

Fresh water is scarce

All the water
on earth
(including oceans)

All the
fresh water
on earth

Fresh water
in our lakes
and rivers

1.

- Fresh water accounts for only 2.5% of all water
- Scarcity is increasing due to climate change

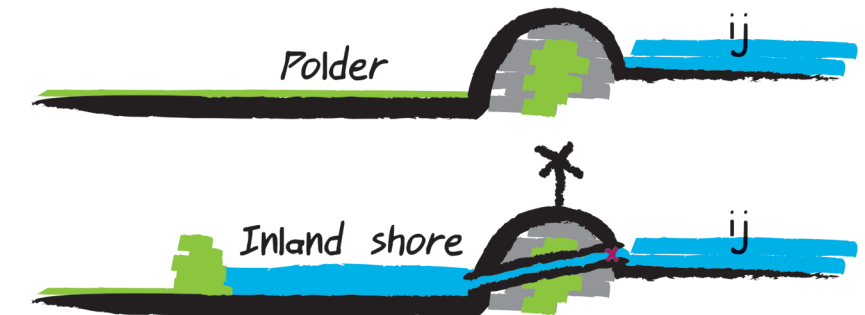
IJsselmeer: the rain barrel of the Netherlands

2.

IJsselmeer and Markermeer together form the country's rain barrel. During high water levels, we discharge valuable fresh water into the sea. There are plenty of opportunities to better utilise this water.

Innovative water management using 'inland shore'

Added value
Economy
Ecology
Quality of life
Safety



3.

'Inland shores' enable us to better utilize our water by giving it more space and creating a better balance in space and time using flexible water level management. 'Inland shores' provide added value in terms of the economy, ecology, quality of life and safety.

Ecological inspiration: Lake Peipsi (Estonia-Russia)

4.

- Room for water: no dikes like around IJsselmeer, but natural banks
- Higher water level in the winter, submerged grasslands
- In spring, shallow waters warm up quickly, creating the perfect breeding habitat for fish and other animals

Ecological living lab: Koopmanspolder 'inland shore'

5.

- 16 hectares living lab
- Water level management through fish-friendly screw pump
- Experiments with various water levels since 2014
- Result: polder is spawning ground and juvenile habitat for fish and is attractive to birds

Economic inspiration: Taihu Lake (China)

6.

- Fresh water lake 300 km west of Shanghai, China
- Intensive fresh water aquaculture in and on the water
- Solutions both within and outside of the dikes

Economic living lab: Wieringermeer 'inland shore'



7.

- Living lab and breeding pond at the farm
- Experiments with new fresh water revenue models
- Breeding of Chinese mitten crab, various fish species and floating and salt-tolerant crops

Help creating the future of circular food

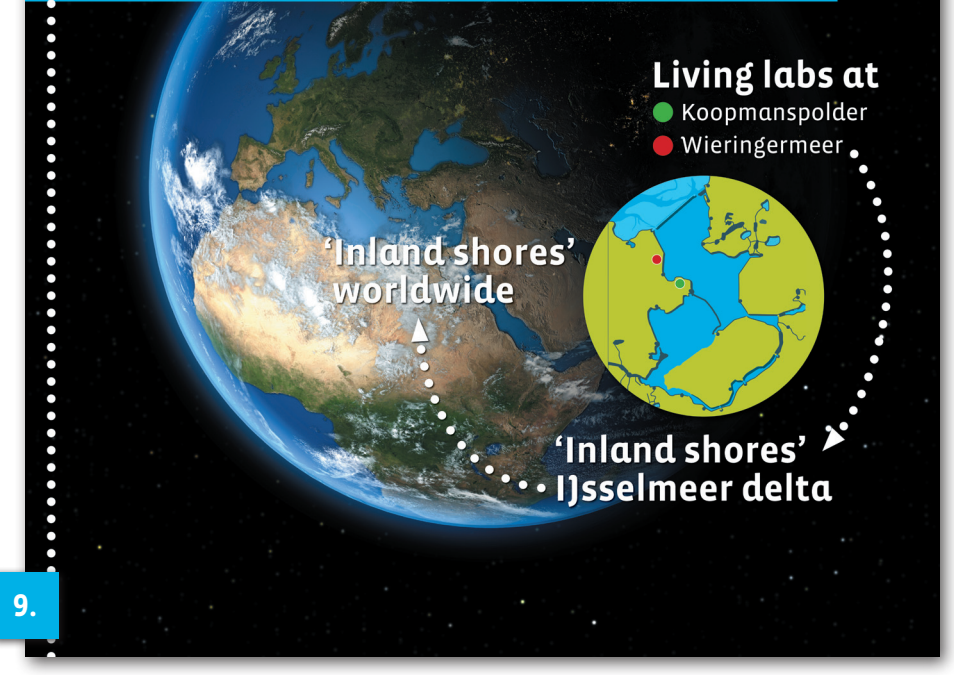


8.

PROTIX

- Nutrients from insects
- Local production
 - Efficient recovery of organic residual flows
 - Efficient use of soil
 - No methane emissions
 - Minimal use of fresh water
 - No waste
 - Agricultural diversity
 - Closing cycles

Our vision for the future: scaling up the concept



9.

- Gain recognition and acceptance of the innovative 'inland shore' concept for practical implementation in the Netherlands and internationally
- Enable countries to continue developing the concept in terms of quality of life, safety and connecting to other innovations

inland shores



The 'inland shore' concept was developed by:
Rijkswaterstaat in collaboration with Deltares

Collaboration partners for the Koopmanspolder 'inland shore':
Rijkswaterstaat, Deltares, Province of North Holland, Hollands Noorderkwartier district water board, Municipality of Medemblik, FishFlow Innovations, Staatsbosbeheer
Contributing artist: Ben Raaijman

Collaboration partners for the Wieringermeer 'inland shore':
Rijkswaterstaat, Deltares, Province of North Holland, Hollands Noorderkwartier district water board, Municipality of Hollands Kroon, Sportvisserij Nederland, AKWA Foundation, Salt Farm Texel, Meromar Seafoods B.V., Stichting Duurzame Ontwikkeling, Proeftuin Zwaagdijk, Hiemstra B.V., De Ruimte Advies

• • • Europe is investing in the future. The Wieringermeer 'inland shore' living lab was created with support from the European Regional Development Fund established by the European Union

Research in the living labs is supported by:
Wageningen UR, Clusius College, VHL University of Applied Sciences



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Photographs:

IJsselmeer: Beeldbank RWS - Bart van Eyck ©

Lake Peipsi: Ute Menke ©

Koopmanspolder: Kwint v.d. Berg ©

Taihu Lake: Machiel Wilbrink ©

Chinese Mitten Crab: Helen Doef ©

Maggots: Olaf Steeneken ©

Living lab Wieringermeer: Mennobart van Eerden RWS ©

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