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Geographic Potential And Constraints For The Italian Mariculture

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Authors describe the productive characteristics of the most important marine organisms, fish and other species, being presently reared in the Italy, and the general situation in the various Mediterranean countries, as well as the types and modes of management. In this framework, Authors review the criteria to be met for a good implementation of the aquacultural activity, from the biological and environmental as well as from a socio-cultural and economic viewpoint, underlying importance or relationships with the geographical space. The needs of mariculture are then considered more in depth, with a distinction between intensive and extensive management, on land and in cages, touching the spatial distribution of temperatures, meteorology, solar radiation, sediments and granulometries, oxygen, salinity, nitrogen and nutrients, parasites and predators, organic and inorganic pollution. After a general outlook on the productive aspects of the Mediterranean mariculture, Authors examine Italy's macro-scale potentials, i.e., the advantages and constraints deriving from the coastal morphology and from favorable and adverse anthropic factors, with a regional breakdown; competitive uses of the land and the waters are also considered, as well as the legislative instruments already implemented at national and local level. All the above elements are then been used to produce integrated maps of actual and possible mariculture activities along the Italian coasts. It appears that full mariculture capacity has only been achieved in a limited number of cases, mainly with mussels and a few fish species; moreover, the potentials of restocking have not been exploited yet. The development of the mariculture sector in Italy depends on the capacity to have sound planning and management which, nowadays are easily assisted by modern instruments, such as the geographical information systems (GIS). In conclusion, Authors make a few considerations and proposals regarding the Italian mariculture sector.