

SEA SPRING ECO CITIES

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In cooperation with



OUR WORLD

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In our rapidly urbanizing world, clean potable water is becoming an even scarcer source. City developers (private and public) are trying to increase supply in order to fulfill a growing demand. Unfortunately, in many cases the methods used are unsustainable and with a negative impact on the environment.

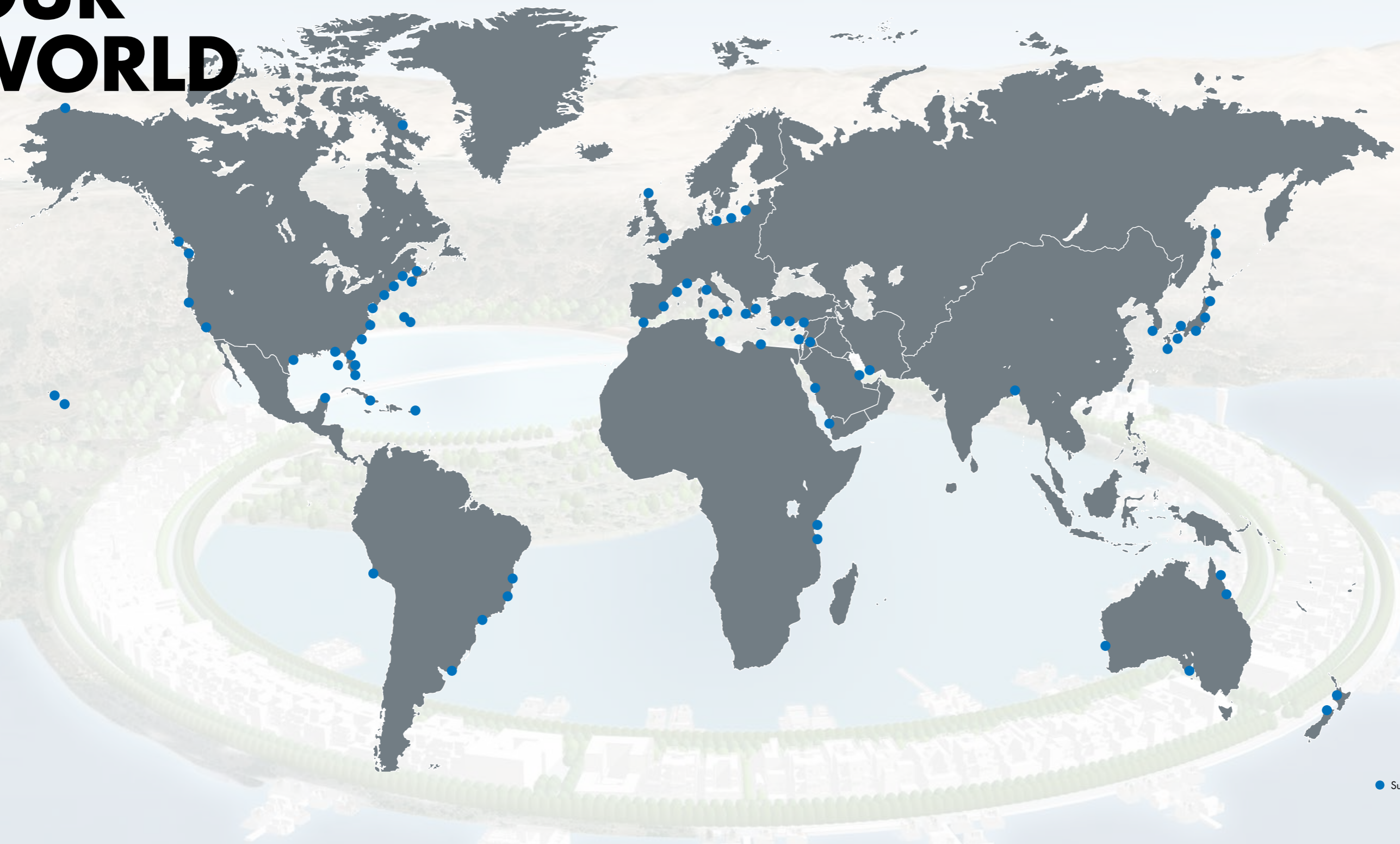
For decades, researchers and engineers have tried to capture fresh water from submarine sea springs, albeit without great economical success.

The concept of SEA SPRING ECO CITY¹ has been developed by the hydrological engineers of Aquaconsult, the landscape architects of KuiperCompagnons and Boskalis. By uniting the highest environmental standards and economic realities, the unique concept creates a sustainable source of fresh water and develops highly desirable new land for modern eco-friendly urbanization.

For more information on the possibilities in your region, please refer to the contacts in the brochure.

1) SEA SPRING ECO CITY is a patent pending product of Royal Boskalis Westminster N.V.

