Project no.	COLL-500305
Project acronym:	AQUAETREAT
Project title:	Improvement and Innovation of AQUAculture Effluent TREAtment Technology
Instrument	Collective Research

Final Activity Report

Period covered:	from 15/05/2004	to 08/02/2008
Date of preparation:	17/06/2008	
Start date of project:	15/05/2004	
Project coordinator name:	Sebastiano Vilella	
Project coordinator organisation name:	University of Lecce	

1. Project execution

Project objectives

The AQUAETREAT Consortium is composed by an Industrial Association (IAG), four research organisations (the RTD performers) and four SMEs, established in five EU Member States. The Consortium was involved in the realisation of an EU Collective Research project in the field of water management in the aquaculture sector.

The project, funded by the EU Commission, was entitled “Improvement and Innovation of AQUAculture Effluent TREAtment Technology” and aimed to the development of new methods, techniques, approaches and strategies for a more efficient and environmentally friendly use of water in aquaculture. A crucial aspect of the project has been the transferral of the knowledge to the professionals of the aquaculture sector of the entire EU, albeit many of the benefits will be available to the aquaculture producers of all over the world.

More in particular, the scientific and technological objectives of the project consisted in developing an efficient and cost-effective integrated system for waste water treatment, to be applied in the aquaculture sector for the reduction of clean water consumption and of environmental impact in the effluent recipients. The system to be developed within the project had to be implemented in the production cycles of the aquaculture SMEs of the EU countries without noticeably impinging on the production costs and economic benefits.

In particular, the results that the present project aimed to reach were an overall efficiency of suspended solids extraction of 70-80% in seawater and 40-50% in freshwater, a sludge concentration between 20 and 40%, the characterisation of new, eco-compatible and cost effective flocculating agents, a sludge stabilisation process avoiding the use of chemical reagents, the application of the water treatment system to closed-circulation plants, the application of seawater and freshwater sludge on crop productions in intensive cultivation fields, the analysis of the socio-economic impact, the short-term and mid-term effects on the recipient system, the possible alternative ways for sludge use, the valorization of the nutrients dissolved in the water, the dissemination and training activities.

Contractors involved in the project

The Federation of European Aquaculture Producers (FEAP, B) is the European Industrial Association on behalf of which the RTD performers undertook the scientific and technological research activities. Through the FEAP the knowledge was and will be

transferred to large communities of SMEs (both associated or not associated to the FEAP) to improve their general standard of competitiveness. FEAP currently represents 31 National Aquaculture Producer Associations of 22 European Countries. Its main role is to provide a forum to be able to establish common policies on questions relating to the production and the commercialisation of aquaculture species that are reared in Europe. It was responsible in the project for the dissemination plan, the organisation and management of the training programme and the training of personnel.

Four RTD performers participated to the project. All of them are scientific institutions of international stature in the field of aquaculture and agriculture, with lot of experience in fish farming, environmental management and crop production and specific publications on international journals and books. The choice of the partners and the structure of consortium were established with the aim to combine expertise, specific competencies and leading academic personalities concerning various topics and aspects in the field of aquaculture technology, water treatment, fish biology, ecology, oceanography, animal physiology, eco-toxicology, plant physiology, agronomy, biotechnology. All partners had already been successfully involved in European projects on aquaculture and water treatment.

The four RTD performers are:

- The Institute of Grassland and Environmental Research (IGER, UK, http://www.iger.ac.uk) is the principal centre in England and Wales for research on grassland based livestock agriculture. Its core activities include forage-related plant breeding, plant biology and microbiology, animal science and nutrition, soil science and agro-ecology, agricultural systems research. IGER's participation to the project was mainly devoted to the aspects of nutrient management, sustainable nutrient use, field techniques for denitrification process, generation and transfer on N species in the subsoil, environmental preservation in agriculture.

