

News from CMSS

A new Nordic co-operation project



The Nordic Council of Ministers Labour Market Committee has just approved funding for a Nordic cooperation project entitled 'Project Measures in Prevention of Occupational Injuries in Fishing in the Nordic countries' (ViFAFiN).

CMSS is the initiator and facilitator for the project which focuses on the remarkable positive development in the incidence of accidents in the Nordic fishing industry. The aim of the project is to examine the historical background for the reduced rate of accidents, the actions taken and the used instruments related to the prevention of accidents in the fishing industry in the Nordic countries. The intention is in particular to gain insight into and knowledge about the specific preventive measures that has and has not worked – a knowledge that is lacking today – but is in demand nationally as well as internationally and can eventually guide future preventive initiatives and working strategies.

The study is based on a combination of previous research and experiences from projects on safety, health and environment in the fishing fleet, records, register data and historical concrete actions taken by authorities and institutions in the respective Nordic countries. Furthermore, as a new feature, the study is complimented by interviews with fishermen in order to accumulate knowledge about what works in regard to preventing occupational injuries in the fishery.

The project is carried out by institutions in Denmark, Norway, Finland, Iceland and the Faroe Islands, and it runs from January to December 2016.

Training course on International Health Regulations: Ship Sanitation Certificates

CMSS is planning a short training course for port health officers and inspectors in cooperation with the World Health Organization (WHO), European Office and the EU SHIPSAN ACT Joint Action.

The course will address inspection of hygiene and health standards on ships based on the European manual on hygiene standards and surveillance of communicable diseases and on the issuance of Ship Sanitation Certificates (SSC) based on the WHO International Health



Esbjerg port - an entry point to the city of Esbjerg and Denmark

Regulations (IHR) learning package. The course is scheduled to take place in Esbjerg 11-13 April 2016.

The course targets professionals from the Nordic countries, including the Baltics, who are employed by the authorities responsible for performing ship inspections and issuance of Ship Sanitation Certificates (SSC). This course aims at bridging the gap in the field, which is experienced by the respective professionals. According to the results of a research conducted 2014 in all European Union member states plus Iceland and Norway, the responding professionals expressed training needs in almost all the respective topics including training needs related to public health risks from microbiological, chemical and radiological agents and guidelines for reporting to the competent authorities.

For more information - please contact senior researcher Despina Andrioti: dandrioti@health.sdu.dk

New report concludes: Fishery – still a demanding profession



In August, with the support of the European Fisheries Fund, CMSS published the report 'Ergonomic working environment, physical strain and fatigue on Danish fishing vessels'. The report is based on a questionnaire survey sent to a random sample of Danish commercial fishermen. The aim of the report was to map the fishermen's physical work environment in regard to workload, pain and fatigue - with the intent to improve future conditions in the fishing industry.

The results derive from 270 active commercial fishermen and include responses from both skippers and deckhands of an average age of about 53 years and with an average experience of about 30 years.

We found that the deckhands have higher workloads than the skippers. However, this was also to be expected, as the deckhands are usually responsible for cleaning and icing the catch, which is among the most physically demanding tasks.

Furthermore, we saw that the crew of potters and netters/liners has a significantly higher workload compared to the crew of trawlers, which may be due to the fact that trawlers are typically large and mechanized fishing vessels, while potters and netters/liners are often smaller vessels with less space and fewer crews on board.

The study also shows that pain is common among the fishermen, and not surprisingly, the reporting of pain is closely linked to the level of workload. Compared to the rest of the population, the fishermen suffer from more pain with the low back, shoulders and hands particularly affected.

Somewhat surprisingly, the results do not show a higher level of fatigue among the fishermen compared to the general population: This could be attributed to the fact that the fishermen regard fatigue as a natural part of their work at sea.

Despite the positive development in the fishing industry during the last 10-15 years, the study concludes that the fishermen still have a high workload and experience much pain.

When comparing the results with the fishermen's own suggestions for improvement, future development of mitigating facilities should focus on small vessels and particularly address deckhands. At the same time, focus should be kept on trying to ease strain on the low back, shoulders and hands. Furthermore, the costs for developing these facilities should also be kept down as fishermen are already facing a tough economic struggle with low fish prices and restricted quotas.

