

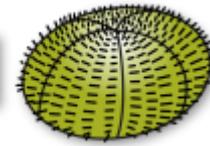


Northern Periphery and
Arctic Programme
2014–2020



EUROPEAN UNION
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European Regional Development Fund

URCHIN
Utilising the Arctic Urchin Resource



Six Month Newsletter (October 2015)

URCHIN project launch and kick off meeting in Tromsø, Norway

The EU funded Northern Periphery and Arctic (NPA) Programme project titled “Utilisation of the Arctic Sea Urchin Resource (URCHIN)” officially started on 01 May 2015. Soon after, Nofima hosted the start-up meeting of the project in Tromsø, Norway on May 19-21. The project partners came from throughout the Northern Periphery area including Ireland, Iceland, Norway, Greenland and Canada. The project aims to utilise the sea urchin resource present in the environmentally harsh and challenging Northern and Arctic region. The specific challenges that will be addressed and that were discussed at the opening meeting included improving urchin fishing techniques, the sustainable and responsible harvesting and management of stocks and the creation of legislation and supply chains for sea urchin products from isolated areas. The NPA Programme has a strong focus on innovation and national and transnational technology transfer; the project will encourage the development of the urchin fishery and the entry and participation of small and medium enterprises into the urchin fishery throughout the NPA area.



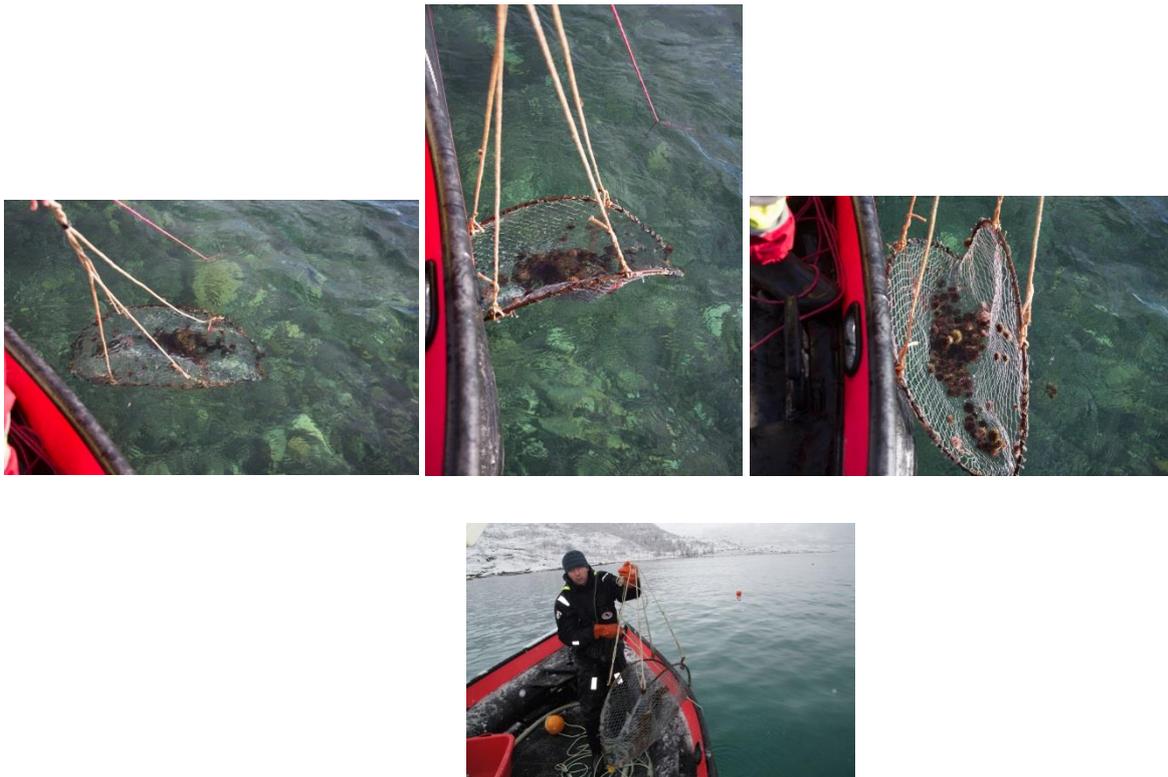
*The project partners attending the start-up meeting in Tromsø, Norway
Photo: Tor H. Evensen*

Partner activities since start up meeting:

Norway:

Development and testing of passive trapping technology for the Norwegian fishery as an alternative to SCUBA dive fishing:

A series of trapping experiments have been undertaken by Nofima to investigate the effectiveness of trapping as an alternative to fishing sea urchins using SCUBA divers. In Norway the latter is both expensive and logistically challenging. Trapping is a low technology, low cost alternative that is easily accessible to new as well as established fishers. After testing various trap designs and methods an optimal trap design, bait and trapping regime has been established. Small scale testing has been followed up by a larger scale tests at a variety of sites in a large sound (Kvalsund) in Tromsø in northern Norway. The results have shown that the design of the trap, the type and quantity of bait used, the length of the set time and most importantly the selection of suitable fishing sites with plentiful and large urchins are all critically important to successful fishing with traps. The catch rates indicate that it is both possible and economically viable to fish urchins on a commercial scale using trap technology. This opens the door for small scale, low technology and low investment ventures to gain access to the sea urchin fishery in Norway and other countries.



