European Aquaculture
Technology and Innovation Platform

EATIP Thematic Areas

Background & Proposals

European Aquaculture

EATIP Thematic areas

1. Product Quality, Consumer Safety & Health
2. Technology & Systems
3. Managing the Biological Lifecycle
4. Sustainable Feed Production
5. Integration with the Environment
6. Knowledge Management
7. Aquatic Animal Health & Welfare
8. Socio-Economics & Management

Vision documents and SRIAs

- The **Vision Documents** provide a consensus view of where the sector should be in 10-20 years time
  - identifying strengths, weaknesses – opportunities, threats and specific knowledge gaps
- The **Strategic Research & Innovation Agenda** should describe what needs to be done to respond to the identified goals of the Vision Document

Product Quality, Consumer Safety and Health - Vision

"Sustaining and building, in a cost-effective manner, a competitive advantage through the production of high quality, healthy and safe seafood, accompanied by scientific data documenting these facts and communicating it properly to relevant interests groups and the consumers."

Product Quality, Consumer Safety and Health - Key Goals

1. *To maximise the health benefits of aquaculture products*
2. *Ensure the continuing safety of aquaculture products*
3. *To deliver high quality aquaculture products to protect and grow the farmed fish market, fully meeting consumer expectations including appearance, taste, texture, nutrition and provenance*
4. *To better understand consumer perception and improve their attitude towards aquaculture products*

Technology & Systems – Vision

"To advance aquaculture industry technologies and systems so that Europe can become an environmentally and economically sustainable net supplier of seafood, characterised by a safe and attractive working environment."

Technology & Systems – Key Goals

1. *Ensure an environmentally sustainable industry by the application of new knowledge and technology innovations*
2. *Meet the demand for aquaculture products in EU by the development of efficient technologies to support continued growth*
3. *Ensure the profitability of the aquaculture industry by developing improved management systems and technology*

Technology & Systems – Key Goals

4. *Ensure ethical and healthy production of fish*
5. *Ensure the production of high quality aquaculture products that are safe for consumption*

EATIP AGM Barcelona, 31 March 2011

Managing the biological lifecycle - Vision

"European aquaculture in 2030 will produce larger volumes and contribute to a decrease of imports through a significant improvement of its competitiveness. It will also focus on being a commercial stakeholder in aquaculture worldwide.

For the biological inputs, this competitiveness will be obtained from: product specificity, targeted production environments, a high level of professionalism & skills and clear political & societal support."

Managing the biological lifecycle – Key Goals

1. *Establish predictability and improve output at every production stage of the lifecycle*
2. *Genetic improvement of productive, health and animal welfare traits*
3. *Improve broodstock management methods and control of sex and reproduction in captivity*
4. *Manage the lifecycle of carefully selected "NEW" species that have high economic importance*

Sustainable feed production - Vision

"Sustainable fish feeds, based on solid scientific knowledge and reliable raw materials, will contribute to making aquaculture one of the most efficient producers of high value food for humans, and one that respects environment and fish welfare."

Sustainable feed production – Key Goals

1. *Base formulation of Future Fish Feeds on solid knowledge of fish nutritional requirements, and expand the number of well characterized and sustainable raw materials which can be used.*
2. *Advanced novel feed technologies to produce cost effective feed with improved quality.*
3. *Understand and minimize negative effects of alternative diets on fish health and welfare.*

Sustainable feed production – Key Goals

4. *Adapt and utilize advanced methods to understand and model nutritional responses.*
5. *Resolve strategic research problems in fish nutrition.*

Integration with the environment – Vision

"Aquaculture in 2030 will produce nutritious food with less environmental footprints than any other type of food production for humans, and this production will, to a greater extent, be based on feed resources taken from outside the human food chain".

Integration with the environment – Key Goals

1. *To establish fundamental scientific knowledge on the assimilation capacity of biogenic wastes from aquaculture in benthic and pelagic ecosystems.*
2. *To establish technology to minimise emission of biogenic matter from aquaculture and to minimize the potential impacts of the actual emissions by means of management tools and integrated multi-trophic cultures.*
3. *To understand the fate and cumulative effects of persistent agents used in aquaculture and minimizing their impact on the environment.*

Integration with the environment Key Goals

4. *To establish more fundamental knowledge to reduce the negative interactions between farmed and wild stocks, including wildlife.*
5. *To develop or adapt tools and measures in support of appropriate environmental governance for aquaculture.*
6. *To communicate unbiased scientific knowledge on environmental interactions in order to improve public perception of aquaculture.*

Knowledge Management – Vision

"In 2030, the European aquaculture industry will be widely regarded as an environmental, economic and socially sustainable activity. This respect will be grounded in evidence-based scientific knowledge, industrial strength and consumer confidence."

Knowledge Management – Vision

"Knowledge and innovation will be competitive advantages for the European aquaculture industry. European scientists will be major contributors to the international scientific community, providing relevant input to all stages of the aquaculture value chain. The aquaculture sector will be attractive to a wide range of highly educated people, with positive growth and employment opportunities."

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Knowledge Management – Vision

"The industry will be characterised by its ability to fast-track progress from knowledge development and intellectual protection through to innovation, industrial application and product development."

Knowledge Management – Vision

"European aquaculture will adopt cutting edge knowledge management practices to support state-of-the art technological development. This will be the key factor which allows the aquaculture industry to meet the imminent market demand for fish production, due to limited natural resources coupled with a growing world population."

Knowledge Management – Key Goals

1. To manage Knowledge effectively within the European Aquaculture sector
2. Ensure the availability and efficient use of necessary state-of-the-art aquaculture research infrastructures across national, stakeholder and disciplinary boundaries

Knowledge Management – Key Goals

3. To ensure that the European aquaculture sector has a good reputation through successfully communicating the role it plays in society
4. To foster and build the human capital of the European aquaculture sector

Aquatic animal health and welfare Vision

"By 2030, improvement in aquatic animal health and welfare in European aquaculture will produce high quality, robust animals - resulting in increased productivity that builds on environmental and welfare standards."

Aquatic animal health and welfare Key Goals

1. *Improving understanding of host pathogen interactions together with the development and application of diagnostic tools, vaccines and immunomodulators.*
2. *Minimising the spread of existing, emerging and the introduction of exotic diseases through epidemiology, health monitoring, surveillance and biosecurity.*

Aquatic animal health and welfare Key Goals

3. *Use and develop best practice to optimise efficacy of treatments and prevention methods.*
4. *Measure welfare and understand its consequences if compromised in order to incorporate welfare as core component of production management.*
5. *Improve the availability of vaccines, medicines and immunomodulators through changes in the regulatory process.*

Socio-economics & management Vision

"Create the economic, social, management, political and governance framework conditions that enable innovative development of sustainable aquaculture for future food and nutrition security, viable companies and livelihoods within Europe's coastlines and freshwater aquatic resources."

Socio-economics & management Key Goals

1. Ensuring effective governance– having a 'level playing field' within and outside Europe
2. Establishing an enabling environment for innovation and productivity growth that allows a trade-off between risk and return
3. Recognition of property rights, collateral and access to and protection of sites

Socio-economics & management Key Goals

4. Realising economies of scale, knowledge development, effective horizontal measures and adequate research funding, supply chains, industry structure, trade and markets
5. Assuring dependence, resilience, adaptability and distribution, image and consumer acceptance


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