Traditional irrigation techniques in an agroecological perspective

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Traditional irrigation techniques can be considered as an active defence against desertification and climate change

Traditional agriculture has been made possible thanks to strongly anthropogenic ecosystems, i.e. the oases, which are the result of a symbiosis, between humankind and nature, leading to strongly coevolutive agricultural ecosystems. Traditional irrigation techniques (e.g. terraces) made the cultivation possible in adverse environments thanks to the exploitation of distant water sources or atmospheric humidity. These techniques can be considered as one of the axles of the oases and an active defence against desertification.
A different paradigm: the palmerie

A palmerie is a strongly productive sparse palm forest arising in an area where the water table is close to the surface and where a stream, often hyporheic, is present.

The palmerie is irrigated mostly by flooding, the concept of irrigation efficiency is no more valid since the percolating water recharges the water table and it is reused downstream.

The trees protect the soil from sun sterilization and wind erosion and heavy machinery too. The palmerie is an ecosystem able to produce during all the year and it is the driver of the local economy in many desertic areas.
Traditional agriculture a tool for resiliency

From an agricultural point of view, a major source of crisis can be the change of water availability, particularly in the case of a decrease in availability. In these scenarios it seems that traditional farming systems are intrinsically resilient and prove to have a large potential to adapt to climatic changes.

Tradition farming systems often have been subjected to natural selection across the centuries and have been adapted to their particular environment.