

Research project MERAMED - Development of monitoring guidelines and modelling tools for environmental effects from Mediterranean aquaculture

Akvaplan-niva were the coordinators of a large EU funded research project to develop methods for assessing the impact of fish cages on sediments and water column in the Eastern Mediterranean.

Project objectives

- Undertake surveys to assess the environmental impact of marine cage fish farms in a range of conditions in the eastern Mediterranean.
- Develop a predictive model to simulate the environmental response at Mediterranean sea cage farms to differing cage stocking levels and feeding regimes

Monitoring surveys

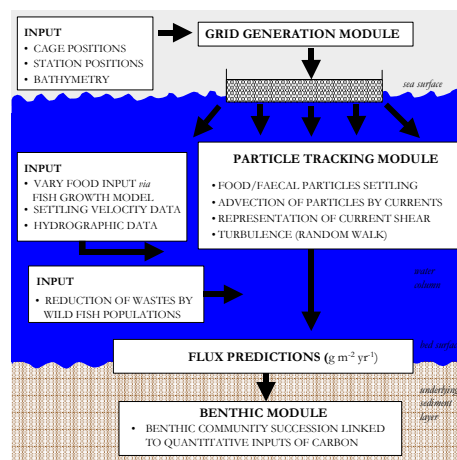
Seven fish farms in Greece were surveyed to cover the range of environmental conditions and farm production practices typical of the eastern Mediterranean. A number of different monitoring equipment and methodology were compared to be able to recommend the most cost effective choice.



Data was collected using current meters, DGPS drogues, CTDO probes, sediment profiling imagery (SPI), and underwater photography. Sediment samples were taken using grabs and corers. Stereo photograph was used to assess quantity and type of wild fish around the cages.

Predictive modelling

The model MERAMOD was developed with emphasis on a wild fish module, where waste food and faecal particles arising from the farmed fish are removed by wild fish.



Mitigation of impact

The model was used to test different management approaches for mitigation of impact such as impacts from different fish species, deep and shallow sites, improved food conversion rate, etc.