● Submarine sea springs



SUBMARINE GROUNDWATER DISCHARGE



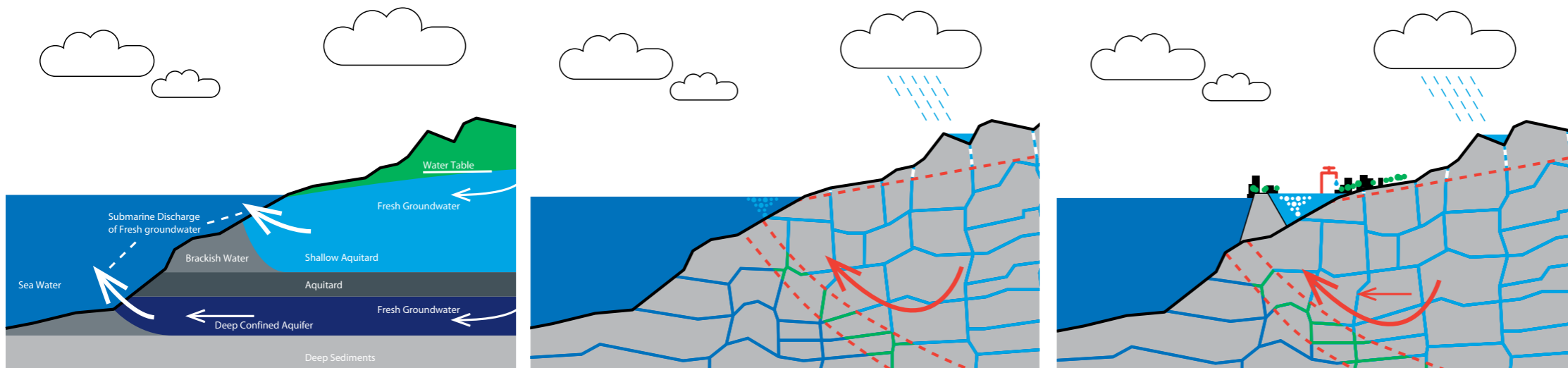
In many places in the world (see map on previous page), ground water discharge occurs also offshore through seepage (diffused) or springs (concentrated). The concept developed here, uses that untapped source of fresh water to create a sustainable and environmentally friendly living environment.

UNIQUE METHOD

The unique (patent pending) method of SEA SPRING ECO CITIES, unites the highest environmental standards with the social requirements for new land (growing population, urbanization) in an economic viable way.

The dike created around the existing sea spring collects the fresh water. When making the dike suitable for real estate development, new coastal land will be made available. It will not only create a permanent source of fresh water, but since all infrastructure can be built using the latest environmental practices, it also has all the potential to create zero or low carbon emission cities.

Submarine Spring visible at the surface of the sea



left
Submarine groundwater discharge

middle
Submarine groundwater discharge

right
Submarine groundwater discharge captured in the enclosed lagoon

1. ORIGINAL SEA SHORE

rural condition

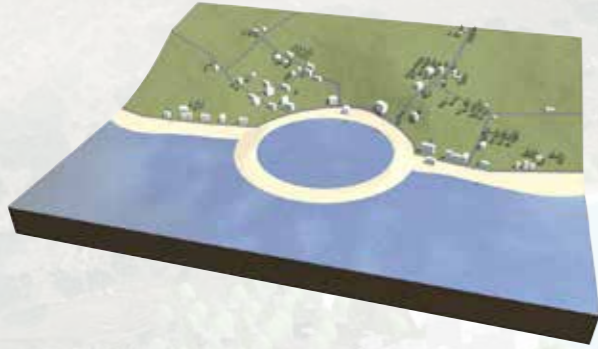
urban waterfront



2. DIKE

rural condition

urban waterfront



3. ENCLOSED LAGOON

rural condition

urban waterfront



4. SEA SPRING ECO CITY



PARTNERS

Royal Boskalis Westminster N.V. is a global dredging and maritime services company active in many segments including coastal protection and infrastructure. Thanks to its multidisciplinary approach with in-house engineering capabilities, Boskalis executes both large and small-scale projects. It is committed to execute its projects to the highest standards with respect to the environment, safety (for all stakeholders) and sustainability. Its innovative approach combined with a highly skilled staff and versatile fleet, Boskalis is the preferred partner for many in the world. As partner of EcoShape, Boskalis is very much involved in the groundbreaking development of *Building with Nature*. Refer also to www.ecoshape.nl.

KuiperCompagnons is a leading spatial design office, creating practical urban design solutions for (new) cities around the globe, improving water safety and quality of life and always with great care for people and nature. Refer also to www.kuiper.nl.

SEA SPRING ECO CITIES is a joint initiative of Boskalis, KuiperCompagnons and the hydrological engineers of Aquaconsult.