



Preface

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The Millennium Ecosystem Assessment (MEA), launched by the U.N. in 2001 and made public in 2005, is a decisive step toward better integration of environmental goods and services in formulating development policies and economic strategies. By popularising the notion of ecosystem services and by proposing a quantitative estimate of the material and immaterial benefits drawn by humans from ecological services, MEA served as an invitation to think differently about the relations between humans and nature.

In a context of climate change and biodiversity loss, the notion of ecological services has rapidly gained ground in political debates. It was a key topic during the 10th Conference of the Parties to the Convention on Biological Diversity, held in Nagoya in October 2010, and a guiding concept in drafting the new French biodiversity strategy that was adopted in May 2011. The recent intergovernmental platform on biodiversity and ecosystem services (IPBES) was further proof of both the relevance and the international standing of the concept.

The goal of good water status, particularly good ecological status, set by the European water framework directive in 2000 has led to major efforts to preserve and restore aquatic environments. The ecological services provided by aquatic environments are now a topic of growing interest to water managers and, more generally, to all stakeholders in society interested in the quality and sustainable management of aquatic environments. For at least a decade, numerous multi-disciplinary programmes have been carried out by a wide range of institutions in the fields of both fundamental and applied research.

The Scientific council on water and aquatic environments, managed by Onema, is active in the efforts to provide the concept of ecological services with an operational basis. Jean-Pierre Amigues and Bernard Chevassus-au-Louis wrote this book which discusses the existing studies, clarifies the main concepts, identifies the major issues and presents the various steps and methods used to assess services. The results expected of these methods are examined, their potential for use in management is discussed and the best manner to interpret the results is proposed.

At a time when decision-makers and stakeholders have made clear the need for assessments of environmental projects, it was important to discuss the elements of what could become guidelines for assessment of the ecological services rendered by aquatic environments. This book provides managers with key concepts on addressing "why assessments are necessary" and "how the results of an assessment can be used". There is of course no single, universal method of assessing services. For each case encountered, it is necessary to adapt the general principles and devise a particular approach. The goal of this book is to assist in launching a dynamic new approach to the problems concerning the environment and resources.