- The University of Lecce (UNILE, IT, http://www.unile.it) is a young, dynamic and fast growing institution with more than 30.000 students enrolled and a choice of eight faculties, 39 3-year undergraduate degree courses, 11 graduate courses, one of the 6 schools of excellence in Italy, and more than 1700 teaching and non-teaching staff, distributed in 19 Departments and research centres, including a

Botanical Garden and the Marine Aquaculture and fisheries Research Centre of Acquatina. It was responsible in the project for water, sludge characterisation, valorization and reuse exploitation and contributed to the study of the environmental impact and to the training of researchers and technicians. The University of Lecce took also care of the overall management of project activities.

- The Institut français de recherche pour l'exploitation de la mer (IFREMER, FR, http://www.ifremer.fr) is the largest research institute in marine biology in France (1200 people, and a budget 150 K Euro) with specific efforts in aquaculture and fisheries. The department of Aquatic Living Resources is responsible for research into improvements, exploitation and economic development of living resources. It was responsible in the project for water and by-products characterisation, and contributed to the sludge characterisation, valorization and reuse exploitation, to the study of the environmental impact and to the training of researchers and technicians.

- The Aquaculture Wales Group at University of Wales Swansea (UWS, UK, http://www.swan.ac.uk/) has expertise in constructed wetland technology, recirculation technology, a range of expertise related to aquaculture including fish and shellfish nutrition, plankton and polychaete culture. The institute has all the necessary capacity for soil and water analysis and waste re-use. UWS was responsible in the project for the data analysis package and participated to the activities for water, sludge characterisation, valorization and reuse exploitation, for the study of the environmental impact and for the training of researchers and technicians.

Three intensive aquaculture farms, located in three different EU Member States (IT, DK and FR), covering different kind of rearing system and reared species, plus an engineering and commercial Italian company, compose the ‘core group’ of SMEs which were involved in the project, both in the RTD activity and in the dissemination and training programmes. The fish farms integrated within their production plants the water treatment systems while the RTD performers and the other SME partner provided the development and tuning of the prototypes and all the technological assistance. All partners contributed to the dissemination of the results and to the training activities. At this purpose, the fish farms provided the water treatment systems as learning facilities for the training courses.

The four SMEs are:

- STM Aquatrade Srl (STMAqua, IT) is specialised in design, engineering and management of marine hatcheries and on-growing farms. Recently, special attention has been given by the company to fish farm effluent treatment technology. It was responsible in the project for feasibility and economic impact analyses and contributed to system optimisation.

- Høghøj Troutfarm (Hoghoj, DK) is a land based, freshwater, closed-circulation fish farm, located in Denmark, growing trout in concrete rearing tanks, for a total year production of 85 tons. It participated in the project for system implementation and support to sample characterisation and ensured the logistic support for the short training courses.

- Maribrin srl (IT) is a land based marine, flow-through fish farm, located in the South of Italy growing sea bream and sea bass in 50 concrete rearing tanks (25 to 300 cubic meters), for a total year production of 150-200 tons. It participated in the project for system implementation and support to sample characterisation and ensured the logistic support for the short training courses.

- The Comité Interprofessionnel des Produits de l'Aquaculture (CIPA) (FR) (Partner n. 6) is the most representative committee of trout culture farmers in France. It represents the French aquaculture sector at national and international levels and is responsible for the advertising and promoting activities and for the market observatory and organisation relative to the sector. It was responsible in the project for system implementation and support to sample characterisation and ensured the logistic support for the short training courses, directly involving the "Charles MURGAT" fish farm, a fresh water farm that produces 550-600 tons of salmonids per year, as the site for the water treatment system implementation.

Two third-parties were also involved in the project:

- the Blue Water Flatfish Farm, producing turbot in a closed marine recirculation system in UK;
- Hydrotech, a Sweden enterprise producing specific technology for water treatment.

