



Food and Agriculture Organization
of the United Nations

Farming fish in the desert is a necessity



Fish consumption in many desert countries is very low, up to three to four times lower than the global average (20.5 kg/capita/year in 2018). Many countries rely on fish imports to meet local needs and demands.



Developing innovative aquaculture systems for food security and nutrition as become imperative in the Near-East and North-Africa region. FAO is working with Governments and private sector to promote sustainable aquaculture systems well adapted to arid and desert conditions.



Aquaculture can be integrated with crop production in traditional oasis or aflaj systems, bringing beneficial impacts in addition to food production. It can also be implemented by using brackish or saline ground water with systems such as integrated fish-salicornia production;



Emerging technologies such as RAS (Recirculated Aquaculture System) permit to virtually produce any fish anywhere. Commercial units producing salmon, grouper, sturgeon, yellowtail kingfish or tilapia have provided the proof of concept in desert areas;



It can also be practiced using water-scarce technologies such as aquaponics;



Finally, the access to sea by most desert countries provides good prospect for marine aquaculture production as well as unfed aquaculture, with filter-feeding shellfish such as oysters or seaweed.

Desert aquaculture is technically feasible and must be developed to feed the fast-growing population in arid areas.

To learn more:

