

A project on the Baltic island of Bornholm has been approved by the Danish government to use the best available technology to produce as fuel-efficient a trawl gear setup as can be achieved, while not compromising selectivity.

The project involves DTU Aqua, the Danish Technological Institute, Bornholm processor Espersen AS, local and national fishermen's organisations and Ulrik Jes Hansen of CATCH-Fish, with the project as a whole co-ordinated by Gemba Seafood Consulting, with funding from the EU Commission and the Danish government.

Ulrik Jes Hansen told *FNI* that what has really made the project interesting is that the Danish government has lifted all of the regulations restricting trawl gear, to give the project a wider and more effective framework to function within.

"The government has taken a very enlightened view of this and this means that we do not have to abide by the Bacoma window requirements, or the T90 requirements, or the T90 requirements that I have some serious misgivings about," he said.

"When T90 regulations for codends were put in place for the Baltic, Brussels decided that the same rules for joining diamond mesh and square mesh should apply for T90, so the result is that the codend becomes very narrow and all the benefits of the T90 are lost, with the fish forced down this tube with all the damage that this entails. But now we have been given a completely free hand to use the best ideas around.

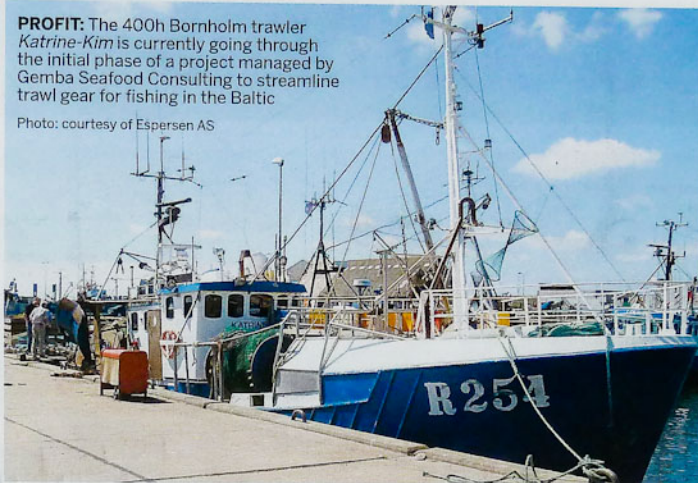
"We have a really great team of people involved, including Klaus Hjorth Hansen at Nexø Vodbinderi and Allan Rønn Pedersen from Thyboron Skibssmedie, who are supplying the Type 15 pelagic trawl doors," he said.

The 400hp Bornholm trawler *Katrine-Kim* R-254, skippered by Niels Jørgen Nilsen, is the test bench for the project and the trials are due to start using a set of twin-ring trawl gear spread with a pair of doors towed off the bottom, with a Simrad system of sensors to monitor door height, spread and performance.

"We are using Dyneema wherever possible in the trawl, so it's actually almost 100% Dyneema except for the codend, as we felt

PROFIT: The 400hp Bornholm trawler *Katrine-Kim* is currently going through the initial phase of a project managed by Gemba Seafood Consulting to streamline trawl gear for fishing in the Baltic

Photo: courtesy of Espersen AS



Baltic project – best technology

that this needed to be made from a thicker twine and we expect to use Ultracross knotless netting for the lifting bag for quality reasons," he said, commenting that the design

optimum bottom contact, but with the doors off the bottom. The trawl looks very good in simulation and a lot of the very clean shape is achieved by using

"This trawl should make it possible to increase the trawled area, but we haven't gone for the full size potential that the trawl offers. It seemed best to keep some scope back for flexibility in terms of speed."

Bringing the best together

"We have been struggling to establish Baltic cod as sustainable," said Alex Olsen of Bornholm processing company Espersen, which is the single largest buyer of Baltic cod.

"There have been a lot of issues with cod in the Baltic over the last few years, but for us the situation is that there's no purpose in being a processor if there's no cod."

Espersen has taken a strong line in refusing to buy illegally landed fish and has pushed for MSC certification of Baltic cod.

"We have tried to be a leader and to advocate best practice," he told *FNI*. "We are now close to MSC certification and this

should be complete in January or February, but that's just a first step. Our responsibility is more than just that as there are issues of discards, selectivity and emissions that all have to be addressed."

The full sensor data and video recordings made on board can be used to provide verification of the catch data and discards, which will also provide Espersen with a wealth of information that allows the chain of custody to be documented right back to the catching area.

The project now in progress involving *Katrine-Kim* is going through its initial phase, with the trawler's normal fishing practices being carefully documented to provide a set of benchmarks to measure the project's later stage against.

Alex Olsen said that fishing with the new gear begins in October with the new season and is expected to continue until late May, when the annual three-month stop commences.

"We know what's needed, but nobody is doing it, so our idea was to bring together gear experts, energy specialists and others who could have an input into this and combine all this knowledge to see if it's possible to do all this profitably," he explained.

"This is a way of demonstrating to the fishermen that this can be done. So we hope that the result will be that the NGOs are happy that we are fishing with gear that has less ground contact, that we have better selectivity and sustainable fishing – and that the fishermen are able to fish more profitably. None of this is new, but we are bringing together different technologies into a cohesive project."

"What we are hoping to see is an improvement of 10 to 15% to the bottom line of the fishing operation, plus a substantially reduced carbon footprint for the catch, reduced environmental impacts and fully documented responsible fishing practices," he said.

He told *FNI* that the project is being monitored throughout and data being checked systematically for results, but initial results are expected early in the New Year – as long as the approaching winter weather does not delay things by keeping the fleet tied up for too long.

"The completed project is expected to improve the profitability of cod trawling by 15% and is supported by a number of organisations and companies"

of the trawl itself is not entirely new and is the result of a lot of ideas exchanged between netmaker Klaus Hjorth Hansen and skipper Niels Jørgen Nilsen.

"It's built for a large spread, with a good vertical opening and

fly meshes," he told *FNI* and commented that there is a lot of interest in flying doors in the Baltic region, especially with plans for a Russia-to-Germany gas pipeline that is expected to cross some busy fishing grounds.