

## **Health, safety and environment competence among fishermen in Ostrobotnia and Nordland**

**MTT Agrifood Research, Finland – Norsk Landbruksrodgiving HMS, Norway**

### **Report form research site visits – 6-15.8.2014**

**6-7.8. 2014**

#### **National Institute for Occupational Safety and Health (NIOSH) meetings in Seattle, Washington, USA**

In his role as chairman of the National Occupational Research Agenda (NORA), Surveillance working group, managed by the National Institute for Occupational Safety and Health (NIOSH), Risto Rautiainen participated in a two day meeting reviewing progress and making plans for the NORA for the Agriculture, Forestry and Fishing sector. As part of the meetings, Dr. Jennifer Lincoln, head of the NIOSH Alaska office gave a presentation on the NIOSH fishing safety and health work. NIOSH materials, including video, Alert, and research documents were collected from here excellent presentation. Further discussions with Dr. Lincoln were held. She has worked with the Norwegian SINTEF fishing organization before, and she is very interested in collaborating with us in future projects.

Picture 1. Dr. Jennifer Lincoln, NIOSH presenting to the NORA Agriculture Forestry and Fishing sector council in Seattle, WA



On Thursday Aug 7 the NIOSH NORA AgFF sector council members visited Trident Seafoods fishing vessel in Tacoma, Washington. Lurella Lee, Safety officer for Trident Seafoods, arranged a presentation on the processes and safety issues related to Trident fishing fleet, and the Bountiful vessel in particular. This vessel is set up for fishing crabs and cod with cages, mostly in the Bering sea and coastal areas of Alaska. The vessel has

processing, cooling and storage facilities. Work activities and safety issues were presented during the 3 hour visit onboard and at the harbor.

Picture 2. Visit at Trident Seafoods facility and Bountiful fishing vessel in Tacoma, Washington



Picture 3. Demonstration of area on Trident Seafoods vessel where the crab or cod cages are lifted into the vessel and emptied into the processing line inside the vessel.



**Monday 11.8.2014**  
**Visiting Nordland Fylkes Fiskerlag**

We visited Nordland Fylkes Fiskerlag, which is a department of Norges Fiskerlag. Norges Fiskerlag has 5000 members and is an independent trade organization, which employs

advisors, economists and lawyers. Norges Fiskarlag works with quotas, regulations, sea rights and has connections with fishery research organizations. Nordland Fylkes Fiskarlag is one out of 32 local offices and organizes 1100 fishermen. We met with Laila Alendal in Bodø. This office has three employees who offer services to fishermen.

Norges Fiskarlag offers a safety system to their members. This system includes risk assessments for different types of work. The insurance companies demand that this system shall be in the vessels. However, the impression is that many just buy the binder and don't use it actively.

It is mandatory for fishermen to attend a one-week safety course and then have a two-day follow-up course every fifth year. These courses include some HS education, but this can be increased and improved. The schools that offer these courses have to be approved by the Fishery Department.

Based on our discussion, Nordland Fylkes Fiskarlag think it is very important to establish an OHS-service for fishermen.

Dinner at Statles Rorbuer, Restaurant Marmælen.

Pictures 4 and 5. Anne Marie Heiberg, Laila Alendal and Kim Kaustell. Safety and health system binder.



**Tuesday 12.8.2014**

**Meeting with Norges Kystfiskarlag, Ramberg Flakstad, Lofoten, Steinar Friis and Kjell Olav Halland**

Kjell Olav Halland is deputy director in Kystfiskarlaget and is responsible for HS. Kystfiskarlaget's members typically have vessels in the range 7-20 meters. Their main focus is to secure that good processing facilities and good harbors are available. Kystfiskarlaget representatives mentioned that working several days with no or little sleep can be one of the most serious risks for fishermen. A new problem is that foreign workers now operate cranes and work on the boats. This can create dangerous situations due to

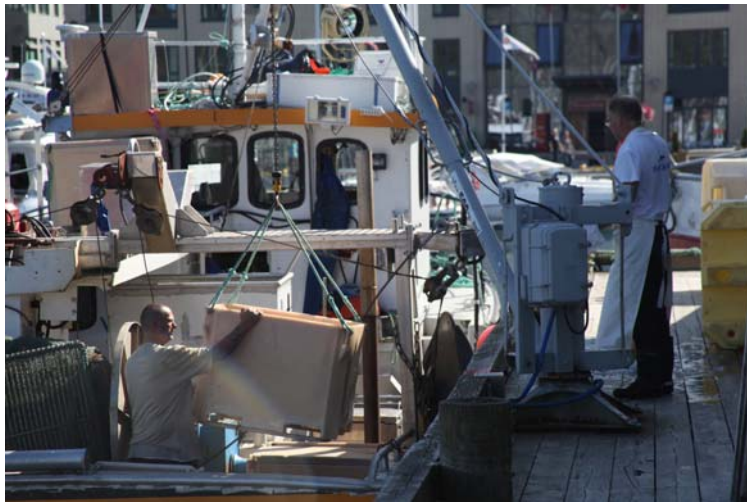
language problems. They also mentioned that the training on sea has to be improved for new employed fishermen.

