

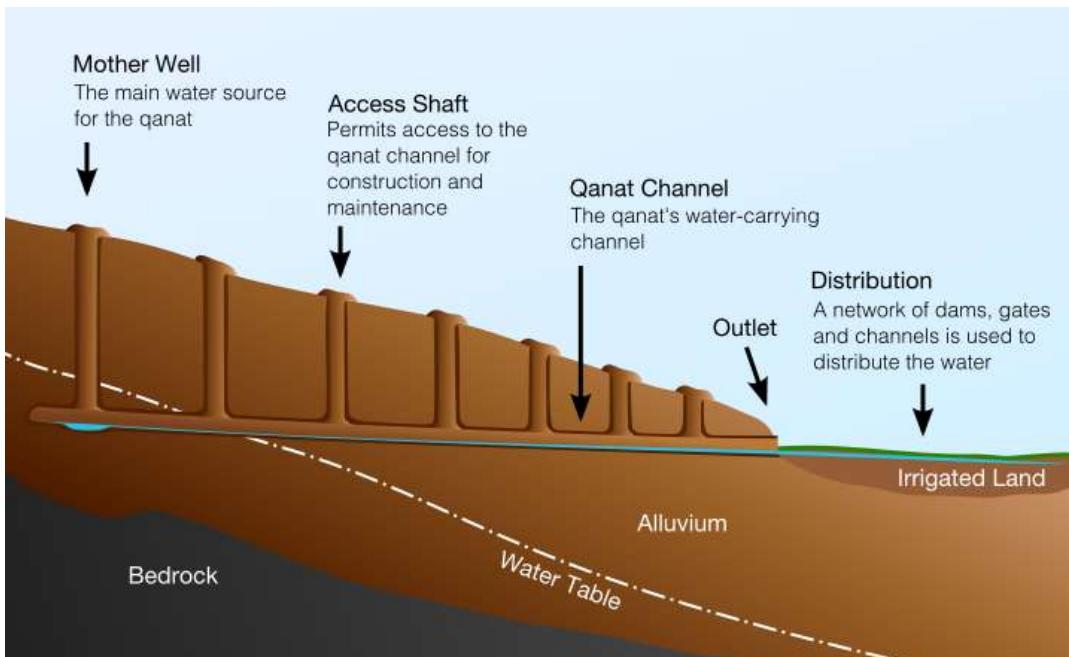


Irrigation - Karez

What is Karez?

A Karez is a traditional water management system used throughout Afghanistan. The system uses gravity to deliver underground water to the surface. The system allows water to be transported over long distances in hot dry climates with limited losses to seepage and/or evaporation. An estimated 7,000 Karez irrigate an area of around 170,000 ha in Afghanistan.

A Karez consists of vertical shafts, connected by gently sloping tunnels (See figure).



A Karez (known as a Qanat in other countries) brings underground water to the surface using gravity. (Diagram - Samuel Bailey Wiki)

The Karez system is organized and operated by local communities. Water allocations are based on water entitlements and rotations (similar to surface water systems).

Issues

Karez require regular maintenance to 1) repair collapsed canals or shafts, 2) clean out silt from channels, and 3) reduce water losses from broken canals. Some Karez are no longer working as excessive mechanical pumping has lowered water tables below the intakes of the Karez.



Karez canals require maintenance
(Photo <http://www.afghanistan.gc.ca>)

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