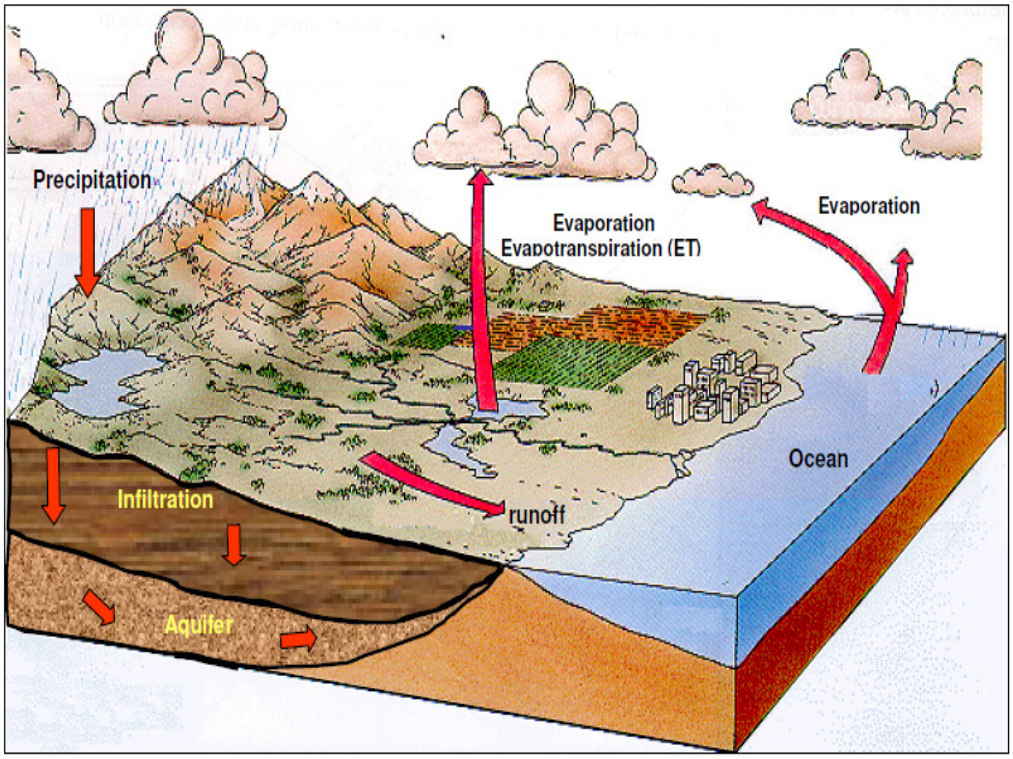
Hydrological Cycle



In summary, the water sources of the earth can be categorized as follows:

- Atmospheric water – Rainfall, Dew, Snow etc.
- Surface water – Rivers, Sea, Oceans, Streams, Lakes, Springs etc.
- Groundwater – Aquifers

- Water generally occurs in three states, Solid (ice), Liquid (water) and Gaseous (moisture). When water is evaporated from rivers, lakes and ponds, it is converted into gaseous state (vapor) in the atmosphere to form atmospheric water; this is in turn released back to the earth as rainfall, dew, or snow as the case may be depending on the geographical location, season and time.

