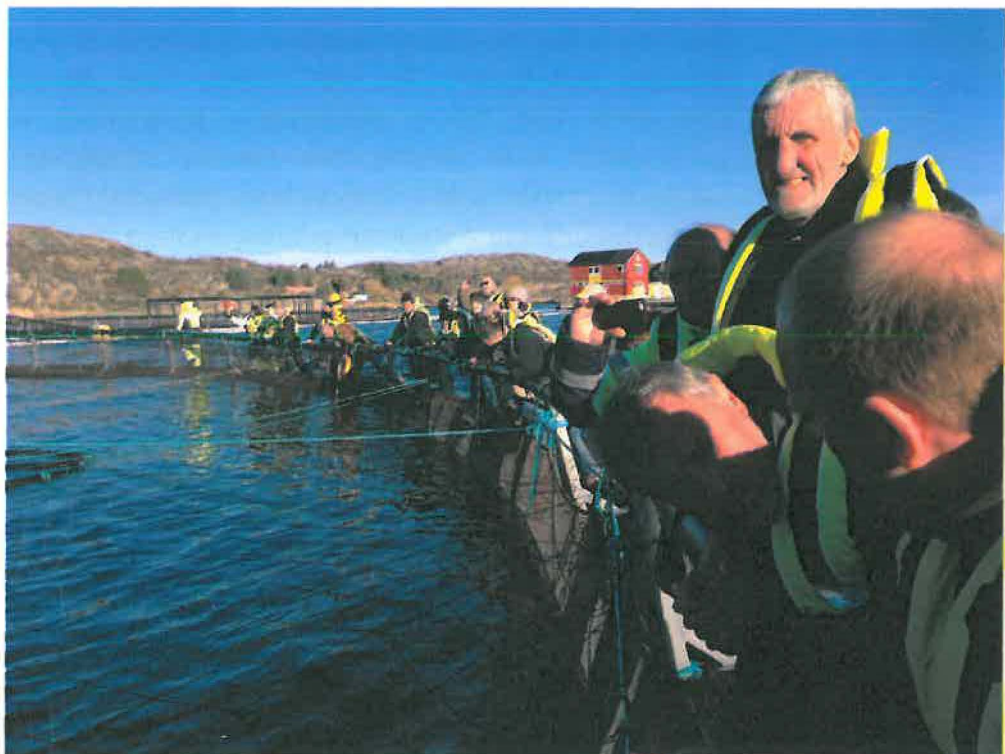


Report

Workshop in Trondheim and excursions to the Norwegian seafood industry and NTNU

Author(s)

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ABSTRACT

During the SeaMed project we have arranged workshops and visited seafood industry in Albania, Montenegro, Kosovo and Bosnia & Herzegovina. In October 2014, the whole consortium visited Trondheim. The three-day workshop included excursions to the Norwegian seafood industry and NTNU. The final results from all project partners were presented, and future cooperation possibilities were discussed. The participants were visiting two salmon processing plants, Isfjord and Salmar/Nutrimar, and a salmon farm (Måsøval Fiskeoppdrett AS). In total 29 participants were involved in the workshop activities.

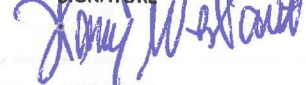
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Next morning, the project group started on a whole day excursion to the island of Frøya where the first visit went to an Atlantic salmon fish farm, Måsøval Fiskeoppdrett (Fig.1 & 2). On the farm, a presentation was held where the group was informed about the company itself, different issues related to the farm site, fish handling routines, automatic feeding and surveillance system and biosecurity. The group also witnessed how fish were routinely sampled for health and quality control.



Fig. 1. The Atlantic salmon farm-site (arrow) visited during the excursion to Måsøval Fiskeoppdrett AS.



Fig. 2. Visit to Måsøval Fiskeoppdrett AS after boat-trip from Flatval, Frøya.

After lunch at Hotel Frøya, the next stop was at the SalMar processing plant located at Nordskaget, Frøya (Fig. 3). The plant is probably the most modern in the world for the first-processing (slaughter and processing) of salmonids. The main product is gutted salmon on ice but also different fillet products are

1 The aim of the workshop

SINTEF is leading a project in the Western Balkans (WB) where the goal is to strengthen the seafood industry in the countries Montenegro, Kosovo, Bosnia-Herzegovina and Albania through education, knowledge transfer and innovation. The project has been ongoing for almost three years and has led to good collaboration across scientific disciplines between the participating countries in WB and between universities where local industry partners in aquaculture and fisheries sectors also have been partners. During the project, the industry has been closely connected to the university partners and the students work.

