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Towards an Integrated Coastal Zone Management in Campania region (Italy): a multidisciplinary approach to the analysis of coastal fishery activities and their socio-economic management

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Abstract

The paper presents some of the main outcomes of a study concerning the application of the Integrated Coastal Zone Management (ICZM) to Campania region in Italy. The study was focused on the analysis of main uses and activities related to fishery such as the definition of thematic maps describing zones in which fishing activities are prohibited or restricted, areas of distribution of fishing effort, socio economic sustainability of local artisanal fishery, the relevance of fishing tourism and recreational fisheries, an analysis of local fish market. Data provided by official source as the Fishery Data collection, vessel traffic monitoring systems, logbook and legislative sources were successively verified by a field analysis through direct interviews to stakeholders.

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1. Introductions

Integrated Coastal Zone Management (ICZM) is a dynamic process for the management and sustainable use of coastal zones, which takes into considerations all aspects of coastal ecosystems and landscapes. It aims for the coordinated application of the different policies affecting coastal zones such as nature protection, aquaculture,

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fisheries, agriculture, industry, shipping, tourism, development of infrastructure and mitigation and adaptation to climate change (European Commission, 1999). The concept of ICZM dates back to 1994, when the resolution of the EU Council of 6 May 1994 highlighted the need for an EU strategy for coastal areas based on sustainable development principles applied through an approach that respects the limits of natural resources and ecosystems. Therefore, integrated coastal management covers the full cycle of information collection, planning, decision-making, management and monitoring of implementation.

Following this approach, this paper presents some of the outcomes of an ICZM project undertaken in the Campania region - Southern Italy, a marine area of around 9200 km² and 474 km of coastline. This area belongs to the FAO Geographical Sub Area 10 (GSA 10) - South Tyrrhenian Sea- and includes four main coastal zones: the Domizio coast, the Gulf of Napoli, the Gulf of Salerno and the Cilento coast. As in many Mediterranean regions Campania region has a typical multi-gear and multi-species fishery, with more than 150 commercial species and a large number of fleet's segments using different types of gears and performing diversified fishing operations during the year.

Taking into account the main uses and activities interacting in the area and related to the fisheries sector, the study initially focused on the identification of Operational Units: homogenous groups of vessels targeting the same fish stocks, using the same gear, performing similar fishing operations and having a homogeneous economic structure. This preliminary phase also included the definition of thematic maps describing zones and/or periods in which fishing activities are prohibited or restricted, sites for marine fish farming and areas where the majority of the fishing effort is concentrated. An evaluation of the sustainability of small scale fishery and an analysis of the relevance of fishing tourism and of recreational fisheries were also performed. The final part of this study presents an analysis of the local fish market in order to investigate its strengths <http://context.reverso.net/traduzione/inglese-italiano/of+strengths+and+weaknesses> and weaknesses and potential actions for the valorisation and promotion of local seafood. All the phases of the study benefited from the active participation and cooperation of stakeholders involved in the fishing sector through a survey based on fifty-five face-to-face interviews.

2. Materials and Methods

Mediterranean fisheries are multi-species and multi-gear in nature. This complexity represents one of the most general features of Mediterranean fisheries, which the management system should take into account. In order to reduce this complexity the Operational Unit (OU) approach was applied by identifying homogeneous groups of vessels from biological, economic and social points of view. The identification of OUs in the Campania region was based on the definition endorsed by the GFCM in 2001 (Adriamed, 2001). OUs are defined by a multidisciplinary approach where the level of homogeneity within each group of vessels is maximized with respect to “species or group of species” targeted, “type of fishing operation” and similarity in the “economic structure” (Accadia & Franquesa, 2006). Homogeneity criteria were obtained through a fleet segmentation based on the following variables: coastal area, fishing zones, vessel's length overall (LOA) and gear type.

The individuation of the OUs started from the total number of vessels registered along the coasts of the Campania region. The fleet identified on the basis of the National Fleet Register in 2014 and consisting of approximately 1100 vessels, was divided into groups, making an effort to maximize intra-group homogeneity. The maximum level of homogeneity was evaluated with regard to the type of fishing operations, the target species and the economic structure (Fig. 1).

Two types of sources were used for the collection of data: the Data Collection Framework (DCF) as foreseen by the Regulation (EC) n. 199/2008 and survey data supported by direct interviews to local operators. Data collected through the DCF is organized by fleet segment and macro area and, therefore, is not suitable for providing the necessary information to develop a management system based on OUs. To address the problem of lack of information detailed at sub-regional level, average estimates resulting from the DCF were processed and used as a basis for the reconstruction of socio-economic data at OU level. Average data per vessel on landings in weight and value per species, fuel costs, commercial and other variable costs, maintenance and other fixed costs, labor costs and depreciation costs were estimated. The results of these estimations were submitted, amended and finally validated through interviews to fishermen, covering all geographical areas and fishing methods of the Campania region.

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