

# From local adaptation to industrial production: Loss of sustainability on the west coast of Norway

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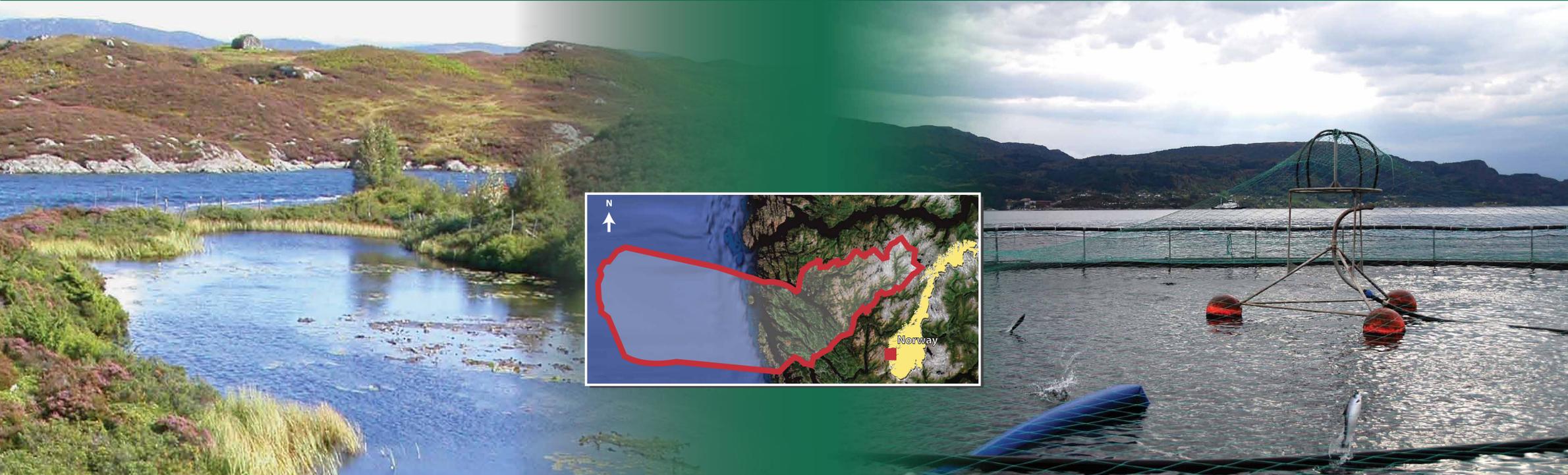
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United Nations  
Educational, Scientific and  
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## Traditional adaptation

- Based on the combination of small scale fisheries and heathland farming
- Small farms dependent on marine resources
- Coastal areas with marginal arable land
- Food security: The combination of resources from sea and land laid the grounds for sustainable food production
- Natural forests removed by the use of fire to create open *Calluna*-heathlands
- Coastal areas transformed to heathlands as far back as 6000 BP
- The open heathlands served as extensive all-year-round grazing grounds for sheep, goats and cattle
- Transport of nutrients from outfields (heathlands) to infields (cropped land)
- Management resulted in small scale heterogeneity of the landscape
- This natural resource management regime proved sustainable over the past four thousand years, facilitating a relatively high human population density along the coast

## Challenge for the future

*The present way of living, heavily based on fish harvesting, oil production and related industries, but with low locally based food production, is not a sustainable way forward.*

*To meet this challenge a UNESCO Man and the Biosphere (MAB) project is under planning in search of better ways to sustainably manage the natural resources of the coastal areas for the future.*

*The new MAB will constitute nine counties in the west coast. It will aim to 1) conserve natural and cultural diversity, 2) promote economic development based on sustainable and cultural principles, and 3) create infrastructure for research, environmental monitoring, education and dissertation of sustainable development*

## Modern adaptation

- After World War II this management system fell out of use
- With agricultural modernization, traditional heathland farming was marginalized, and today even modern farming on the coast is no longer economically viable
- Consequently, most of the open coastal heathlands have disappeared due to encroachment of woody vegetation and forest plantations
- With a consequent loss of diversity at all scales
- Contrastingly, the specialization of fisheries, with bigger boats and improved technology, has stressed the deliverance of marine ecosystem services
- The oil industry in the North Sea has created more lucrative job opportunities
- Hydropower in the same region has created the grounds for energy demanding industry
- Today, the coast of Western Norway is regarded as the most resource rich part of the country, with a large economic productivity related to hydro power electricity, fisheries and the oil industry

## The Man and the Biosphere (MAB) Programme

- 564 MAB areas in 109 countries globally, none in Norway yet
- Aiming to set a scientific basis for the improvement of the relationships between people and their environment globally
- Combines natural and social sciences, economics and education to improve human livelihoods and safeguard natural ecosystems
- Promotes innovative approaches to economic development that is socially and culturally appropriate and environmentally sustainable
- Intergovernmental Scientific Programme



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