Read the report in full [here](#).

Ongoing projects – preliminary results

Project MARTHA

MARTHA, the international project on Seafarer fatigue, in which we in CMSS work with colleagues in England, Sweden and China, has now entered its final year. The project has proceeded as planned. It consists of a survey of seafarers' experiences in relation to perceptions relating to work-related fatigue, risk factors and mitigation. We at CMSS and colleagues from Dalian Maritime University have the main responsibility for this part of the project.



About 1,000 questionnaires have been completed by seafarers in two European and two Chinese companies. Moreover, some 60 interviews have been made with seafarers and land-based company staffs. The collection of data is finished, and the data are now being analyzed.

Currently, the preliminary results document in various ways the suboptimal work and sleep patterns at sea and the relation to fatigue. The handling of fatigue among seafarers is inadequate and has a negative impact on both safety and health. Thus, there is room for improvement.

Our colleagues in Sweden, England and China have focused their work on monitoring the seafarers' sleep (using sleep diaries and Actigraphs) on actual sea voyages as well as the assessment of options for reducing fatigue on board. A very large amount of data has been collected and is now being processed.

MARTHA has already led to scientific publications, and there are several more on the way. Martha has also been presented at various international congresses. The project is supported by the TK-Foundation.

Read more about project MARTHA [here](#).

Radio Medical Database for Research Use

The research project "Optimization of the maritime tele medical health service", or as we call it in daily speech "the Evacuation project", has now been underway for 1 year, and the result is a complete database of the past 10 years' almost 13.000 contacts to Radio Medical Denmark. These contacts include information about the seafarers' nationality, sex, age, rank, position, type of vessel, diagnosis and much more, which contribute to an increased knowledge about disease and accident patterns. This knowledge may benefit



Centre of Maritime Health and Society



planning and implementation of prevention and health promotion actions at sea.

However, the main focus in the project is cases leading to evacuation, which often cause the greatest human and economic impact to those involved as well as the shipping companies. These cases - about 50-60 annually - are followed-up by a search in the archives and records of the Danish Maritime Authority to uncover the actual consequences of the

evacuation; exit from or remaining employed in the Blue Denmark? The project also aims to compare the Danish tele medical efforts with other leading maritime nations to see how we are performing in international comparison.

The project is supported by the Danish Maritime Foundation and executed in collaboration between Radio Medical Denmark and the Centre for Maritime Health. It runs until November 2017.

You can find further information about the evacuation project [here](#).

A selection of other CMSS activities

International collaboration on TMAS

CMSS participated – represented by Lulu Hjarnø - in an international symposium about Telemedical Assistance Services (TMAS) "The Way Forward for Maritime Telemedicine" 30-31 October in Rome. The meeting was organized by the International Maritime Health Association (IMHA) and the venue was at the Italian TMAS, Centro International Radio Medico (CIRM).



The aim of the meeting was knowledge transfer on the organization and functioning of TMAS from the approximately 10 different nations represented. In addition, the aim was to discuss opportunities for the establishment of an international TMAS register for optimizing TMAS efforts.

Lulu Hjarnø contributed with a presentation about the 'Evacuation project' which aims to conduct an international benchmarking of selected TMAS efforts. The symposium was the first step to initiate a mapping process of the registration of TMAS data by the leading maritime nations. Denmark was also represented by Radio Medical Denmark.

International safety conference in Portugal



The 8th international Working on Safety conference (WOS) took place in Porto, Portugal 23-25 September. CMSS was represented by researcher Hanna B. Rasmussen who gave a presentation about changes in safety culture in the oil and gas industry. The WOS conference gathers researchers, academics, practitioners and policy makers from all over Europe, but also participants from e.g. Japan were present.

This year's main theme was 'Smart Prevention for Sustainable Safety'. Some of the current societal challenges, such as the demographic changes, globalisation, and rising global competition for resources, are impacting the global economy and, in consequence, the way work and safety are addressed by workers, companies and policy makers. These challenges will require a more multidisciplinary approach to safety and prevention of accidents. Discussions of these challenges and possible solutions were presented by the various researchers – either in plenum sessions or parallel sessions.