Work performed

The RTD project started by analysing the dynamics of water pollution in relation to the fish rearing processes at three different aquaculture sites chosen for the implementation of the treatment systems (Italy, France and Denmark), identifying all the aspects (intrinsic and external) of the water quality and composition changes during its passage trough the production cycle and all the possible intervention points for reducing water consumption and pollution. Different approaches and solutions have been identified for each farm and have been implemented within the production cycle to obtain the tangible reduction of water consumption and pollution and specifically designed water treatment systems have been realised at each fish farm accordingly. By means of the water treatment, most nutrients and suspended solids are extracted and, while the treated water is returned to the production cycle or disposed in an environmentally safe manner. At the same time, the extracted sludge is compacted and stabilised by using appropriate apparatuses and specifically designed protocols. After a period of tuning and optimisation the water treatment systems started to run at their best efficiency level, producing cleaned water for recycling, and thickened sludge. All the effluents, as well as the treated water, the sludge and other co-products of the effluent water processing, have been characterised by a series of physical, chemical and biological of analyses. Several new potential flocculating agents have been tested in order to individuate the most effective and environmentally safe. The potential exploitation of the thickened, stabilised sludge in agriculture as soil fertiliser has been assessed by on-field application to the cultivation of several crops. In the last part of the project, the impact of the effluents on the recipient ecosystem and on the animal health has been assessed, establishing the benefits for the environment of the treatment of the effluent water from aquaculture plants. The socio-economic profit of treating effluent aquaculture water has been examined in all the farms involved in the project. Lot of participation to workshops, trade fairs, congresses, meetings of the aquaculture sector have been performed in the last part of the project, together with the realisation of the regional workshops and the training course planned. The consortium website has been continuously updated with the last outcomes of the project and several articles relative to the project activities have been published on press. Lastly, the handbook for water treatment in aquaculture has been realised, printed and distributed to thousands of stakeholders, registering an interest higher than the most optimistic foresight.

Results

The RTD activity permitted to individuate and to identify and set most of the variables which affect the fish production in an aquaculture plant related to water use and processing. Implementing different treatment systems in production situations different in kind of water used, degree of recirculation, geographic location, water and air temperature, livestock density, reared species, etc., allowed to understand the way how to best design the specific treatment system for each reality. After the installation of the treatment systems at the respective locations, the best running configurations have been identified in function of each working condition by a series of trials. At the end of the tuning phase, cleaned water and stabilised, thickened sludge have been available for testing in recirculation and agricultural application, respectively. A detailed and full characterisation of effluents, treated water, sludge and co-products has been obtained through a series of determinations and observations. A side result of this phase, albeit very important, was the identification of natural products with flocculating capacities comparable to that of the standard, chemical agents. The treated water and the sludge used for additional biomass production experiments revealed in concrete the possibility to re-use them in safe and economically profitable ways. Treated water was reused for fish rearing by recirculating it in the rearing tanks after the treatment, saving very large amounts of clean water. The sludge was applied on different crops as soil amender/fertiliser, showing positive effects on specific species such as tomato varieties, on which it resulted more effective than the ordinary industrial fertilisers in terms of productivity of the plants.

The strong and wide dissemination activity carried out during the project, which represents the main issue of the project itself, allowed to circulate the RTD results among the scientific and professional community of the aquaculture sector, as well as to spread the information on the benefits and the methods of waste water treatment over the aquaculture community. The pivotal result of the dissemination activity was the publication, in thousands of copies, of the “Handbook on water treatment in aquaculture”, a comprehensive collection of the results arisen from the project activities edited in a very handsome way to be a useful working and decisional tool for aquaculture producers which implement, or are going to implement, the treatment of the effluent water in their plants. The presentation of the results of the project at extra-European events aroused great interest in the project. In particular, the handbook on effluent water treatment was extremely appreciated by the world-wide aquaculture community, from producers to governmental agencies. Many copies of the handbook