The purpose of the workshop in Trondheim was to:

- provide an opportunity for the project partners from Western Balkans to meet and exchange expertise with the Norwegian seafood industry and academia.
- Accomplish excursions to state-of-the-art fish farm and processing plants to demonstrate large-scale salmon farming and processing of fish through the value chain.
- Discuss concepts and ideas that might be applicable for improving aquaculture and processing in the WB countries. Such a development should be supported by academia in terms of relevant education programs.
- Based on the ideas and discussions above, the ultimate goal of the meeting was to initiate the process of preparing applications to the programs that are described in Western Balkans Regional R&D Strategy for Innovation.

2 Meetings and excursions

A list of the participants is shown in Appendix I and the program for the meeting is shown in Appendix II. As can be seen from the list of participants, the participants from WB constituted personnel from aquaculture, fisheries and mussel industries, universities in addition to MSc and PhD students.

On the first day, 15 October 2014, the participants visited the premises of SINTEF Fisheries and Aquaculture (SFA) in Trondheim. Several presentations were held focusing on several of the activities SFA are involved in, how the institute carry out applied research, and how SFA is organized.

After lunch, the group visited the Norwegian University of Science and Technology, NTNU, Department of Biotechnology. Here, a presentation was given about how NTNU is organized, different student programs and research activities.

Subsequently, the Isfjord processing plant in Trondheim was visited. The company buys gutted salmon and rainbow trout from various producers along the Norwegian cost line. The primary products are smoked fillets sold under their own brand name or under the name of other companies. Various products based on fresh fillets or fillet pieces are also produced.

made (Fig. 4). In conjunction with the plant, fresh rest raw materials are transferred to the new Nutrimar plant located next door. Here, salmon oil, fish meal and protein concentrate will be produced on a routinely basis.



Fig. 3. The location of SalMar and Nutrimar processing plants at Nordskaget, Frøya.



Fig 4. Salmon and rainbow trout processing plant at SalMar.

During the last day of the workshop, held at Britannia Hotel in Trondheim, both the project manager of Herd Maritime, Liv Møller-Christensen, and Gyda Christophersen from The National Institute of Technology (leading WP3) were present. All students presented a summary of their theses and a plan for the finalization of their work. Furthermore, the project partners exchanged their experiences within each project and high-lighted positive results of the cooperation as well as areas where there could be room for improvement. All presentations can be found at webpage: <http://seamedweb.com/>. The partners from the WB countries pointed out that the present project had strengthened the cooperation between industry and academia which, to them, represented a new work model that was considered useful for further development of their respective sectors in the region. Several students pointed out that the SEAMED project had represented a unique possibility to educate themselves within the aquaculture or fisheries sectors. Moreover, all partners from the WB countries agreed that this project really did establish a

cooperation platform between countries that should be exploited for further cooperation. The possible future cooperation areas were identified:

- Multidisciplinary project on sustainable use of resources, bioeconomy
- Aquaculture of new species
- Utilisation of rest raw materials
- Biofouling monitoring and cleaning of net-cages.

Possible funding sources such as the Foreign Ministry (UD), Horizon 2020, and the World Bank were mentioned. Concluding the work, project leader Marit Aursand (SFA) took the responsibility for looking into funding possibilities for further cooperation projects.



3 Budget

Budget for the workshop in Trondheim

Travel expenses for people from Western Balkans: students (6 persons) and academia (8 persons + 1 could not attend because of illness) and industry from Western Balkans (6 persons+1 could not attend because of illness):

Plane tickets:	131.259 NOK
Hotels 4 nights:	82.000 NOK
Workshop (2 days) expenses (conference room, coffee breaks, lunch, dinner):	62.754NOK
Visiting industry (travel expenses, lunch and dinner):	24.555 NOK
<u>Administration, coordination of the meeting, other expenses:</u>	<u>89.432 NOK</u>
Total:	390.000 NOK