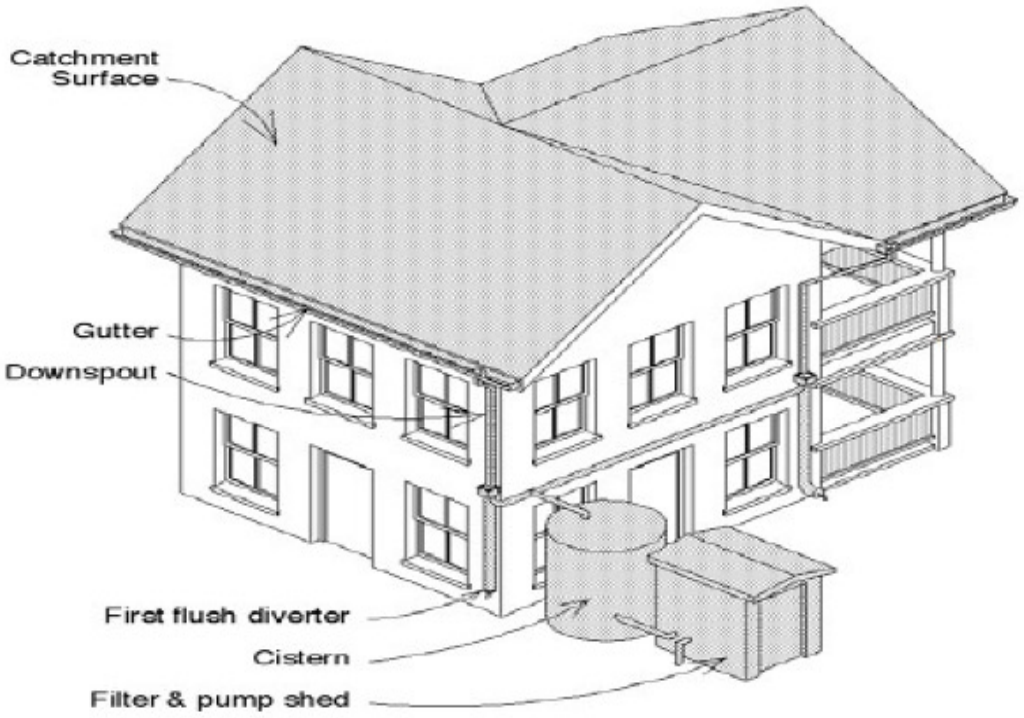


Figure 2: Rainwater harvesting for domestic Use

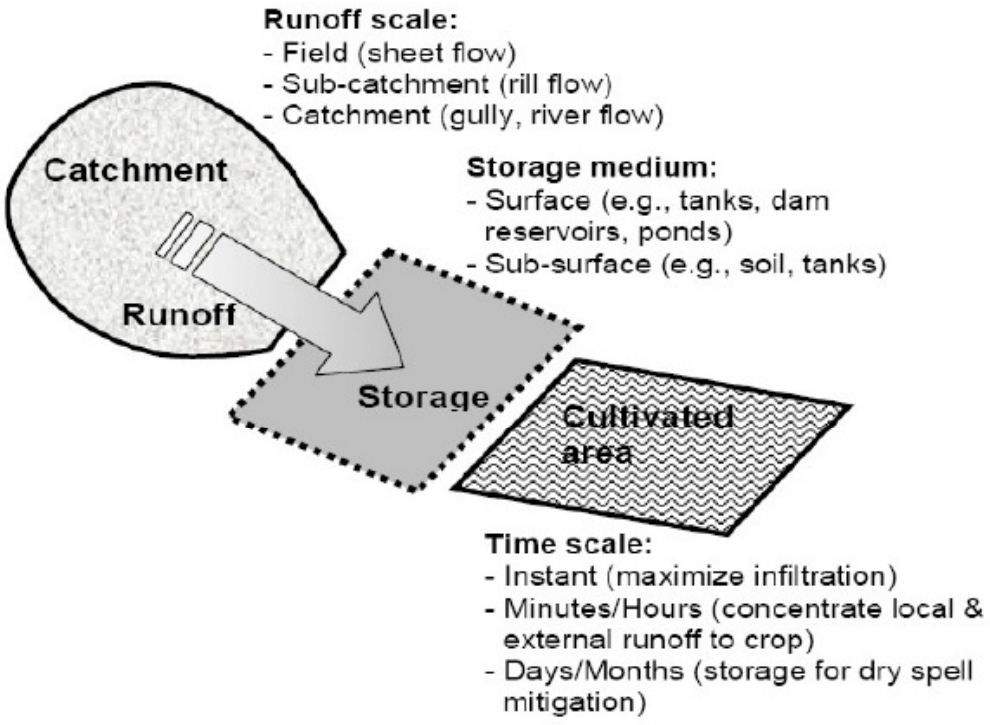


Figure 3: Rainwater harvesting for crop production

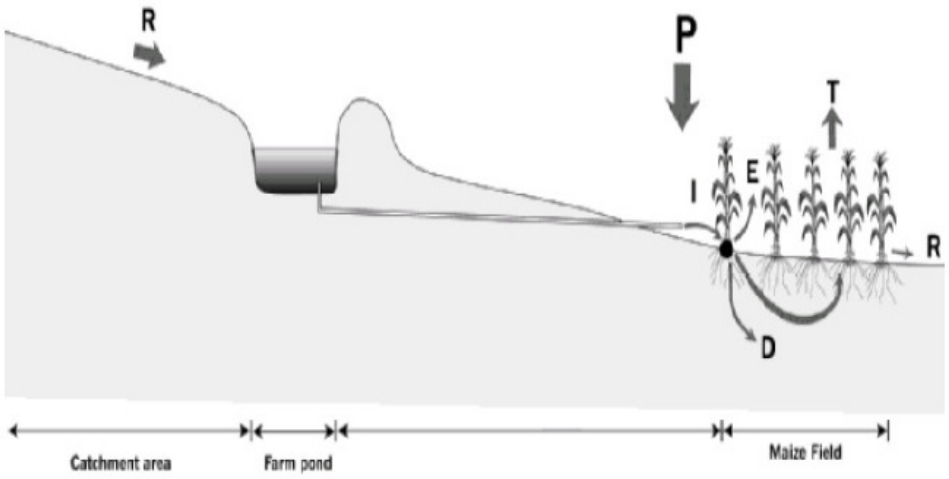


Figure 4: A typical on-farm pond for irrigation

- **Surface water Development**
  - As earlier explained, rivers, streams etc. usually receive a lot of water from the contributing catchment in the wet season; the water in the rivers can be developed for the use of man. The development of the surface water of a river for example may require the construction of a dam in order to impound the water in a reservoir created by reason of the damming or the construction of an intake structure from which part of the flow in the river can be abstracted for use.
  - A reservoir is created on rivers to store water during the wet season and is later released in the dry season when the flow is low in order to meet demand.