

Digitalization is strongly present in the current Maritime Studies of the Baltic Sea at the University of Turku



Tommi Inkinen

Professor

Brahea Centre

Centre for Maritime Studies

University of Turku

Finland

tommi.inkinen@utu.fi

Maritime studies are doing very well at the South-West Finland today. Centre for Maritime Studies (CMS) is an international education and research unit that is an integral part of Brahea Centre of the University of Turku. CMS offers diverse research agenda in the fields of maritime industries and logistics for public and private sector organizations. An important factor in the maritime research profile of the University of Turku is the current strong drive in multimodal transportation digitalization, automation and IT management. Autonomous, including remotely operated, shipping is one of the main areas in our current research.

For the future university research the main objective is to conduct high quality studies that have both academic significance as well as applications. The research focuses both on academic (basic) and applied research linked with practice. The scientific research is multidisciplinary combining business studies and economics together with environmental and social sciences. CMS research agenda also highlights the role of a research integrator in maritime research. We have specialists in traffic and ports in the Baltic Sea, logistics chains and infrastructure, and in marine industry sector. The results produced are always

presented in such a way that the stakeholders can make use of them in the most efficient manner. Economy, market, and business environment monitoring is one of our key focuses. We are also concentrating in research and development projects related to the environmental issues of shipping and ports, especially to the benefits and costs of emission restrictions. We coordinate interdisciplinary environmental research supporting marine spatial planning and integrated coastal zone management. We apply our extensive collaboration network to support both national and international networks and partnerships. A number of them are found in the Baltic Sea Region (BSR). For example, our partnership in Merikotka network, combining the excellence of Aalto University's marine technology, and University of Helsinki's environmental studies, strengthens our national and international activities.

Currently, CMS focuses on the following research spearheads: First, *shipping and maritime logistics* including research tasks concerning maritime transport (volumes and contents), infrastructure, port networks and port operations. Digitalization is strongly present on these topics and CMS currently participates a number of related BSR-wide projects. Other key-areas of research are maritime safety and pilotage operations. Second, research on economics and societal impacts of *maritime cluster* focuses on the development and future prospects of marine industries, related cluster dynamics and their economic impacts. In this regard, corporate social responsibility in shipping operations together with studies focusing on Blue Growth are acknowledged. Third, the theme of *marine environment and spatial planning* includes analyses on efficiency and impacts of environmental regulations in shipping. Therefore, environmental status of ports and marine spatial planning are significance study topics associated with shipping and offshore activities in the Arctic and their performance and impact of the European ports system. These are integrated into knowledge-base and management system analyses.

The three spearheads require methodological diversity and triangulation. Therefore, both qualitative and quantitative approaches are applied in CMS research projects in concert. This applies not only to the research itself but also education demands of universities. The future generations of professionals working in the maritime sector require broad skill sets including know-how of technology, economy and management. The most important methods include combinations of data mining, statistical modeling and qualitative tools. Methodological proficiency is the key-feature in all our projects and research designs.

From these foundations CMS and the University of Turku has created a track record in the maritime studies focusing on the Baltic Sea and BSR. We aim to develop and apply four main steps in our research. These include steps starting from the project creation, planning phase, project execution, and result monitoring together with continuous development of research agenda. In this process, the structuring of the research design and project management is paramount, and extensive BSR wide collaboration networks are needed. Finally, knowledge dissemination with all the relevant media channels, together with an output and impact monitoring continue to be focal points in the University of Turku's strategic research profile of maritime studies.