Chapter 8
Typologies as Management Tools: Understanding the Environmental Attitudes and Economic Prospects of Mussel Farmers in Greece

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ABSTRACT

Mussel farming in Greece constitutes an important economic activity for the areas where it is concentrated. This paper presents the results of a survey of mussel producers in Thermaikos Gulf, Northern Greece, where almost 90% of the total mussel production in the country takes place. Using data from a questionnaire survey of 66 mussel producers in the area, a typology is elaborated, by means of which three types of mussel farmers are discerned. "Professionals" are the ones continuing their family tradition, "Newcomers" are those who chose mussel farming as their main occupation and recently invested in the sector and "Aged amateurs" are the oldest and least educated group, members of which plan to pass their farm to younger family members. There is strong evidence that the sampled "Newcomers" achieve considerably higher financial results, however the sample size is not adequate to generalize for all results except for the farm income. When it comes to their environmental attitudes, mussel farmers comply to bans in cases where high toxin concentrates are detected, but they are not convinced about the effectiveness of controls. They discern very clearly between the environmental and regulatory measures necessary to boost the productivity of the sector, but they seem to proclaim by far the latter type of adjustments, including the resolution of location issues. Based on the profile of each cluster and the general results of the sample proposals are made concerning the implementation of the new Common Fisheries Policy.

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INTRODUCTION

The sea aquaculture constitutes today one of the most dynamic economic activities of the primary sector in Greece. It consists of the fish and mussel farming sub-sectors, whose main characteristic is their intense export orientation. Approximately 80% of Greek fish aquaculture production, principally European seabass (Dicentrarchus labrax) and Gilthead seabream (Sparus aurata) and 90% of Mediterranean mussels (Mytilus galloprovincialis) are exported, mainly to the European market (FAO, 2015; Karagiannis et al., 2013; Theodorou et al., 2011). According to the Greek and European Statistical Authorities, the production of farmed fish in Greece, 95% of which is seabass and seabream, reached up to 90.7 thousand tons in 2013 with a value of 408.5 million €, while mussel production averaged 17,193 tons with a value of 6.7 million € (European Commission, 2014). Today, aquaculture is the leading agricultural sector in Greece, and fisheries constitute a strategic product for the national economy (European Commission, 2014). Apart from the decline in the traditional fishing sector, the rapid growth of aquaculture in Greece in the last three decades can be attributed to the extended and sheltered coastline of the country, the prevailing favorable climatic conditions and the increased demand for fresh marine products of high nutritional value (Theodorou et al., 2010; Theodorou et al., 2011).

Although Greece is one of the largest producers in seabass and seabream in the EU, the country's mussel farming sector has not been developed according to its growth potentials. The Greek mussel sector entails a strong impact on the rural economy, providing employment for a significant part of the local population and producing a high quality product. More than 300 farms, located mainly in the Thermaikos Gulf (North Aegean Sea, Region of Central Macedonia) are engaged in mussel farming. The farms operating in Thermaikos Gulf account for almost 90% of the annual harvest in the country, constituting the main centre of mussel production in Greece (Theodorou et al., 2010; Galinou-Mitsoudi et al., 2006).

The legislative framework for the operation of aquaculture in general, including, of course, mussel production, is the Common Fisheries Policy (CFP). Its basic goal is to ensure that the sectors of fisheries and aquaculture are environmentally, economically and socially sustainable and that they produce healthy food for EU citizens. At the same time, the CFP seeks to promote the dynamics of the fisheries sector and to ensure reasonable standards of living for fishermen and their communities. A basic principal of the CFP in the 2015-2020 period is to ensure the viability of fish stocks over time, through a safe approach which recognizes the impact of human activities in all elements of water and marine ecosystems. It aims at rendering fish fleets more selective in their choice of catches. As a result, CFP promotes regulatory measures for farmers, including mussel producers, whose intentions, needs and basic characteristics should be explicitly recognized in order to understand their dynamics and anticipate their impact on the environment and the growth of the sector. Then, the implementation of relevant measures could become less generalized and more targeted on the particular profiles of farmers, thus significantly increasing their efficiency in the achievement of the strategic goals set by the EU.

The purpose of this paper is to examine the profile and the attitudes of Greek mussel farmers, based on data from a questionnaire survey on a sample of 66 mussel farmers of Thermaikos Gulf. Respondents were categorized into clusters and differences in their economic performance were tested and analyzed. In addition, their environmental attitudes and proposals for the future of the sector were examined, in order to gather valuable information for policy makers, under the light of the new CFP.