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Experimental advances in shellfish offshore zone production in Basque Country (SE Bay of Biscay)

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The Basque Government expressed the need of the establishment of an offshore zone for the expansion of aquaculture production in the Basque Country (Aquaculture Development Strategic Plan 2014-2020). For that, AZTI made the site selection as well as the oceanographic and microbiological, sanitary characterization and monitoring for the declaration of a "Shellfish Zone Production" (SZP). The offshore SZP has the minimum requisites to assert; among others:

- The existing environmental and regulatory compliance. According to the measurement of organic and metal elements concentration, shellfish culture is enabled at SZP. In addition, according to the microbiological data, the produced shellfish does not require depuration for commercialization.
- Good Oceanographic conditions. (T = 11.5-23.5 ºC; current speed = 18. 7 ± 4.6 cm seg-1; wave high = 2± 1.4 m; Salinity = 33-35.8 PSU); chlorophyll "a" concentration = 0-10 µg L-1 with dominance of diatoms during blooms.
- The design and validation of strength of submerged longline structures proposed for use in ZPM open waters (image 1). The culture technology chosen is described. The shellfish culture model of SZP exerts low impact over the marine ecosystem.
- Good culture conditions (growth and survival of experimentally cultured species). The aquaculture performance of mussel Mytilus galloprovincialis reveals that the growth patterns (daily specific rates (%), length = 0.32; shell weight = 0.82-0.84; Dry meat weight = 0.95-1.00) are similar to those observed in others productions sites in Spain and Europe.
- The minimum conflicts with fishing activity and other maritime sectors. The SZP is an example for development of offshore aquaculture in Atlantic arc and Maritime spatial planning.

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Biography

Luis Lagos is an Aquaculture Professional, PhD for Pontificia Universidad Católica de Valparaíso, Chile with 18 years of experience in intensive fish production. He is involved in the aquaculture optimization and expansion. He gives counseling for problems related to the reproduction of fish and shellfish, as well as continuous improvement of production. Actually he works in Marine Investigation in AZTI, with main objectives to promote aquaculture development in Biscay Bay and Basque Country.

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