Preparation of this document

A challenge to geographic information systems (GIS) and remote sensing work on fisheries or aquaculture concerns geographic cognition and spatial awareness. There is a lack of appreciation that many or perhaps most of the problems concerning fisheries and/or aquaculture may be rooted in spatial differentiation, thus fisheries managers and others may often not appreciate the importance of the geographic perspective. It is because of this lack of appreciation that there is the need to train people in the use of GIS and remote sensing. The recent emergence of "marine spatial planning" is an exact reaction to this lack of realization about the importance of spatial issues. As a consequence, this technical paper was prepared to provide policy-makers and senior managers, who have to deal with their national fisheries and aquaculture sectors, with an overview of GIS and remote sensing tools to help them lead to more sustainable fisheries and aquaculture. This document will also be of relevance to aquaculture operators, industry organizations, non-governmental organizations and other groups interested in understanding GIS and remote sensing and their influences on master plans, industry regulation and the management of aquatic resources.

The FAO Fisheries and Aquaculture Resources Use and Conservation Division has been active in promoting the use of GIS and remote sensing in fisheries and aquaculture for many years. Promotional activities have been carried out by means of technical publications, training courses and workshops as well as the FAO GISFish Web site also created for this purpose.

The need for technical papers for understanding and applying GIS and remote sensing in fisheries and aquaculture was recognized in the 1990s; in fact, the Food and Agriculture Organization of the United Nations (FAO) commissioned and published the first technical papers on the subject: *Geographical information systems and remote sensing in inland fisheries and aquaculture* (Meaden and Kapetsky, 1991) and *Geographical information systems: applications to marine fisheries* (Meaden and Do Chi, 1996). The present technical paper aims to update these papers.