The challenges of adaptive management - Navigating institutional complexities and substantial uncertainties in fish stocking policy

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Adaptive management implies a system in which policy and practice are constantly revised in a continuous circular process to accommodate new ecological knowledge. This study set out to address the often complicated link between science and management, which holds a prominent position in adaptive management theory. The topic was elaborated focusing on the empirical case of fish stocking policy. While fish stocking is perceived as a solution to many problems of modern fishery management, scientific researchers warn that current practices, including introducing alien populations, seriously threaten the sustainability of fish stocks. Accordingly, the aim of the study was to address, explain the existence of and, finally, discuss the prospect of narrowing the gap between science and policy, promoting the potential for adaptability.

Even though Sweden was used as an empirical point of departure, a multi-level governance perspective was adopted. Two separate studies were conducted; the first aimed at defining the characteristics of the policy subsystem, while the second study analyzed policy making related to fish stocking with a bottom-up approach. The empirical material was collected through documental analyses and interviews.

The empirical findings underlined that fish stocking is a wicked policy problem, as the vast substantial and institutional uncertainties characterizing the policy subsystem were identified as variables complicating the realization of adaptive policy making. Fish stocking decisions are made within a complex policy subsystem that involves multiple actors and policy-making institutions, conflicting goals and competing notions of the problem. Policy is produced on the international, European and national levels and within different policy sectors. Moreover, current policies reveal great diversity and range as well as inconsistencies in definitions and terminology.

The lower-level bureaucrats, making stocking decisions on the regional level in Sweden, must navigate within this complex policy subsystem. Even though all regions are embedded in the same formal institutional framework of legal rules, regulations and policies, they tend to behave differently. The empirical analysis highlighted some clear divergences in how the issues of genetic diversity and fish stocking are understood and addressed in different regions. These variations were explained by differences in existing implementation resources, policy beliefs and readings of formal regulations.

Public policy makers can respond to the above described situation in two ways; they can either change formal regulations or influence available implementation resources. Both management approaches might have positive as well as negative effects on the subsystem’s adaptability. There is a trade off between the need for more detailed regulations on the one hand and the possibility to accommodate regional contexts in policy making on the

other.

Finally, since the policy problem constitutes an illustrative example of the disparate challenges associated with adaptive management theory and the realization thereof, the findings are likely relevant also for other policy subsystem sharing similar qualities.