Fishing for sea urchins using passive traps in Norway.

Photos: Tor H. Evensen

Ireland:

Reseeding program

The urchin spat to be used in Ireland for the reseeded trials are now at a size that they are ready to be collected and reseeded as required. Colin Hannon is in discussions with associated partners in Ireland regarding site surveys to be conducted over the next few weeks during Spring tides. Once the sites are selected the spat is ready to go and they will be shifted in small batches from the production site to the nearby reseeded areas.

Galway Mayo Institute of Technology is also in discussions with Bord Iascaigh Mhara (the Irish Sea Fisheries Board) to arrange an urchin conference/workshop for spring 2016. Keep an eye on the website and more information regarding this will be distributed as soon as it becomes available.



Paracentrotus lividus juveniles ready for reseeded
Photos: Collin Hannon

Greenland:

Test fishing and holding

Royal Greenland A/S has conducted trial fisheries for Green Sea Urchins and has established that there are Sea Urchins in West Greenland, Maniitsoq and in Nuuk. The sea Urchins have been fished using a bottom dredge, based on the model used in Iceland. Royal Greenland A/S was inspired by the methods used by an Icelandic company called Thorisholmir. Royal Greenland A/S also tested the sea urchin trap, developed by Nofima in Norway, which is a passive trap that uses bait and sea urchins were also caught using this technique.



*The dredge used in the Greenland trials, based on the Icelandic model.
Photos: Nikoline Zeimer*



*The traps used in the Greenland trials
Photos: Nikoline Zeimer*

Royal Greenland A/S also ran some preliminary holding trials using plastic containers to make a system with running seawater for holding and feeding sea urchins, in order to enhance the roe. The trials used manufactured feed pellets, developed by Nofima in Norway and the sea urchins were fed both pellets and also with natural seaweed. These initial trials were not particularly successful and Royal Greenland intend to rerun the trial with modifications to the holding system.



*The holding system developed by Royal Greenland for sea urchin roe enhancement.
Photos: Nikoline Zeimer*

Market research in international markets

Sea urchins are abundant in Greenland and could be a new item on the seafood market for Royal Greenland A/S. Nikoline Zeimer from Royal Greenland went to Japan to visit their Japan Division. She took with her sample products of Individual Quick Frozen (IQF) sea urchin roe. It is hoped that this type of product would be acceptable and convenient in the lucrative Japanese market as it is easy to use some of the frozen roe as required and keep the rest frozen which means it can be used whenever it is needed. Although Nikoline realized that introducing a new product in the Japanese market would not be easy, she was not aware of how important appearance is for the Japanese market – the Japanese have a saying that first a meal is "eaten by the eyes". Nikoline discovered that appearance is a very important factor. The outcome of the trip was that there are good possibilities to proceed with the preliminary research on production methods for frozen sea urchin roe. Royal Greenland A/S is examining production possibilities, with the main issue at this stage being high labour costs.



*The Tsukiji fish market in Tokyo, Japan. The largest market for sea urchin roe in the world with daily auctions setting the prices for sea urchins throughout Japan
Photos: Nikoline Zeimer*

Iceland:

Population monitoring for Government Regulation and for fishing efficiency in Iceland

A dredge survey was conducted by Thorisholmi and the Marine Research Institute in September 13-18, 2015. The aim was to provide the first assessment of green sea urchin resources in southern Breidifjörður by a dredge and an underwater camera. The ski-dredge used is the same as the one that is used for commercial fishing, a modified scallop dredge of 250 cm width and a bag of 150 cm length. The mesh size of the bag is 100mm. The whole area investigated was 9.7 km² and was divided into seven separate fishing areas of different sizes, depths (8-60m) bottom types and quality. Sea urchins of good quality (roe filling >10%) were observed in 45% of the whole area investigated. The maximum densities observed in an area were 0.12 kg/m² or 1.5 indiv/m². Information on population structure and roe yield was also investigated and these differed between areas. The size range was 17-85mm but over 50% of the urchins were in the size class 55-65mm. The relationship between size (diameter) and wet weight was good, especially at the stations where a few small individuals were sampled. The efficiency and selectivity of the dredge is unknown but will be assessed when results from the bottom photographs become available.



