



## Site Selection and Carrying Capacity Assessment for Coastal Aquaculture, Case of Hormozgan Province

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### Abstract

The purpose of this research is site selection and carrying capacity assessment for coastal aquaculture (case of Hormozgan Province) within the framework of ecosystem approach to aquaculture. Today, one of the important requirements for the development of aquaculture in the developed world is the environmental capacity of the carries out the development and changes made during the various activities. There are four types of range capacities: Physical Carrying Capacity, Production Carrying Capacity, Ecological Carrying Capacity, and Social Carrying Capacity, Each of which can specify a degree of industry-authorized development. In this context, it is necessary to note that the overlapping of the concept of the capacity of the Bird in the three ecological, productive and social contexts of the concept, called the Ecosystem Approach to Aquaculture, or EAA, means an "ecosystem approach to aquaculture". In Iran, due to the limited sources of fresh water, the interest and attention to the use of seawater has been devoted to the development of aquaculture. Therefore, the information needs for the development of this industry were derived from the FAO and World Bank (THE WORLD BANK) indicators based on the indicators and criteria for each type of capacity in the framework of the ecosystem approach. These criteria and indicators differ according to the type of range capacities and type of aquaculture using inland water resources, marine and coastal aquaculture in the province. These criteria, including land use, slope, soil type, water quality, wave height, depth of water, etc. After the implementation of this study, using multi-criteria evaluation method (MCE) in the context of GIS, weighted in layers It was mapped. With the help of this method, in the study area, the zones with suitable capabilities for aquaculture development were identified. The results of the assessment showed that for the establishment of aquaculture projects, a surface equivalent of 50,000 hectares for shrimp farming in the province is desirable. Most of the suitable breeding areas are suitable for research in the eastern parts of the province, including the city of Jask. Venice has produced a production capacity of 14,742 tons for Cultivation of sea fish in cages of the province, which is the most suitable area, the southern part of the island of Qeshm and the eastern border of the Strait of Hormuz. Also, the results showed that compared to the current situation, which deteriorating capture fishery stocks had or no growth rate or a slight growth rate. Development of coastal aquaculture projects in the province can grow up to twenty times by 1404. Due to its consequences in the water and drought areas of the Hormozgan coastal zone, the adoption of an ecosystem approach to aquaculture in the areas of implementation of the plan is necessary in order to reduce the negative effects of necessity. To the detriment of the interests and services of the Persian Gulf and Oman Sea ecosystems, or the disruption of coastal and offshore applications from aquaculture development projects.

**key words:** Multi criteria Evaluation Method, Ecosystem Approach to Aquaculture, Carrying Capacity