

Title: Sustainability and Socio-Economic Analysis of Long Line Mussel-Farming in the Gulf of Trieste. Tools for Development of Production Sector

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Abstract: Aquaculture and fisheries are essential resources for the agri-food production of the north Adriatic coast. In particular mussels farms occupy a large area of the gulf of Trieste. A total of 16 producers, working in small cooperatives or individually, utilize 30 vessels on the 15 km of mussels long-line along the coast. Our study intends to analyze and evaluate the sustainability of this activity also in relation to its productivity, and to contribute to development of a tool for the optimization of ecological sustainability of mussel production. The analysis of sustainability is done with the application of two different indexes: Ecological Footprint and Emergy Analysis. Emergy Analysis entails comparison of this activity with other types of aquaculture (or agriculture), which utilize different methods to obtain the same final production. The computation of Ecological Footprint, an index seldomly apply to marine systems, will highlight the dependency of mussels aquaculture in the Gulf of Trieste from other local or national resources. The evaluation is based on a data set obtained through interviews and questionnaires submitted to the producers, which intended to evaluate the materials, technologies, methods of production, and commercial channels, and an official informations from local authorities. Production data have been submitted by public structures and sales cooperatives (producers).