

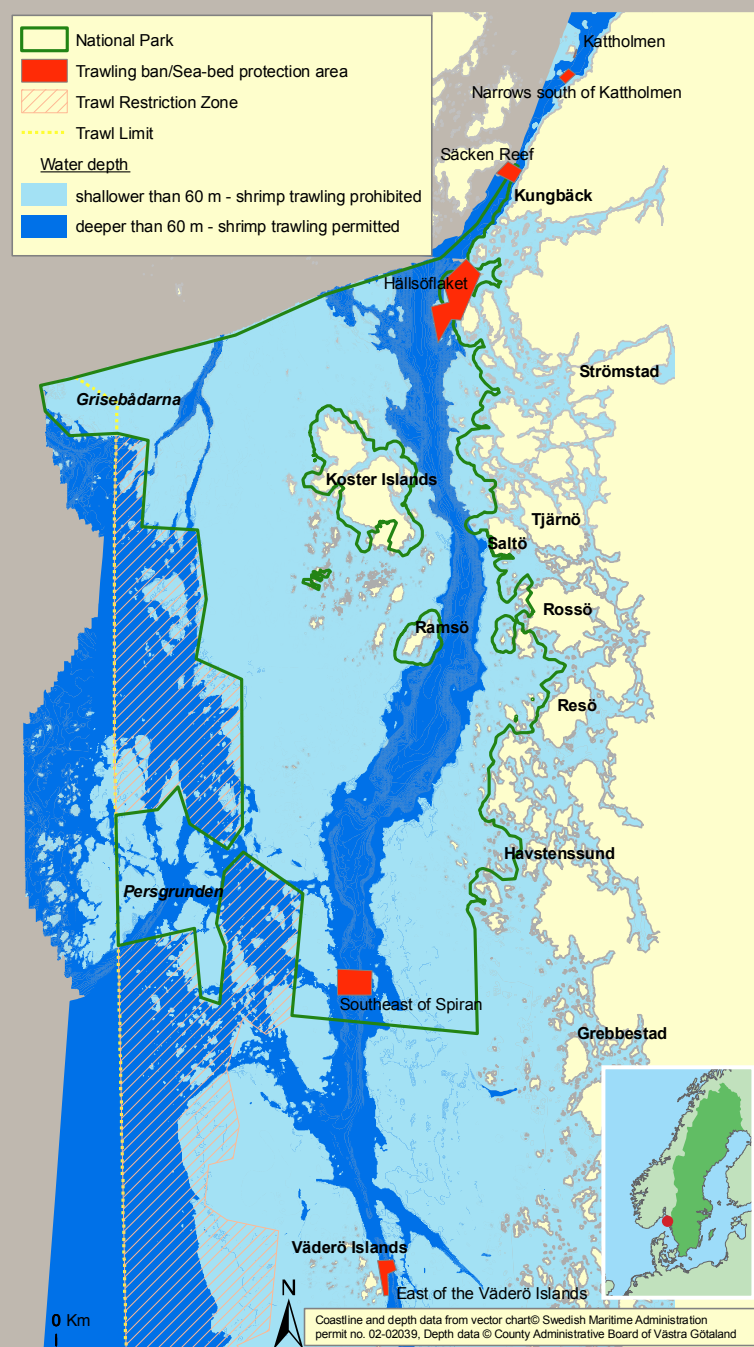
The Koster-Väderö Fjord

– important fishing grounds and national park

The deep trough that runs south from the Norwegian border to Väderöarna lays inshore of the trawl limit. Trawling is generally prohibited here, but selective shrimp trawling is allowed in waters more than 60 feet deep if trawls are equipped with a sorting grid. Most of the shrimp trawling is done in the trough between Saltö, Väderöarna and at Persgrunden.

A complete trawling ban is in force in six special areas, of which three are within Kosterhavet National Park. When the park was created these were changed to sea-bed protection areas, in which anchoring and use of other equipment that can damage sea floor are prohibited.

In the Trawl Restriction Zones trawling is allowed only for prawns and Norwegian lobster. Here too, species-specific sorting grids are required on the trawls.



A prizewinning fishery

Development of the Koster-Väderö Fjord model was rewarded in 2003 with the **Swedish Seafood Award**, Sweden's premier fishing industry award. The prize was for the category "Sustainable Fishing". The jury's declaration read: *"Regulation of shrimp fishing to protect the unique ecosystem in the Kosterfjord, along the coast of northern Bohuslän, is the first example in Sweden of local management that has been implemented and shown to be successful . . ."*

In 2009, fishermen Charles and Robert Olsson were awarded the **Coop Änglamark Prize** for their efforts to "protect the marine environment and inspire others to fish in a sustainable manner". The jury's declaration read: *"There are people in this small company that do a great job and make a big difference. The prizewinners have shown clearly that everybody can influence our environment in their own way and with commitment that inspires others . . ."*

KRAV-certified shrimp trawling

At present, one of the shrimp trawlers in Kosterhavet, the SD Ferder, is KRAV-certified. KRAV-certification requires fishing with gear and methods that do not compromise the sustainability of stocks. Use of environmentally friendly motor oil and environmentally friendly waste management are also required in order to carry the KRAV label.

Read more about the professional fishery, shrimp trawling and Kosterhavet national park:

www.samforvaltningnorrabohuslan.se

www.kosterhavet.se



A unique marine environment

The Koster-Väderö fjord is located on the Swedish west coast, within the country's most species-rich marine area. The Kosterhavet national park, established in 2009, is Sweden's first marine national park and has over 200 species of animals and algae that are found nowhere else in the country.

