Shellfish reefs contribute to the restoration of the North Sea ecosystem. Biodiversity in and around reefs is twice as high as on sandy sea floors.

A. Shellfish reefs provide shelter for juvenile fish and serve as nursery grounds.

B. Oysters and mussels provide an attachment substrate for marine invertebrates and plants.

C. Shellfish filter seawater. This improves water quality and visibility, benefitting visual hunters such as terns and predatory fish. Scuba divers also benefit.

D. Worldwide, shellfish reefs contribute to natural coastal protection. Shellfish remove suspended sediments and algae from the water, and deposit this material around their shells. This way, they promote the growth of sandbanks and protect the coast against high waves and storm tides.

Illustration: © Jeroen Helmer (ARK)
Restoration of shellfish reefs

Once, shellfish reefs covered about 20% of the North Sea floor, but diseases, pollution and overfishing have led to a significant decline. As part of the Haringvliet Dream Fund Project, ARK Nature and the World Wildlife Fund are working on shellfish reef restoration. Shellfish, such as mussels and flat oysters, filter the water and are food for fish and birds. The reefs formed by shellfish provide shelter and nursery grounds for many marine animals, and serve as attachment substrate for plants and sessile invertebrates such as anemones. They also play an important role in natural coastal protection.

Shellfish reefs are vital for marine life and play a key role in the ecological restoration of the North Sea. The question is how to bring the lost reefs back. To investigate this, we are planting mussels and flat oysters in the ‘Voordelta’, off the southwest coast of the Netherlands. Will they survive, grow and reproduce? The ultimate objective of this project: creating biodiverse shellfish reefs where marine life flourishes!

The Haringvliet Dream Fund Project

The Haringvliet used to be a large inlet of the North Sea and an important estuary of the Rhine-Meuse delta. It is located in the province of South-Holland, between the islands of Voorne-Putten and Hoeksche Waard to the north and Goeree-Overflakkee to the south. In 1971 the Haringvliet was closed off by the Haringvliet dam, changing the dynamic delta ecosystem into a freshwater lake. From 2018 the sluice gates will be set ajar to allow fish migration between rivers and sea and to restore the gradual transition between freshwater and salt water in the estuary.

ARK Nature, Natuurmonumenten, Dutch National Angling Association, Birdlife Netherlands, Staatsbosbeheer and the World Wildlife Fund are working together on the ecological restoration of the Haringvliet, in anticipation of the opening of the Haringvliet sluice gates in 2018. This project would not be possible without the financial contribution of the National Postcode Lottery. Our ambition: to clear the way for migratory fish, birds and a dynamic delta ecosystem – for all of us to enjoy!

Towards a dynamic delta

In addition to restoring shellfish reefs on the seaward side of the Haringvliet dam, the Dream Fund Project focuses on five other themes: nature development, recreation, sturgeon, fisheries and monitoring. Along the shores of the Haringvliet we are restoring nature areas. Once the Haringvliet sluice gates will be set ajar, freshwater as well as salt water will flow in and out of these areas, creating a brackish zone. Tidal ecosystems will develop, providing habitat for (migrating) birds to rest, feed and breed. In addition, migratory fish can use these areas to acclimatize on their journey between the sea and rivers.

Hiking and biking trails, observation huts and viewpoints will enable everyone to enjoy the unique nature of the Haringvliet. We aim to bring back the sturgeon, the majestic fish that used to inhabit these waters before it was wiped out by pollution and overfishing. Furthermore, we are working with the government and fisheries sector on agreements to promote healthy fish stocks in and around the Haringvliet. By monitoring fish and bird populations we will track the effects of ecological restoration, from the past to the future.

Visit our website: haringvliet.nu