made available on the consortium website have been downloaded in addition to the hard-printed ones.
At the end of the project, with the full conclusion of the RTD activities, the Aquaetreat Consortium has made available a bulk of general knowledge which can be exploited to address strategic crucial issues of the aquaculture sector, such as the impact of intensive fish farming on the environment. Side outcome of the project is a lot of specific technical knowledge which can practically support the fish farmers in adopting the effluent water treatment approach in their production cycles, assisting them in the setup and the running of the treating systems. This result has been pursued also by the realisation of 4 training courses on the topic of effluent water management in aquaculture during the life of the project. The most representative output of the project in this sense is, again, the publication of the handbook of the effluent water treatment in aquaculture. The interest arisen by the handbook in the world aquaculture community indicates how strong is the perception of the importance of effluent water treatment practices in world aquaculture. The concrete benefits for the environment and, in turn, for the entire community, deriving from the development of a modern, environmentally sustainable production of fish food needed for the next future, suggest to continue the RTD and training efforts in this field.

Project co-ordination
The co-ordinator of the project, as well as of the Consortium, is the University of Salento (formerly named University of Lecce), in the person of Prof. Sebastiano Vilella. He can be contacted at his office at the Department of Biological and Environmental Sciences and Technologies of the University of Lecce, via Monteroni, 73100 Lecce, Italy. Phone no. +39 0832 298671, fax no. +39 0832 324220, E-mail sebastiano.vilella@unile.it or aquaetreat@physiology.unile.it
The Aquaetreat project website is at: www.aquaetreat.org

2. Dissemination and use

FEAP, the IAG contractor of the project, is the holder of all Intellectual Property Rights arisen from the RTD activity performed for the project. All the topics regarding IPRs were examined by the General Assembly of the Consortium, where the IAG considered time by time the involvement of other partners in the exploitation of specific issues and the opportune actions to be performed.

Exploitable knowledge and its use

Owing to the adequate and encouraging results obtained by the project for the implementation of the technology transfer, a complex exploitation plan was adopted by the Consortium.
Widespread European acceptance of policy and the associate technology, for a subject such as water treatment, is best when supported by the professional Associations responsible for the sector. At this regard, the FEAP is considering the creation of a separate business structure, associating the project partners, in order to transfer the technology developed to the fish farming sector. There is no reason to consider that this activity would be restricted to the European Union. Such a structure should not involve equipment manufacture but be more focused on the provision of technical services and consultancy for the technology transfer, recommending specific equipment where appropriate. Such a policy requires the employment of national representatives, potentially working within the Associative structures, that would be part of a European network. This would have the advantage of information sharing at the European level while providing practical services at the local level.
The scope of activity and the potential market within each country require close assessment, a point accounted for within the tasks of the feasibility study occurred within the project. This examined the application of consultancy and technical services and the direct employment of personnel in order to be able to establish the base skills required for successful implementation. The implication of the National fish farming Associations will be essential for having both an accurate study and market assessment for the justification of a future business activity. Furthermore, a core of competence was developed during the project, based on the people, the personnel associated with its development, the technology and the knowledge and skills developed, all of which will be applied to the business structure.

On the basis of the spin-off feasibility study occurred within the project, a new company (Tecnosea srl) has been created in 2007 as a spin-off of the University of Lecce. The company is currently operating in the field of effluent water treatment and will end the first financial year in profit.

