Preparation of this document

There is growing need to transfer land-based and/or coastal aquaculture production systems further into the sea as a result of the expected increases in human population, competition for access to land, and clean water needed to increase the availability of fish and fishery products for human consumption. Mariculture, in particular offshore aquaculture, offers significant opportunities for sustainable food production and for the development of many coastal communities, especially in regions where the availability of land, nearshore space and freshwater are limited.

This technical paper is an expanded and more detailed version of a contribution entitled "Spatial analysis of the potential for offshore mariculture" to a Food and Agriculture Organization of the United Nations (FAO) workshop proceedings (Lovatelli and Aguilar-Manjarrez, forthcoming) that aims at providing additional guidance in the development of offshore mariculture. The workshop proceedings collect and synthesize global information on the potential for offshore mariculture development by focusing on technical, environmental, spatial and governance challenges. The goal is also to identify major opportunities and challenges that FAO, its Member States and other stakeholders could act upon for the industry to grow on a sustainable footing.

This technical paper responds to the needs of the FAO Member States in providing estimates of the potential for offshore mariculture development, presenting, for the first time, quantitative spatial measures of the status and potential of offshore mariculture development that are comprehensive of all maritime nations and comparable among them.

This document is part of a recent series of spatially oriented activities aimed at the development and management of aquaculture. These activities have included reviews on geographic information systems, remote sensing and mapping for marine aquaculture, and spatial planning tools to support the ecosystem approach to aquaculture. Additionally, the activities also cover marine spatial planning for aquaculture, site selection and carrying capacity, and virtual technology and decision-support tools. Although these activities have had varying objectives, the common theme among them is the demonstration of the essential role of spatial analysis in the development and management of aquaculture from global to local levels. The present document continues this theme.