Adapting fisheries and their management to climate change: A review of concepts, tools, frameworks, and current progress toward implementation

As the body of literature on marine climate impacts accumulates the question is no longer whether marine ecosystems and their living resources are affected, but what we as scientists, managers and policy makers can do to prepare for the inevitable changes. In this study, the current literature on how fisheries, fisheries management and fishing communities react and adapt to projected climate impacts is reviewed. First, a brief background on adaptation research, including definitions of key terms and concepts is provided. Secondly, available frameworks and tools to assess and foster adaptation to climate change are outlined and discussed. Thirdly, case studies illustrating several key aspects (political, legal, economic, and social) influencing adaptation at the level of fisheries, communities and households worldwide are presented and compared. Finally, a brief synthesis of the main issues and their implications for adaptation within fisheries and fisheries management at large are identified and discussed. In summary, the study illustrates that while a great wealth of local and regional knowledge, as well as tools and approaches to foster adaptation exists, examples of concrete adaptation actions and measures are surprisingly few. This emphasizes the need to increase the general awareness of climate change impacts and to build a solid political, legal, financial and social infrastructure within which the available knowledge, tools and approaches can be set to practical use in implementing adaptation to climate change.

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