At the moment several different possible forms of knowledge exploitation are considered concretely:

Overview table

Exploitable Knowledge (description)	Exploitable product(s) or measure(s)	Sector(s) of application	Timetable for commercial use	Patents or other IPR protection	Owner & Other Partner(s) involved
1. Water treatment system	*Design services and operational advice*	*Land-based fish farms*	*2007*	*IPR protection in progress*	*FEAP and Aquaetreat consortium* *Tecnosea srl*
2. Mathematical modelling of farm effluent	*Design services and operational advice*	*Land-based fish farms*	*2007*	*IPR protection planned*	*FEAP, University of Wales and Aquaetreat consortium*
3. Regional Training Courses	*Instruction and operational advice*	*Land-based fish farms and hatcheries*	*2006*	IPR protection planned	*FEAP and Aquaetreat consortium*

Dissemination of knowledge

The dissemination of the results obtained by the AQUAETREAT project used modern and traditional techniques, adapted to the key target (the profession) as well as to the scientific community, administrative authorities, policy-makers and the public. Dissemination efforts were made on the basis of the publication of information that did not affect the Intellectual Property Rights concerning the project and upon the basis of an agreed strategy within the consortium (i.e. respecting the requirements of the business plan).

Four main targets have been addressed by the dissemination activities.

The profession

For the profession, the primary approach was:

- Presentations at National Association Congresses (lectures, demonstration stands, technical visits)
- Development of specific Regional Workshops (following the line of the successful PROFET Workshops).

The scientific and technical community

For the scientific and technical community the following actions were considered:

- Presentations at International Conferences/Trade Fairs and other regular international events individuated at the Consortium level.
- Publication of scientific information on appropriate academic and technical journals.
- Project/System Articles (developing the technical and economic positions) for inclusion in the major professional press, National Fish Farming Magazines and Environmental Journals.
- Publication of a “Handbook on water treatment in aquaculture”, a comprehensive collection of the results arisen from the project activities edited in a very handsome way to be a useful working and decisional tool for aquaculture producers which implement, or are going to implement, the

treatment of the effluent water in their plants.

Policy-makers and Administrations

For the administrative authorities and policy-makers, the use of the National Association Congresses and International events, which included the Symposia of the European Inland Fisheries Advisory Commission (EIFAC) and the Aquaculture Committee of the General Fisheries Council of the Mediterranean (AQ-GFCM) (bodies of the FAO), facilitated contact with these representatives, particularly the scientific advisor of the authorities.

This combination of approaches, for which clearly targeted audiences have been identified, assured a full and complete involvement of the profession and other stake-holders that have a role to play in the development and implementation of the project's goals and results.

The Public

It is increasingly important for any profession that is involved with food production (post-BSE and dioxin) and that interacts with the environment to be transparent and pro-active in informing the public of its activities, its effects and its contribution. For fish farming, an integrated approach is necessary due to the broad scope of the activity.

For this specific target, a combination of approaches was adopted:

A dedicated web-site, as a sub-Site of Aquamedia (allowing application of a multilingual glossary and translations), using a 'consumer-friendly' approach, was developed and available online since the first months of project activity. It includes a virtual tour explaining the different aspects of the system technology and project approach.
Broad articles for the press and, particularly, specialised magazines, were produced during the project life and will continue to be published in the future.

The FEAP has established and maintains professional links with other international and National organisations (the International Salmon Farmers Association (International), the Global Aquaculture Alliance (international), Pacific Aquaculture Caucus (USA/Canada),

the Network of Aquaculture Centres of Asia [NACA] (Asia)) who were continuously informed of the project and its developments. These contacts assured world-wide dissemination and opportunities for giving added-value to the European research efforts, skills and competence.
The widening of the opportunities outside Europe, taking benefit of these contacts and additional actions (such as the ASEM [Asia-Europe] platform for RTD cooperation in aquaculture), gave greater scope to the dissemination, training and business opportunities developed within the project.
Attendance at appropriate international conferences (e.g. World Aquaculture Society and NACA events, Asian International Fishery Forum) demonstrating the work and scope of AquaEtreat, particularly in countries where water control is becoming an increasing important issue (e.g. Asia, Australia, North America..) enlarged the possibilities of successful business implementation. At this regards it must be considered that an IRSES proposal for the exchange of knowledge with Indian researchers relative to effluent water treatment applied to shrimp culture has been applied for funding under the FP7 and received a positive evaluation. At the moment of writing this document the proposal is in the negotiation phase.

