

Sustainability of seafood production – challenges and the way forward

Abstract

Sustainability of seafood supplies is a matter of growing concern at a time when demand is increasing and some of the factors constraining the development of aquaculture are challenging the efforts towards increasing production. Stabilization of harvest from fisheries has generated a great deal of interest in aquaculture. Besides directly enhancing production, aquaculture can reduce pressure on wild stocks and biodiversity, and contribute to enhancing depleted stocks. Aquaculture systems are diverse, requiring a comprehensive understanding of the different issues and knowledge-based solutions, and an enabling environment that favours application of innovative ideas to support development of this sector. Diversity in aquaculture often requires adopting more balanced and informed approaches that take into consideration the environmental, social and economic conditions. The future of aquaculture depends on management of key issues and application of appropriate strategies. This chapter discusses the trends that characterize the emergence of aquaculture as a major provider of high quality protein, the challenges it faces in a changing climate, the impact of adaptation measures on sustainability, the possible role of some forms of biotechnology, introducing ecosystem perspectives and the potential of forging synergies of this sector with other means of producing seafood.