APPENDIX I

	Participant	Institute	Industri	Signature
1	Roland Kristo	AiT		<i>Roland Kristo</i>
2	Ardian MAÇI	AiT		<i>MAÇI</i>
3	Gulielm Kroqi	AiT		<i>Kroqi</i>
4	Jerina Kolutari	AiT		<i>Kolutari</i>
5	Elvira Beli	AiT		<i>Beli</i>
6	Mark Babani		Mare Adriatik	<i>Mark Babani</i>
7	Arjan Demiri		DFMS	<i>Arjan Demiri</i>
8	Aleksandar Joksimovic	IMB		<i>Joksimovic</i>
9	Ana Pesic	IMB		<i>Ana Pesic</i>
10	Ljubomir Vujacic		Ahileas	<i>Vujacic</i>
11	Ilija Guskic		COGI	<i>Guskic</i>
12	Samir Muhamedagic	US		
13	Emir Habibovic	US		<i>Emir Habibovic</i>
14	Dino Lepara	US		<i>Dino Lepara</i>
15	Irma Kapo	US		<i>Kapo</i>
16	Azra Mustafacic	US		<i>Azra Mustafacic</i>
17	Tijana Slagalo		Association	
18	Agim Rexhepi	UP		<i>Rexhepi</i>
19	Skender Muji	UP		<i>Muji</i>
20	Fazli Shabani	UP		<i>Shabani</i>
21	Fazli Bytyçi		Trofta	<i>Fazli Bytyçi</i>
22	Haki Bytyçi		Trofta	<i>Haki Bytyçi</i>
23	Marit Aursand	SINTEF		<i>Marit Aursand</i>
24	Leif Grimsno	SINTEF		<i>Leif Grimsno</i>
25	Ulf Erikson	SINTEF		<i>Ulf Erikson</i>
26	Revilija Mozuraityte	SINTEF		<i>Mozuraityte</i>
27	Ekrem Misimi	SINTEF		
28	Karl Andreas Almås	SINTEF		<i>Karl A. Almås</i>
29	Ulf Winther	SINTEF		<i>Ulf Winther</i>

APPENDIX II

**SEAMED workshop Trondheim
15-17 october, 2014****15 october** **Place: SINTEF, Fisheries and Aquaculture, Brattørkaia 17C, Trondheim****9:00 – 9:10** **Welcome at SINTEF**
*Research Director, Dr. Prof II Dr. Marit Aursand***9:10 – 9:35** **SINTEF Fisheries and Aquaculture**
*President, Dr. Karl Andreas Almås***9:35 - 10:00** **Aquaculture and environment**
*Research Director, Ulf Winther***10:00 - 11:00** **visit SINTEF F&H lab facilities**
*Dr. Ulf Erikson & Dr. Revilija Mozuraityte***11:00 – 12:00** **lunch at SINTEF****12:30 – 13:30** **visit of NTNU****14:00 – 15:00** **isfjord****18:00 – buss from Britannia hotel to <http://www.tavern.no/>****16 october:** **bus trip, visit of Salmar,****7:30** **leave from hotel****10.30 – 12.30** **Visit of Salmar processing line,****12.30-13.30** **lunch Frøya Hotel****14.00-16:30** **visit of Måsøval Fiskeoppdrett AS****17:00 – 20.00** **trip back to Trondheim**

17 october **Workshop Place: Britannia hotel**

9:00 – 9:20	Seamed project, Research Director, <i>Dr. Prof II Dr. Marit Aursand</i>
9:20 – 9:40	Herd Maritime Program and Seamed <i>Herd Maritime Sector Manager, Liv Møller-Christensen</i>
9:40 - 9:50	Experience from Seamed project/ field work <i>MSc Leif Grimsmo</i>
9:50 - 10:00	Experience from Seamed project <i>Prof. Ardian MAÇI</i>
10.00 10.30	Coffee break
10:40 – 11:00	Roland Kristo, PhD thesis
11:00 – 11:10	Experience from Seamed project/ field work <i>TI, Dr. Gyda Christophersen</i>
11:10 – 11:20	Gulieim Kroqi, MSc thesis
11.20-11:30	Experience from Seamed project/field work <i>Dr. Ulf Erikson/ Dr. Ekrem Misimi</i>
11:30 - 11:40	Experience from Seamed project <i>Prof. Skender Muji/Prof. Agim Rexhepi</i>
11:40 – 12:00	Fazli Shabani, PhD thesis
12:00 – 13:00	lunch
13:00 – 13:10	Experience from Seamed project – <i>Dr. Samir Muhamedagić</i>
13:10 - 13:20	Azra Mustafčić, MSc thesis
13:20 - 13:30	Dino Lepara, MSc thesis
13:30 - 13:40	Irma Kapo, MSc thesis
13:40 – 13:50	Experience from Seamed project/ field work <i>Dr. Revilija Mozuraityte</i>
13:50 – 14:00	Experience from Seamed project <i>Dr. Aleksandar Joksimovic</i>



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