A list of the main dissemination events occurred during the project life is reported below.

Overview table

Planned /actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
Mar 04	*Presentation/Poster at the World Aquaculture Society 2004*	*Research/Farmers*	**World**	*1500*	*IFREMER*
Aug 04	*Project web-site*	*General public*	**World**	*Public*	*FEAP*
Sep 04	*Conference*	*Research/farmers*	**Australia**	*150*	*UNILE*
Sep 04	*Presentation*	*Associative structures*	**Europe**	*40*	*FEAP*
Oct 04	*Flyers at the European Aquaculture Society 2004*	*Research/farmers*	**Europe**	*250*	*UNILE*
Feb 05	*Presentation*	*Farmers*	**Norway**	*60*	*FEAP*
Feb 05	*Newsletter on Aquaetreat*	*Public*	**World**	*Public*	*FEAP*
Feb 05	*Presentation*	*Research*	**Europe**	*40*	*FEAP*
Apr 05	*Press release-article on Fish Farming International*	*Professional sector*	**Europe**	*>3500*	*UNILE*
May 05	*Presentation*	*Professional sector*	**Europe**	*100*	*FEAP*
Aug 05	*Poster/Presentation*	*Research*	**Europe**	*1000*	*UNILE*
Sep 05	*Presentation*	*Farmers/Research/Admin*	**UK**	*80*	*FEAP*
Oct 05	*First Regional Workshop of AQUAETREAT*	*Associative structures,Farmers/Research/Admin*	**East Europe**	*80*	*FEAP, UNILE*
Oct 05	*Presentation*	*Associative Structures*	**Europe**	*70*	*FEAP*
Feb 06	*Direct e-mailing (to be repeated each three months)*	*Aquamedia newsletter subscribers*	**World**	*2500*	*FEAP*
Apr 06	*Press release (written specialised press)*	*Industry (fish farming), Research*	**Europe**	*7000*	*FEAP, Consortium*
May 06	*Presentation stand and handouts*	*Industry (fish farming), Research, General Public*	**World**	*5000*	*FEAP, Consortium*
May 06	*Presentation/Poster at the World Aquaculture Society 2006*	*Research/Farmers*	**World**	*3500*	*FEAP, UNILE*
May 12 2006	*Second Regional Workshop*	*Associative structures,Farmers/Research/Admin*	**Europe**	*150*	*FEAP, Consortium*
May 06	*Presentation*	*Associative structures*	**Europe**	*40*	*FEAP*
June 19-21 06	*First Aquaetreat Regional Training Course*	*Associative structures, Farmers*	**Europe**	*15*	*FEAP, Consortium*

