



Multi-annual National Strategic Plans for the development of sustainable Aquaculture for the period 2021 to 2030

Summary CROATIA

“National Aquaculture Development Plan for the period until 2027 (NPRA)”

1. State of the aquaculture sector

Marine aquaculture: The most significant fish species in marine aquaculture are European seabass (*Dicentrarchus labrax*), gilthead seabream (*Sparus aurata*) and Atlantic bluefin tuna (*Thunnus thynnus*), but in recent years also meagre (*Argyrosomus regius*), which production has been increasing. Shellfish farming is represented by two main species: Mediterranean mussel (*Mytilus galloprovincialis*) and European flat oyster (*Ostrea edulis*). The production of European seabass and gilthead seabream is carried out in floating cages with the application of modern technologies. Tuna farming is carried out in floating cages in open and semi-open areas in the mid-Adriatic. Farming is mainly based on catching tuna in the wild (8-10 kg) and rearing them to market size (30 kg and more). Shellfish farming is mostly carried out on small family farms with the application of traditional cultivation technologies on floating parks.

Freshwater aquaculture: The farming of freshwater fish species includes the farming of warm-water species (*cyprinids, carp*) and cold-water species (*salmonids, trout*), where common carp (*Cyprinus carpio*) and rainbow trout (*Oncorhynchus mykiss*) are the most significant species. The farming of carp species is traditionally carried out in ponds. The rearing of cyprinid species mostly involves the controlled breeding of carp in monoculture or polyculture with other species, the most represented being grass carp (*Ctenopharyngodon idella*), bighead carp (*Hypophthalmichthys nobilis*), silver carp (*H. molitrix*), Wels (*Silurus glanis*), perch (*Sander lucioperca*), pike (*Esox lucius*) and tench (*Tinca tinca*). Production is mostly semi-intensive. The rearing of trout species is mainly carried out in concrete pools with flow-through systems. The farming of trout species is almost entirely related to the farming of rainbow trout, but with a low percentage there is also brown trout (*Salmo trutta*). Production is intensive. In 2020, the volume of annual aquaculture production was 21772

tonnes and value of annual aquaculture production was more than HRK 1 billion. In 2020, the number of jobs in the aquaculture and processing sector was 3394 employees.

2. Objectives for 2021 to 2027

- Increasing the productivity and resilience of aquaculture production to climate change Strengthening the competitiveness of the aquaculture sector.
- By strengthening the aquaculture sector, contribute to renewing the economy and improving livelihoods in rural and coastal areas.
- Fostering innovation in the aquaculture sector.

Growth target

The production target for 2027 is 28,300 mt, an increase of more than 30% over 2019 production. The increase in employment will be 15% (up to 3,900 workers).

3. Objectives for Measures for 2021 to 2027 responding to the 13 key areas listed in the “Strategic Guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030”¹

1. Access to space and water

Balancing sustainable aquaculture development, nature protection and climate change adaptation. These measures will promote the creation and implementation of spatial and other development plans for coordinated land use and coastal zone management, in the framework of which appropriate space is allocated for sustainable and climate-smart aquaculture growth, but all in accordance with regulations and planning documents in the field of spatial planning and nature protection.

2. Regulatory and administrative procedures

Aquaculture Act, which entered into force at the beginning of January 2018, and constitutes a new legal framework regulating aquaculture and making aquaculture strategically important in the Croatian economy. With the adoption of this Act, aquaculture has been removed from the regulations governing fishing and, by unifying the conditions for aquaculture in the sea and inland waters, has created the legal conditions for simplifying procedures and facilitating the administration of operations, and thus a framework for faster, uniform development of this economic activity in terms of increasing overall production and increasing competitiveness. One of the

¹ COM(2021)236 final

measures is improving administrative mechanisms and encouraging producers to apply public and private food safety and quality standards. This measure concerns targeted investments in the development of human resources, methodologies, processes, systems, and tools that encourage transparent and cost-effective adoption of public policies and controls with regard to food safety and quality in line with EU legislation.