We visited Steinar Friis' sjark (type of fishing vessel) and he showed us features (including safety) of the boat and how long line fishing and jigging fishing work is conducted.

Picture 6. Steiner Friis from Ramberg demonstrating how cod are taken in with the line fishing system in his boat.



Picture 7. Lifting fish containers from boat to dock at landing facility in Bodø.



Next visit was at Vesterålen HMS center in Sortland. We met with Miriam Myrseth from the Occupational Health and Safety service (OHS) and Øyvind Ridola Johnsen from NLR-HMS. This OHS service site has a contract with NLR-HMS to provide services to farmers, and they are interested in expanding the services to fishermen. This would require funding, similar

to farmer's OHS. The OHS representatives think that they already have good understanding of the fishing industry in the area but that there is a need for courses for health providers and advisors to improve the competence in safety and health issues related to fishing. The training should include visiting boats and observing how the work is done. There was also a recommendation to work with the fishing trade schools as they already provide some safety and health information to students.

Picture 8. Vesterålen HMS center in Sortland. Anne Marie Heiberg, Miriam Myrseth from the Occupational Health and Safety service (OHS), Øyvind Ridola Johnsen from NLR-HMS, and Risto Rautiainen.



### **Wednesday 13.8.2014**

#### **Visit to Stø fish landing facility.**

We visited a landing facility and saw how they baited the hooks for long line halibut fishing. Each line was 500 m long and had 250 hooks. One worker could bait up to about 10 lines each day. Health and safety issues in this work include ergonomics, cuts, stings and abrasions in hands. Fungus grows on the lines and the fungus creates sharp spikes, which give skin problems when bating the hooks. We discussed the types of gloves that can be used for this kind of work. We brought several types of protective gloves as samples for workers. We left few pairs for their testing. New lines have been treated with tar. When they are stored indoors the tar has smelled so much that some reported headache after the work day. We were allowed to try baiting the hooks.

Dinner in Nyksund

Pictures 9 and 10. Baiting hooks for halibut fishing.



We were introduced for an Åttring baot. This was originally a wooden rowboat boat with 6-8 oars used for fishing along the Norwegian coast. We were told that the shape of the boards on the boat made a lot of bubbles. These bubbles gave the boat good buoyancy and could be rowed almost as fast as a sailboat in smooth sea.

Pictures 11 and 12. Traditional Åttring fishing baot.



**Thursday 14.8.2014**

**Visiting Roy Korneliussen's sjark at Hovden flytebrygg**

Our first visit of the day was at Roy Korneliussen's sjark at Hovden flytebrygg. He does long line fishing and jigging. He demonstrated how each type of fishing is done on his boat. He had made several improvements on his boat to avoid ergonomic problems after he had cumulative trauma injuries in his right shoulder from repetitive work. He could lift the bottom of the fish tank hydraulically and he had several slides to transport the fish from the hooks to the tank. This way he avoided most of the lifting of fish.

He also demonstrated how the safety belt and safety line work. This is important equipment for fishermen who work alone.

Pictures 13 and 14. Roy Korneliussen's sjark boat designed for long line and jig fishing. Safety line connected to belt.



We then visited a more traditional sjark at the same harbor. This sjark was narrower and did not have the types of slides that were added to make work easier on Roy's boat. We got a demonstration of how the "automatic" jiggling worked. The panel showed how deep the line was set and they could adjust if the line should be pulled up when all hooks had fish or when only 2-3 hooks had fish.

We saw multiple safety, health, and fire protection features on both boats. It is mandatory to have a life raft aboard. Modern fishing vessels have a lot of electronic equipment like sonar, radar, navigation systems, radios etc. Roy had invested in Olex navigation system. This system tells him where other vessels with the same system are and other boats can register where he is. The vessel also had an Automatic Identification System. Vessels fitted with AIS transceivers and transponders can be tracked by AIS base stations located along the coast line. Roy felt Olex had improved his fishing capabilities significantly due to the automated navigation features and ability to locate best fishing areas by sea bottom formations etc.

The second visit was to Hovden fish landing. We met with Helge Fredriksen who gave us a tour of the facility. We got a demonstration of how the fish were processed from delivery on the pier until they were ready to be shipped to markets in Norway and abroad. The fish landing personnel had developed a machine that tied two fish tails together for hanging to dry and making stock fish. This work was earlier done manually by tying a rope and twisting one fish several times around to make the rope tight. This fish landing had also invented a method for breaking off the head of the stock fish. This is normally done by hitting the fish against a steel box. This method made a lot of noise which is eliminated with the new way of doing it. Heads and necks were shipped to Nigeria. The cod stock fish went to Italy and Spain.

Picture 15. Fish processing plant in Hovden.



**Friday 15.8.2014**

Report writing and flights back to Oslo.

During travels to the selected fishing sites, we traveled through numerous fishing villages and observed various types of boats, landing facilities, and also aquaculture facilities. In this project we are not focusing on aquaculture specifically.

Picture 16. Aquaculture facility in the \_ area. In this project we not focused on specific issues related to aquaculture sector.





**References.**

The most powerful thing.. Deck safety awareness for purse seiners. Video. NIOSH. 20017

Sikkerhetsstyringssystem – for fiskefartoy under 15 meter by Norges Fiskerlag, Version 2012