

# 2018

# 2050

# The solution

Decline in arable land\*

World population growing\*



7.6 bn

1.5 Mrd ha



9.8 bn

+29%

-10%

1.35 bn ha

Accessing new land

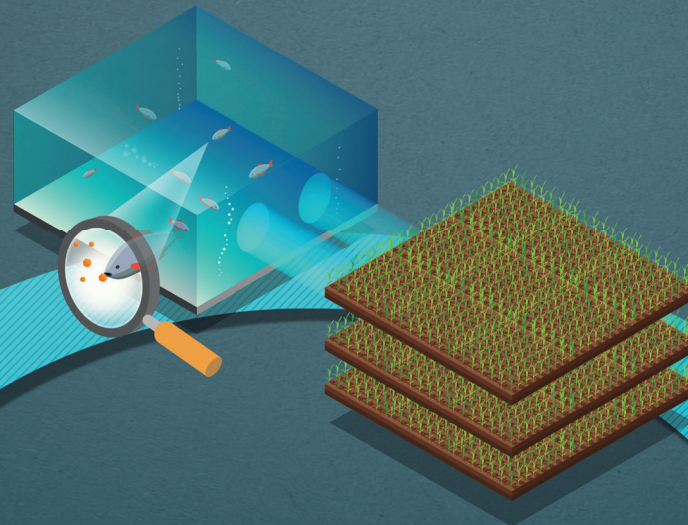
Boosting efficiency

\*ARABLE LAND PER CAPITA IN DECLINE THROUGH 2050



Aquaponics combines the breeding of fish and the cultivation of plants in a closed system.

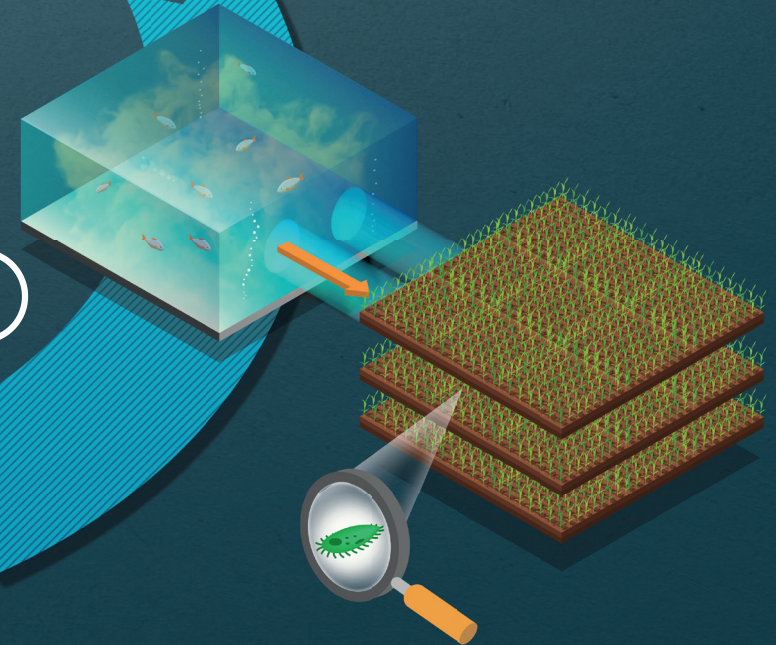
1



After being decomposed by bacteria, the fish excretions act as fertilizers for the plants (nitrates).

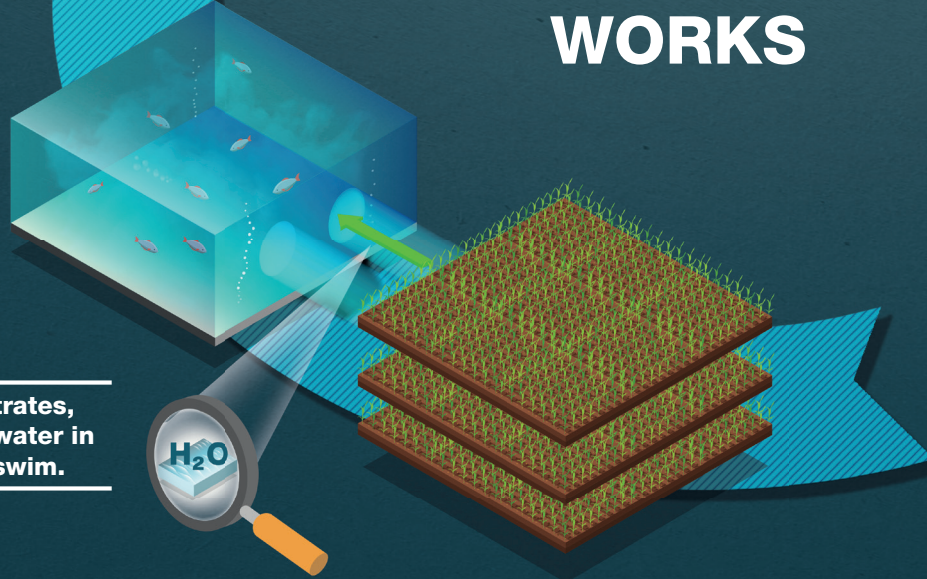
# HOW AQUAPONIC WORKS

2



3

By absorbing nitrates, plants purify the water in which the fish swim.



**Plants** grow in culture beds. Bacteria split ammonia into nitrites and then into nitrates. These are extracted from plants as nutrients. The water filtered in this way is then released back to the fish.



**Water** is circulated between culture beds and fish tanks. The oxygen contained in water is essential for plant growth and for the survival of fish.



**Fish** are fed and produce waste rich in ammonia. The type of fish depends on the size of the tank.