3. Public health, animal health and welfare

Promoting the implementation of effective animal health and welfare management practices in farming. In addition to the mandatory measures to monitor and control fish diseases, aquaculture farms are required to develop their own biosecurity plans. Improve administrative mechanisms and encourage producers to apply public and private food safety and quality standards. Implement prevention and biosecurity measures to maintain the health of farmed organisms.

4. Climate change adaptation and mitigation

Increase investment in efficient and sustainable technologies in aquaculture. In this context, priority will be given to projects aimed at investments in environmentally sustainable intensification of aquaculture production systems, combined intensive-extensive aquaculture systems, recirculation systems (RAS) or integrated multi-trophic aquaculture systems (IMTA), as guarantees of controlled farming conditions with shorter production cycles that also ensure a safe product.

5. Producer and market organisations

Encouraging the establishment of production partnerships between producers and buyers. This measure includes investments in the improvement of production and processing capacities for aquaculture products, aiming at development of new value-added products by targeting different groups of consumers in strategic market segments, as well as encouraging forms of cooperation that will increase the consumption of fishery and aquaculture products. Encouraging the creation and strengthening of producer organisations will be crucial for efficient market and distribution systems performance, better access to financing sources, and desirable transfer of knowledge and new technologies.

6. Animal welfare

In Cyprus, practices for the welfare of fish and especially for maintaining their health and well-being are at a very high level. Aquaculture farms in Cyprus are trying to follow a precautionary approach and reduce the risk by applying good aquaculture practices, such as reduced stocking densities, frequent rotation and cleanliness of cage nets, use

of cage nets from alternative materials (e.g., *Dyneema*) that have a smaller surface area for the development of micro-organisms including parasites. Marine hatcheries in Cyprus, in cooperation with veterinarians, have drawn up a biosecurity protocol to prevent various diseases in general. The measures are focused on:

- Improving the knowledge of the personnel and of the support services.
- Improving the health, well-being, and welfare of farmed species, including biosecurity.
- Promoting and implementing good practices for the health, well-being, and welfare of fish in Cypriot aquaculture.
- Establishment of a national disease prevention and response plan.

7. Diversification and added value

Encourage the development of new products with higher added value in aquaculture. The introduction of new species in aquaculture will be encouraged, especially those that show good market potential and allow for added value.

8. Environmental performance

Improve the management of natural habitats and predatory species on breeding sites. This measure will include sharing of good practices and development of accompanying guidelines for aquaculture and other complementary activities that comply with regulatory framework, primarily in protected areas and in Natura 2000 sites. An application of adequate mechanisms for mitigation of damage caused by predatory species on farms is also foreseen, aiming at establishing a balance between the use of land and water for aquaculture purposes and the effective biodiversity protection.

9. Communicating on EU aquaculture

Promotion of aquaculture products and gastro-destination tourism. These measures will encourage the overall promotion of aquaculture products, including the participation and promotion at national level of the EU co-ordinated campaign on aquaculture in the European Union.

10. Integration in local communities

Linking the aquaculture sector to growth opportunities in circular bioeconomies. These measures will support the development of aquaculture through strengthening its contribution to local development, i.e., the renewal of the rural and coastal economy, but always in complementarity with other sectors, sectoral strategies, and

development plans, as well as funding possibilities and linking the various potentials of specific areas to aquaculture development.

11. Data and monitoring

Improve access to climate and environmental data for public and private stakeholders in aquaculture. These measures will develop a digital platform for integrated data management for decision making, which will allow access to key production, climate and environmental parameters in aquaculture.

12. Knowledge and innovation

Encourage research projects with the objective of solving key problems affecting the production and marketing of aquaculture products. Strengthening educational and vocational programmes in the field of aquaculture. Encourage the establishment of innovation partnerships between manufacturers and scientific institutions.

4. Funding

Financial resources for the implementation of the NPRA, i.e. individual measures of the action plans, will be provided in the State Budget in the Department of the Ministry of Finance according to the fiscal possibilities, from the National Recovery and Resilience Plan 2021 - 2026, from the European Maritime, Fisheries and Aquaculture Fund (EFPR), as well as in complementarity with other European funds, if this is possible depending on the outcome of the programming process of the new financial perspectives of the European Union, and the available financial instruments.