Sustainable exploitation and management of aquatic resources - DTU Orbit (16/12/2018)

Sustainable exploitation and management of aquatic resources

DTU Aqua conducts research, provides advice, educates at university level and contributes to innovation in sustainable exploitation and management of aquatic resources. The vision of DTUAqua is to enable ecologically and economically sustainable exploitation of aquatic resources applying an integrated ecosystem approach which utilizes synergies in natural and technical scientific disciplines. DTU Aqua advises the Danish Ministry of Food, Agriculture and Fisheries and other public authorities, the commercial fisheries, the aquaculture industry and international commissions. DTU Aqua deals with all types of aquatic habitats – from the North Atlantic Ocean and European shelf areas to coastal areas and inner Danish waters, ecosystems in lakes and streams as well as aquaculture. European shelf seas, Danish coastal areas and freshwaters are our main working areas, but we also work on Arctic and sub-Arctic waters, in particular in the North Atlantic surrounding Greenland, and we are involved in research activities in other parts of the world. DTU Aqua’s research is divided into the following fields:

- **Oceanography and climate** focuses on understanding the interplay between physical, chemical and biological conditions in the ocean and how these factors impact the living conditions for marine organisms.
- **Population genetics** aims at gaining knowledge on how to preserve and manage biodiversity sustainably.
- **Individual biology** deals with the biology of aquatic organisms and their interaction with other organisms and with the surrounding environment.

Marine ecosystems aim at understanding the mechanisms that govern the interaction between individuals, species and populations in an ecosystem enabling us to determine the stability and flexibility of the ecosystem. Marine living resources looks at the sustainable utilization of fish and shellfish stocks.

Ecosystem effects expands from the ecosystem approach to fisheries management to an integrated approach where other human activities are taken into consideration.

Fisheries management develops methods, models and tools for predicting and evaluating the effects of management measures and regulations applied by the authorities in fisheries management.

Fisheries technology focuses on the development of selective and low-impact fishing gear which can help limit unintended by-catches and minimize the impact on the marine environment.

Observation Technology is concerned with research and development of systems for collecting data in support of marine research and management.

Shellfish aquaculture and fisheries focuses on production potential and resilience of coastal areas in relation to shellfish aquaculture and fisheries.

Aquaculture covers a wide range of biological and technological aspects from fish nutrition and growth to environmental impacts of aquaculture.

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**General information**

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- **Contributors:** Neuenfeldt, S., Köster, F.
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