

Combination Fisheries and aquaculture

Aquaculture and capture fishery have many links and often use the same maritime space. The most frequent combination of the two industry is the so called capture based fishery. In this combined technology, the stocking material of the aquaculture is from wild catch and the small fish are reared in cages until they reach the market size. Tuna fattening is a widely used capture based aquaculture in the whole Mediterranean where frozen or fresh captured fish are used as feed for the tunas. Well managed marine cage fish cultures (offshore and off the coast) also creates more productive ecosystems for wild fish stocks and provide higher yields for fishing areas. Farming structures (particularly bivalve cultures) may provide habitat for other invertebrates by providing refuges from predation for juvenile fish, positively affecting biodiversity and environmental productivity.

High score on technical, economic feasibility. This already takes place e.g. with tuna. Wild fish are caught and grown in aquaculture. Environmental rating lower because there is always an impact of fisheries but higher score because combination of activities can have high score e.g. restocking

In Mediterranean score for technical rating and as well for the socio-economic and financial impact are higher than in other regions but a bit lower for the environmental. Capture based tuna aquaculture is a married stage combination of fisheries and aquaculture in the Mediterranean, but this can not be qualified as multi-use of space or multi-use offshore platform, because the fish vessels do not use continuously the aquaculture area. Fishing has an impact on stocks. They could remedy each other effects a bit (e.g. adding fish to stocks).

FAO suggested to include the sport fishing in the term of the fishery, because this activity would have a great opportunity in the Caribbean region. In this combination, the sport fishers use the highly productive waters next to the fish farms to have a higher chance to catch fish. This combination also creates opportunity for combination with tourism.

The fixed nature of suspended aquaculture activities (cages, longlines etc) limits the potential combination with fisheries at the same location (multi-use of space) as most types of fisheries are mobile by nature. These fishery activities are hindered by the fixed constructions, or the aquaculture activity is at risk of accidental damage. Fixed (or static) fishing gear, such as lines or pots, can be combined at aquaculture sites. Other possibilities for combination of suspended aquaculture with fisheries could be found in the co-use of the existing infrastructure. For example fishing vessels could also be used for maintenance of aquaculture structures (COEXIST). On the other hand, bottom culture, e.g. bottom cultivation of mussels on beds, provides good opportunities of co-use of space with pelagic trawling (thus excluding bottom trawling) and fixed fisheries.

Aquaculture may also be implemented for restoration purposes. For example, initiatives have started for the reintroduction of the flat oyster in the North Sea ([Smaal et al 1015](#)). If successful, reintroduction might in time allow fisheries for flat oysters.