The deep Koster-Väderö fjord is linked to the Norwegian trench, which in turn connects to the open Atlantic. This means the deep waters of the fjord exchange with those of the deep ocean. In these salty, oxygen-rich waters there are animals that would otherwise only be found on the continental slope. The fjord is an important spawning and nursery area for fish and shellfish, and these conditions are ideal for the northern shrimp. This is the subject of one of the important industries in the area – the shrimp fishery.

Co-management

The shrimp fishery is an important part of the local economy and history. The shrimp stock is in good condition, but trawling can damage both the sea floor and the animals living in the sediment and on the surrounding rocky reefs.

The outstanding natural value of the Koster-Väderö fjord requires careful management. Today, fisheries in the area are co-managed by local fishermen, researchers, the County Administration, the Board of Fisheries, and politicians from Strömstad and Tanum local councils. The foundations for this co-management were laid by the so-called *Koster-Väderö Fjord Agreement*, which was developed with support from among others local councils, WWF, and the European Fisheries Fund.

Professional fishermen are represented on the *Kosterhavsdelegation*, the local board for the Kosterhavet national park. Similarly, managers of the national park are members of the steering committee for co-management of the fisheries.

Fishing within the national park

The stated aims of the national park include long-term protection and conservation of the area's marine ecosystems, habitats, and species while ensuring sustainable use of the area's biological resources.

Within the park, shrimp trawling and fishing for lobster and Norwegian lobster (scampi) are allowed. Trawling is regulated by the Koster-Väderö Fjord Agreement. The park has several sea-bed protection areas where bottom trawling, anchoring, and other activities that can harm the sea-bed are prohibited. Among the goals of the management plan for the national park are: a long-term sustainable fishery in balance with the area's biological diversity, and the improvement of fish and shellfish stocks.

The Koster-Väderö Fjord Agreement

The aim of the Koster-Väderö Fjord Agreement is to develop a sustainable fishery compatible with the region's outstanding natural value.

The Agreement was reached in 2000 between fishermen, researchers, fisheries organizations, and authorities at different levels. The fishery is regulated by law and trawling is prohibited in six valuable areas of the fjord. Trawls must be smaller, lightweight and equipped with a sorting grid that allows escape of fish bycatch. Education and sharing of knowledge are highlighted in the agreement. Several courses in marine ecology (for fishermen) as well as in commercial fishing and fishery technology (for researchers and officials) have been arranged in recent years.



The sorting grid is demonstrated as a fisherman teaches at sea.



Look for Njord-labeled seafoods. Njord is the fishermen's own brand of locally-produced seafood. www.njordnb.se



Approximately 20 shrimp trawlers operate wholly, or partly, in the Koster-Väderö area. About 200 tonnes of shrimp are caught each year.

Shrimp Trawling

- with concern for animal and plant life

The small-scale shrimp fishery in the Koster-Väderö fjord is characterised by:

1. Reduced bycatch using the “Koster-trawl”

Only specially designed trawls may be used in the Koster-Väderö fjord (“Koster-trawls”). These trawls have an aluminium grille (“sorting grid”), which collects fish and other larger animals and guides them through an escape hole above the grid. The shrimp, which are smaller, pass through the sorting grid and are caught in the trawl. This also makes the catch easier to sort for the fishermen. The trawl-doors used are much smaller than usual.

2. Trawling only in deeper areas

Trawling is not permitted in water shallower than 60m depth. The Koster-Väderö Fjord Agreement deepened the minimum permitted trawling depth from 50m to 60m.

3. Protection of sensitive areas

Areas of sea-bed where rare and endangered species can be found are protected. There are ten special protection areas in the Koster-Väderö fjord, and trawling is prohibited in six of these. Three of these areas are within the Kosterhavet national park.

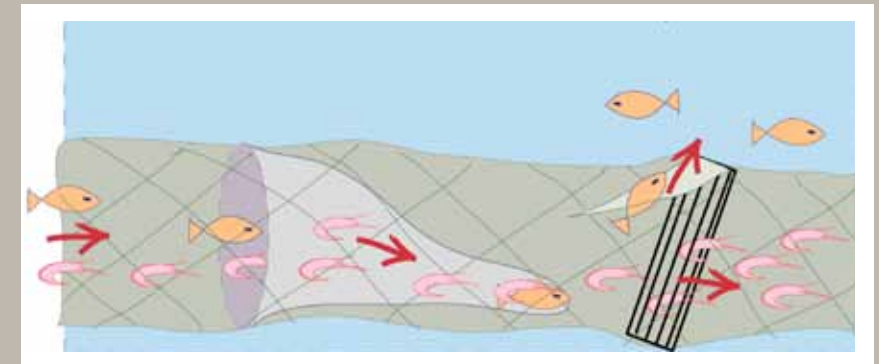
4. Development and continued co-management

The continued development of environmentally sensitive and selective fishing is important. Efforts to further improve the trawls with a view to reducing sea-bed impacts are ongoing. Education and knowledge-sharing between fishermen, authorities and researchers are also important components of co-management.

Developing the regulatory and monitoring frameworks in dialogue with researchers and government agencies is a high priority. In addition, there are collaborations with Norwegian fishermen and authorities to enhance protection of the fjord adjacent to the Norwegian border. Sales, processing and marketing of local fish products is an area with potential for development.



The seabed of the fjord is full of strange animals that can be damaged by contact with a passing trawl. From L to R, a file shell, sponge, and fireworks anemone.



A sorting grid in the trawl (a species-specific grid) guides larger animals and fish out through an escape hole, reducing bycatch by up to 87 percent.