

## **Aquatic commons in worlds of change:**

### **Medieval European experiences and present\_day management.**

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#### Abstract

Human cultures and natural systems directly intersect in fisheries. The encounter so fully illustrates all the paradigmatic hazards of environmental exploitation, that pollution, depletion, systemic collapse, and human dominion are all clearly seen in the present-day catastrophic collapse of oceanic ecosystems, the so-called global fisheries crisis. Life scientists, social scientists, politicians, and fishers debate a spectrum of institutional response, from open access through a range of regulatory measures to exclusive private ownership of the resource. This presentation applies present-day thinking about fisheries destruction and management to the evident experience of medieval Europeans with their own aquatic resources. Its findings undermine proposed solutions and complicate convenient models with a dash of that chaos present in large-scale interaction among natural systems with or without humans.

Exemplary cases from across medieval Latin Christendom show fisheries suffering from all the now-paradigmatic risks. Some of them – overfishing, toxic effluents – alert contemporaries attributed to conscious human (mis)behaviour, while others were in retrospect the then unremarked and unintended consequence of other human activity, notably agricultural clearance and manipulation of watercourses. Now detectable as well is historic damage from natural phenomena such as environmental catastrophes and long-term climatic change which occurred without direct human participation or systematic awareness. Humans were not the only source of environmental variability.

Impacts to and remedies for damage to medieval fisheries were conceived and shaped by socio-economic relations within and between medieval societies. European use of aquatic organisms derived directly from a shared symbolic culture of taboo and purity, of nutritional theory, and of status display. Measures for pollution control and conservation arose from the interplay of local producing and consuming interests. Depletion and systemic collapse provoked a whole catalogue of what would now be called sustainability efforts. Ubiquitous regulatory responses indicate general consensus as to the problem and appropriate remedies (surprisingly similar to those of today). While interested parties actively advanced both community access and exclusive private control, it is now difficult to identify either regime with historically sustained or with destroyed fisheries. Market-oriented substitution responses did, however, align with diametrically opposite rights paradigms: unrestricted open access characterized the late medieval extension of demand to distant marine ecosystems on Europe's frontiers, while private property rights and political power typified the expansion of aquaculture enterprises where technology supplied fresh fish to inland elites.

In a past millennium or tomorrow, a world of interconnections and change promises no sure or continuing remedies for effects of exploitation. Overfishing and climatic change had by the fourteenth century exterminated certain local breeding stocks of herring. Medieval carp culture transformed natural into artificial systems with externalized costs as surely as did agricultural clearances then or the culture of salmon in Norway or British Columbia and prawns in Thailand or coastal India today.