General introduction to the Policy background of new technologies, Infrastructure and Information Technology

Societal and political background

The European Union set itself, within the Lisbon European Council [1](March 2000), a new strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion. Achieving this goal requires an overall strategy aimed at:

1. preparing the transition to a knowledge-based economy and society by better policies for the information society and R&D, as well as by stepping up the process of structural reform for competitiveness and innovation and by completing the internal market;
2. modernising the European social model, investing in people and combating social exclusion;
3. sustaining the healthy economic outlook and favourable growth prospects by applying an appropriate macro-economic policy mix.

How does this affect the European aquaculture sector?

The European aquaculture sector can contribute substantially to achieving the European Union's goal set in Lisbon. It is sure that, to be able to attain these objectives of the strategy, will require the generation of new knowledge, hence the need for investment in research, technological development and innovation - both at pre-competitive level and in individual companies.

Over the last two decades, the European aquaculture industry has shown an undeniable and strong ability to take up research and new knowledge and turning it into increased production of food and strong economic growth. Today the different sectors of the industry must be considered as as world leaders in their individual fields and aquaculture technology is clearly one of the areas where Europe has the edge and can make a difference in the future.

Nevertheless, the industry faces able competition from other parts of the world. Therefore, in order for the industry to stay ahead and realize its potential, a substantial increase in investment in research, technological development and demonstration activities will be required.

European Aquaculture Strategy [2&3]

The European Aquaculture Strategy pointed out the importance of technological innovation for quality, health and welfare. One of the main challenges identified in the Commission strategy was the development of new equipment and management tools to reduce environmental pollution. Other priorities were the development of innovative methods and production systems to support aquaculture diversification and the improvement of technologies for, as an example, offshore cages. Innovations resulting in reaching economies of scale, promoting new productions and creating new opportunities for employment are also encouraged by the European Commission.

Research in the enterprises

Aquaculture is seen as a self-sustainable industrial activity and is therefore expected to cater for its own R&D needs. However, the current financial position of many aquaculture branches does not permit private enterprises to face the cost of R&D activities. Therefore they need to be aided by national research programmes and general Community incentives such as SME research funding.

The Sixth Framework Programme (FP6) helped SMEs in all industry sectors, including aquaculture to get support in research and innovation. This financial commitment is a clear indication of the crucial role attached to SMEs in ensuring Europe's future prosperity.

It is envisaged that in the future the European Fisheries Fund (EFF) could also provide additional support for small scale applied research conducted by aquaculture enterprises. The policy priorities set out include a decrease of environmental impacts, the development of offshore farms, and a stimulation of internal technology development leading to increased competitiveness.

Technology Transfer/Infrastructure

Although competition is widely understood to improve efficiency within a sector, and plays an important role in any company's strategy, the benefits of industrial collaboration are also increasingly recognised. Building links between companies that allow for technology transfer or specific improvements in performance can be highly beneficial, as can a greater sharing of problem-solving skills.

The need of technology transfer and Infrastructure is also underlined by the European Aquaculture Strategy, where the following is stated:
"Farmers' partnership" - The most important marketing measure that farmers should take is to further develop co-operatives, trade organisations, and producer's organisations/associations. These are essential tools to prevent upheavals in supply as well as to compensate for the lack of economy of scale of small farms.

EC research projects on new technologies in the FP6

The summaries (Technical Leaflets) of projects on new technologies in the aquaculture sector (given in the following pages) are addressed mainly within the activity area for SMEs: "Specific Research Activities for Small and Medium-sized Enterprises (SMEs)", including:

- AQUAETREAT
- CRAB
- FISHTANKRECIRC

Only the DESIGNACT project is funded under the activity area: Research Infrastructures.

Footnotes

1. Lisbon European Council 23 and 24 March 2000, Presidency Conclusions http://www.europarl.europa.eu/summits/lis1_en.htm
2. The following sections have been abridged from a variety of Commission publications, principally those concerning the Strategy for the sustainable development of European Aquaculture 19.9.2002 COM(2002) 511
3. The following sections have been abridged from DesignACT Deliverable 1: Inventory of infrastructure and knowledge gaps in aquaculture technology http://www.designact.org/D1.pdf