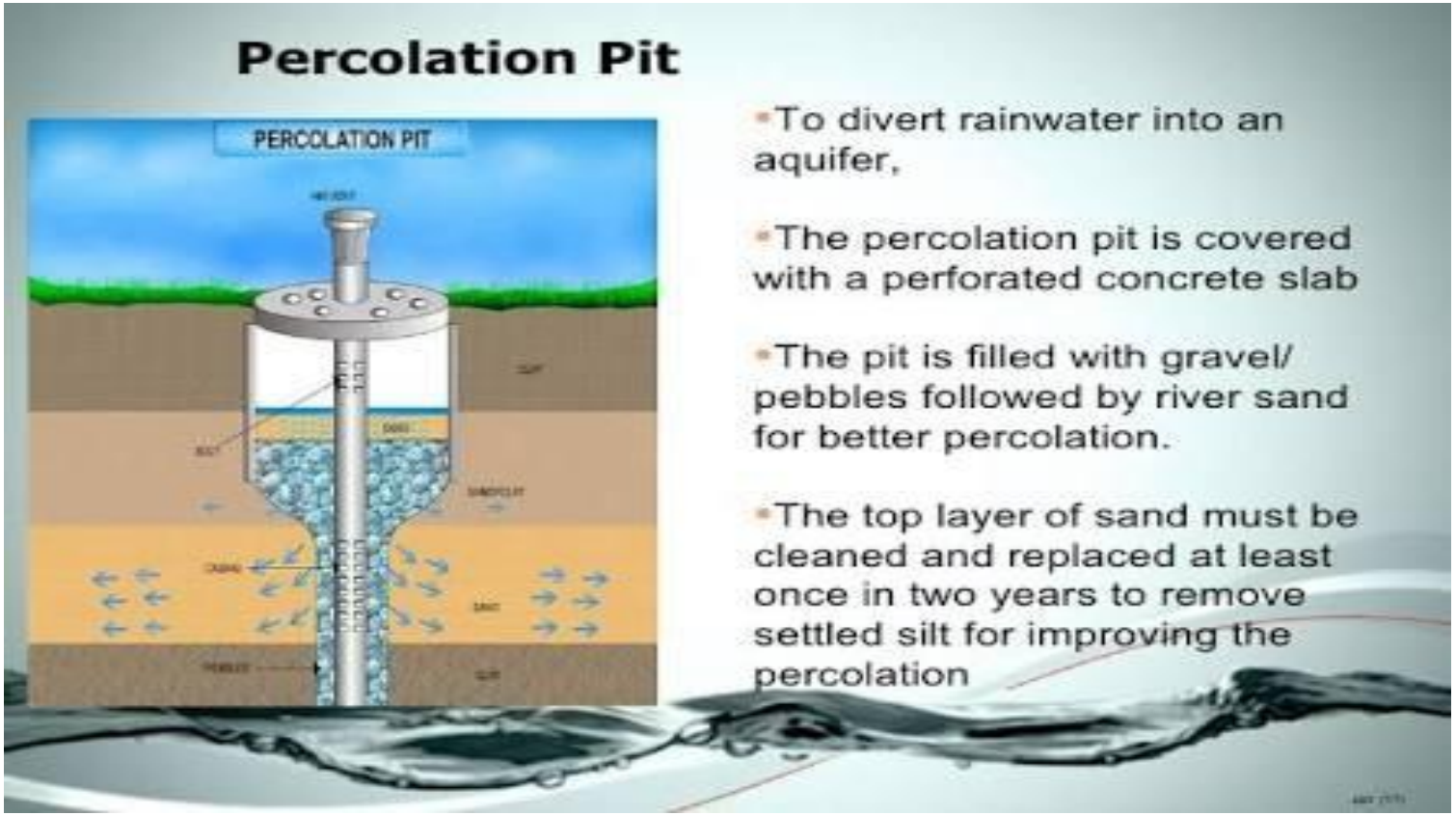
Gully Plugs

- ***Gully plugs*, also called check dams, are mainly built to prevent erosion and to settle sediments and pollutants.**
- **It is possible to keep soil moisture due to infiltration.**
- **They have to be inspected regularly and any damages must be repaired.**

Gully Plug

Percolation Pits

- A percolation pit, in its most low-tech form, is a simple hole dug into the ground.
- It facilitates groundwater recharge through infiltration of surface runoff into the soil or rock.
- Differences to contour trenches:
- Better water storage capability due to greater depth.
- Better stability due to the circular walls, allows for application on steeper slopes than are recommended for contour trenches.



Percolation Pit

Well Recharge Pit

- Site only in areas where rainwater does not infiltrate fast enough where there is high runoff.
- **Avoid** where there is a risk of chemical contaminants entering the well, e.g. fertilizers and pesticides from agriculture, and when the final water abstracted will be used for drinking, unless you have the ability to apply an appropriate filter.

Recharge Well under Construction

Afforestation

- **Afforestation** is the establishment of a forest or stand of trees (forestation) in an area where there was no previous tree cover.
- Prevents erosion through vegetative cover
- Forest attracts rain

Afforestation

Assisted Natural Regeneration of Degraded Area (Pic: Doi Sutheep Pui National Park, Thailand)

Bench Terracing

- **Bench terraces** are a soil and water conservation measure used on sloping land with relatively deep soils to retain water and control erosion.
- They are normally constructed by cutting and filling to produce a series of level steps or **benches**.
- This allows water to infiltrate slowly into the soil.

Bench Terracing