You can read more about the WOS 2015 conference [here](#).

Meeting in Dalian, China and Manila

The MARTHA consortium, which include participants from Southampton Solent University and University of Southampton, Stress Research Institute at the University of Stockholm, Dalian Maritime University, Intermanager and CMSS, have had two yearly meetings for summing up the achieved results and planning for the future. So far, we have had meetings in Southampton, Stockholm, London and Esbjerg. This fall we all met 16-18 November in Dalian, China with the venue taking place in the world largest Maritime University. We are generally on track with our plans and expect a significant scientific output during the next few months.

Following presentations on MARTHA for the international maritime community the Manning and Training Conference in Copenhagen 28-29 April 2015, Zhiwei Zhao and Jørgen Riis were invited to also present at the recent Manning and Training Conference 12-13 November in Manila which was conveniently located on their way to Dalian in China a few days later. At the conference, the participants showed a significant and growing interest in the fatigue issue in the seafaring community.

Recently published scientific articles from CMSS (names of CMSS employees marked in bold)

- **Jepsen, J. R.**, 2015. "Nurse's cramp": Median neuropathy at forearm level related to tablet dosage from blister packs. *International Journal of Advances in Case Reports*, 2, (17), 1102-1105
- **Andrioti D.**, Charalambous G., Skitsou, A., Kyriopoulos, J., 2015. An international partnership interdisciplinary training programme on public health. *Health Science Journal*, 9, (2), 4
- **Jepsen J. R.**, 2015. Brachial plexopathy : a case-control study of the relation to physical exposures at work. *Journal of Occupational Medicine and Toxicology (London)*, 10, (14), 1-13
- Thuesen, A. A., **Rasmussen H. B.**, 2015. Danish rural areas' readiness for joint action as a proxy for the potential for co-production. *Journal of Rural and Community Development*, 10, (1), 32-55
- **Herttua K.**, Mäkelä P., Martikainen P., 2015. Educational inequalities in hospitalization attributable to alcohol: a population-based longitudinal study of changes over the period 2000 to 2007. *Addiction*, 110, (7), 1092-1100
- Drupsteen L., **Rasmussen H. B.**, Ustailieva E., van Kampen J., 2015. Key aspects in managing safety when working with multiple contractors: A case study. *Work*, 51, (4), 715-720
- Paljärvi T., Martikainen P., Pensola T., Leinonen T., **Herttua K.**, Mäkelä P., 2015. Life course trajectories of labour market participation among young adults who experienced severe alcohol-related health outcomes : a retrospective cohort study. *P L O S One*, 10, (5), e0126215
- **Herttua K.**, Mäkelä P., Martikainen P., 2015. Minimum Prices for Alcohol and Educational Disparities in Alcohol-related Mortality. *Epidemiology*, 26, (3), 337-343

- Mäkelä P., **Herttua K.**, Martikainen P., 2015. The socioeconomic differences in alcohol-related harm and the effects of alcohol prices on them: a summary of evidence from Finland. *Alcohol and Alcoholism*, 50, (6), 661-669
- Tang L., Llangco M. O. S., **Zhao Z.**, 2015. Transformations and continuities of issues related to Chinese participation in the global seafarers' labour market. *Maritime Policy and Management*. Published online 2015-05-12. <http://dx.doi.org/10.1080/03088839.2015.1043751>
- **Jepsen J. R.**, 2015. Clinical neurological examination vs electrophysiological studies: Reflections from experiences in occupational medicine. *World Journal of Methodology*, 5, (2), 26-30
- Breidahl T., Christensen M., **Jepsen J.R.**, Omland Ø., 2015. The influence of vessel movements on the energy expenditure of fishermen in relation to activities and occupational tasks on board. *International Maritime Health*, 66, (4), 1-6

You can find more CMSS publications and bibliographic details by clicking [her](#).

CMSS wishes you all a merry Christmas and a happy new year