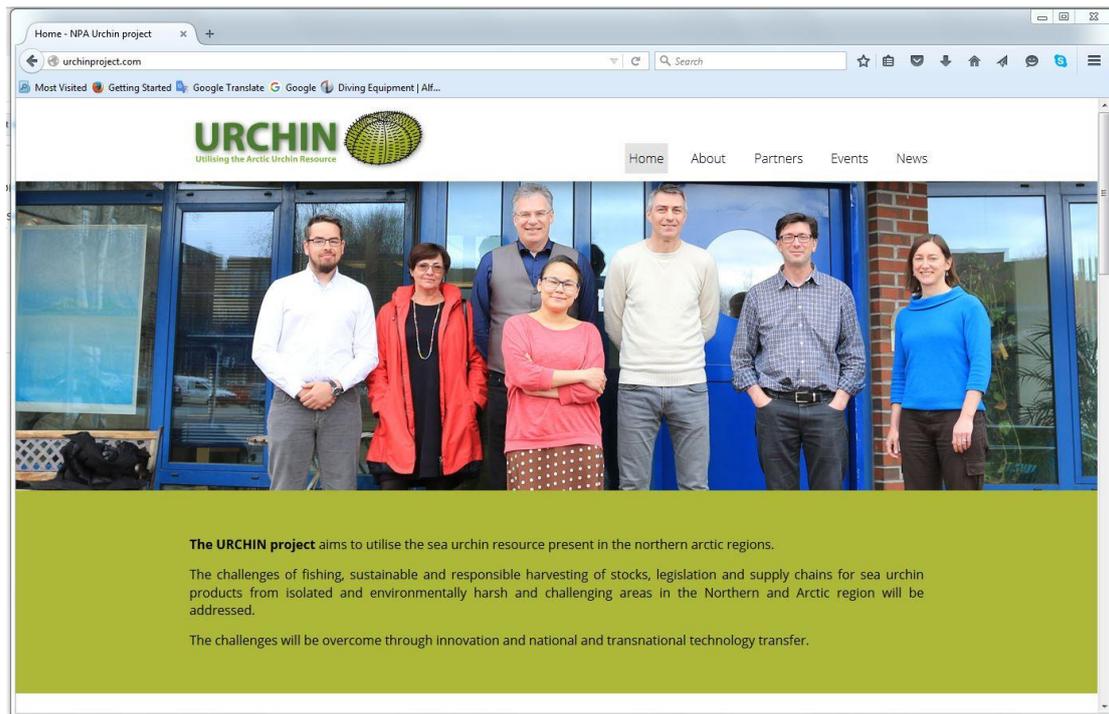
*Clockwise from top left: The bottom trawl used by Thorisholmi to fish sea urchins in Iceland. The trawl coming on board. Unsorted catch and sorted catch of the green sea urchin (*Strongylocentrotus droebachiensis*)*

Photos: Guðrún Þórarinsdóttir

Other project activities

Launch of the URCHIN project website

In August 2015 the website for the URCHIN project was launched by Nofima. The website will act as a means of distributing information from the project as well as general information on sea urchins to all those interested in sea urchin fisheries. Check it out at 'urchinproject.com'.



Project leader meeting with NPA in Kuopio, Finland (Late September 2015)

The NPA hosted an enjoyable and productive meeting for NPA Lead Partners in Kuopio, Finland at the end of September and representatives from Nofima and a diverse range of other NPA projects were in attendance. The meeting was primarily focused on Project Management guidance for lead partners, but was held in conjunction with the NPA annual conference where the Third Call of the NPA was officially launched.

Six month reporting, newsletter and financial reporting

The project has now reached the six month stage and a newsletter and a 6 month NPA report will be completed along with the first financial reporting for the project partners. It has been a busy first six months but with the harsh northern winter fast approaching the activities for the next few months may focus more closely on some of the background reporting as well as preparation for a fresh round of project activities in spring 2016. If you have any queries I would encourage you to contact one of the following national contact points to discuss possible involvement in the URCHIN project and the sea urchin fishery in the Northern Periphery and Arctic area.

Norway: Chris Noble, chris.noble@nofima.no; Phil James, philip.james@nofima.no

Ireland: Colin Hannon, hannon.colin@gmail.com

Iceland: Guðrún Þórarinsdóttir, gutho@hafro.is

Guðmundur Stefánsson, gudmundur.stefansson@matis.is

Greenland: Nikoline Ziemer, nikz@royalgreenland.com

(If you are outside of these NPA countries please don't hesitate to contact Chris or Phil at Nofima for further information regarding associate partners and possible activities outside of these countries)

