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### **Professor in Ecosystem Approach to Marine Management**

DTU invites applications for a position as professor in the research field Ecosystem approach to marine management. The professorship is affiliated with the National Institute of Aquatic Resources (DTU Aqua), Section for Ecosystem Based Marine Management, and it based at DTU in Kgs. Lyngby. The successful candidate is expected to take the lead of the section. The section consists of four research areas: Marine habitats, Fisheries technology, Fisheries management, and Ecosystem effects of fishing.

The section conducts research on the direct and indirect effects of fishing and other anthropogenic activities on the marine environment. The aim is to develop knowledge and tools for use in an evidence-based ecologically and economically sustainable management. Research in Marine habitats concerns the importance of habitats for fish stock dynamics. Fisheries technology addresses the efficiency, selectivity, and environmental impact of the fishing process. The aim is to reduce unwanted bycatch of fish, marine mammals or seabirds and the impact on the marine environment, while improving the efficiency and competitive abilities of the fishery. Research in Fisheries management creates the scientific basis for advice on effects of management measures, such as limits to the amount of fish landed, closed areas and multiannual management plans and for determining their likely effects on the ecosystem and the value of the fishery.

Research in Ecosystem effects of fishing focuses on the quantitative analyses of indicators and reference levels for the interaction between fisheries and marine mammals, seabirds, and benthos, and the contribution of these and other indicators to Good Environmental Status under the European Marine Strategy Framework Directive. It further addresses the interactions between the ecosystem, fisheries, and other maritime activities providing the basis for advice on reducing conflicts and the management of marine ecosystems and maritime activities in general.

#### **Responsibilities and tasks**

The professor is expected to lead the section for Ecosystem Based Marine Management, implying academic, strategic, human, and other resource management as well as active engagement in the department's leadership in helping to develop both other research sections and support functions. The professor's research field will be to develop and operationalize methods considering ecosystem, economic and social aspects in fisheries management to improve ecosystem-based fisheries management. To this aim, the professor is expected to identify impacts of changes in ecosystem structure and function—driven by natural processes and anthropogenic activities—on fish stock and fisheries dynamic and incorporate the resulting biological and ecological knowledge of fish stock dynamics in operational fish stock assessment and fisheries management advice. The professor will act to determine impact of fisheries on fish populations and food webs, e.g., predators and prey of commercial fish stocks and cascading effects in the food webs. Another task is to foster positive interactions of fishing and other maritime activities as a contribution to maritime spatial planning.

The professor is expected to give advice on the next revision of the Common Fisheries Policy, including contributions to international fisheries advisory (e.g. ICES) and management organization (e.g. the EU Commission). The professor should furthermore contribute to the implementation of environmental directives, such as the Marine Strategy Framework Directive, including contributions to regional seas conventions (e.g. HELCOM and OSPAR) as well as to maritime spatial planning at national and international level.

Research and advisory activities are expected to be conducted in close cooperation with other research sections in the department, other units at the University, and other relevant research groups. Results should be disseminated in peer reviewed publications and dedicated outlets aiming to inform management authorities, stakeholders and the public at large and foster national and international collaboration.

The successful candidate is expected to take a lead role in teaching at the BSc, MSc, and PhD levels, including supervision of PhD students and postdocs. For international candidates, DTU can provide Danish language courses enabling the candidates to teach in Danish within 2-3 years.

An innovative focus is on introducing new fishing gear technology and suggesting management regulations reducing negative impacts on the ecosystem while sustaining ecologically and economically viable fisheries.

#### **Qualifications**

The successful candidate must hold an internationally recognized track record on:

- determining growth, survival and spatial distribution of commercially exploited fish stocks
- conducting fish stock assessments and drafting advice on fisheries management
- effects of fishing on predators of targeted stocks as well as other ecosystem components
- indicators of fishing impact
- linkage of various trophic level production and internal, e.g. food web dynamics, and external drivers e.g. climate change, to fish stock production and fisheries dynamics
- integrating ecosystem, economic, social and governance objectives in management advice

Employment requires innovative research at high international level within relevant research themes and a track record in research leadership, including visionary strategic development of the research area, leading multidisciplinary research groups, planning, implementing, and running interdisciplinary research projects, and supervision and training of early career scientists as well as contribution to teaching at MSc level. Furthermore, the candidate is expected to have extensive experience in giving advice on fisheries and environmental management to policy and management authorities.

### Assessment

In the assessment of the candidates, consideration will be given to:

- Documented experience and quality of teaching and curriculum development
- Research impact and experience, funding track record, and research vision
- Societal impact
- Documented innovation activities, including commercialization and collaboration with industry
- International impact and experience
- Leadership and collaboration
- Communication skills

Consideration will also be given to:

- scientific production and research potential
- experience in giving advice to national authorities, international advisory bodies and stakeholder
- research leadership in implementing and coordinating multidisciplinary research programmes
- ability to promote and utilize research results in management advice

### We offer

DTU is a leading technical university globally recognized for the excellence of its research, education, innovation, and scientific advice. We offer a rewarding and challenging job in an international environment. We strive for academic excellence in an environment characterized by collegial respect and academic freedom tempered by responsibility.

### Salary and terms of employment

The appointment will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed with the relevant union.

### Further information

Further information may be obtained from Institute Director Fritz Köster, email: [fwk@aquu.dtu.dk](mailto:fwk@aquu.dtu.dk), cell phone: +45 21362805 or Vice-Director Anders Koed, email: [ak@aquu.dtu.dk](mailto:ak@aquu.dtu.dk), cell phone: +45 21685641.

You can read more about DTU Aqua on [www.aqua.dtu.dk](http://www.aqua.dtu.dk)

### Application procedure

Please submit your online application no later than **XXX 2019 (local time)**.

Applications must be submitted as **one PDF file** containing all materials to be given consideration. To apply, please open the link 'Apply online', fill out the online application form, and attach **all your materials in English in one PDF file**. The file must include:

- Application (cover letter) addressed to the President
- CV
- A vision for future research
- Teaching and research statement, with a focus on the 'Assessment' bullet points listed above

- Documentation of previous teaching and research, as related to the 'Assessment' bullet points listed above
- List of publications indicating scientific highlights
- H-index, and ORCID (see e.g. <http://orcid.org/>)
- Diploma (MSc/PhD)

Applications and enclosures received after the deadline will not be considered.

All interested candidates irrespective of age, gender, disability, race, religion or ethnic background are encouraged to apply.