**Polychaeta as extractive species in Integrated Multi-Trophic Aquaculture systems**

Integrated Multi-Trophic Aquaculture (IMTA) is proposed as a sustainable aquaculture system for the future. In IMTA systems the culture of “fed” species (e.g. fish, crab or shrimps) is linked to the culture of “extractive” species (e.g. filter feeders, detritus feeders or autotrophs), in such a way that waste produced by one species, becomes a resource for species of lower tropic levels. IMTA aims to create systems which are simultaneously ecological sustainable and produce additional valuable products. Fed species (e.g. finfish) only retain part of the feed provided to them, while the rest is released in organic and inorganic forms. A large fraction of the organic particles released, settle quickly at the seafloor, resulting in potential detrimental effects to the environment. Several deposit feeder species have been suggested as potential extractive candidates for IMTA systems, including polychaetes. Nevertheless research on polychaete species in IMTA systems have been limited. This literature study will focus on the potential of polychaete species in IMTA systems.

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