Planned /actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
Sept 13 06	*Presentation at Future Aquaculture Conference*	*Associative structures,Farmers/Research/Admin*	**Europe**	*150*	*UNILE, FEAP*
Sept 28 06	*Second Regional Workshop*	*Associative structures,Farmers/Research/Admin*	**Europe**	*80*	*FEAP, Consortium*
September 29-30 06	*Second Aquaetreat Regional Training Course*	*Associative structures, Farmers*	**Europe**	*15*	*FEAP, Consortium*
Oct 06	*Presentation*	*Associative structures*	**Europe**	*40*	*FEAP*
Nov 28-29 06	*Third Aquaetreat Regional Training Course*	*Associative structures, Farmers*	**Europe**	*50*	*FEAP, Consortium*
Jan 07	*Press release-article on EuroFish*	*Professional sector*	**Europe**	*>3500*	*UNILE*
Jan 07	*Presentation-Workshop CA AQUAGRIS*	*Associative structures,Farmers/Research/Admin*	**Europe, INDIA**	*50*	*UNILE*
Jan 23-24 07	*Presentation-Workshop*	*Associative structures, Farmers*	**Europe**	*50*	*FEAP, Consortium*
Mar 15-16 07	*Presentation-Workshop*	*Associative structures, Farmers*	**Europe**	*50*	*FEAP, Consortium*
Apr 03-04 07	*Presentation-Workshop*	*Associative structures, Farmers*	**Europe**	*50*	*FEAP, Consortium*
May 24 07	*Presentation FAO-FEAP Seminar*	*Associative structures,Farmers/Research/Admin*	**Europe**	*150*	*FEAP*
May 25 07	*Presentation FEAP GA*	*Associative structures,Farmers/Research/Admin*	**Europe**	*150*	*FEAP*
Jun 21 07	*Presentation workshop*	*Associative structures,Farmers*	**Europe**	*50*	*FEAP*
Aug 08	*Presentation workshop*	*Research and Administrator Representatives*	**South Australia**	*20*	*UNILE*
Oct 10 07	*European Parliament*	*Associative structures,Research, Admin*	**Europe**	*Public*	*FEAP*
Oct 22-23 07	*Presentation workshop IUCN-FEAP*	*Associative structures, Farmers*	**Europe**	*150*	*FEAP, Consortium*
Oct 29-30 07	*Fourth Aquaetreat Regional Training Course and Presentation of the Manual*	*Associative structures, Farmers*	**Europe**	*50*	*FEAP, Consortium*

Planned /actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2006/ 2007	*Film/video*	*Industry (fish farming), General Public*	**Europe**	*5000*	*FEAP, Consortium*
Nov 07	*Presentation Conference 8AFF*	*Associative structures,Farmers/Research/Admin*	**India, Asia**	*>2500*	*UNILE,*
Nov 22-23 07	*Presentation workshop PROFET-FEAP*	*Associative structures,Farmers/Research/Admin*	**Europe**	*50*	*UNILE,FEAP*
Nov 30 07	*Presentation workshop FEAP*	*Associative structures, Farmers*	**Europe**	*150*	*FEAP*
Dec 13-14 07	*Presentation workshop PROFET-FEAP*	*Associative structures,Farmers/Research/Admin*	**Europe**	*50*	*UNILE,FEAP*
Dec 17 07	*Presentation workshop*	*Associative structures,Farmers/Research/Admin*	**Europe**	*50*	*UNILE*
Feb 08	*Presentation-Workshop CA AQUAGRIS*	*Associative structures,Farmers/Research/Admin*	**Europe, INDIA**	*50*	*UNILE*
Feb 23-26 08	*Presentation MSE international conference and Fair*	*Associative structures,Farmers/Research/Admin*	**Europe**	*150*	*UNILE, FEAP Associate*
Apr 3-4 08	*Presentation workshop FINEFISH*	*Associative structures,Farmers/Research/Admin*	**Europe**	*50*	*UNILE, FEAP*
Apr 24-25 08	*Presentation workshop CONSENSUS*	*Associative structures,Farmers/Research/Admin*	**Europe**	*150*	*FEAP, Consortium*
May 08	*Presentation workshop*	*Farmers/Research/Admin*	**Europe**	*50*	*UNILE*
June 08	*Presentation Technology Transfer Workshop CA AQUAGRIS*	*Associative structures,Farmers/Research/Admin*	**Europe, INDIA**	*50*	*UNILE*

The project web site (http://www.aquaetreat.org) contains informative pages on project activity and Consortium partners, specialised sections related to the Aquaetreat issues and several links to other relevant web pages. It has been developed since the start of the project and is continuously updated with new technical implementations and content. A continuous effort is being made to keep the website 'active' for the establishment and maintenance of interest and time has been allocated for achieving this using project staff and the communication editor. In addition, regular newsletter/press releases are published on the web-site, reporting developments and providing news on events and publications.

Presentations both at international conferences (either as poster or oral communication) and at National Association Meetings were basically an overview of the project activity with indication of objectives, activity description, dissemination and training opportunities, results and partnership composition. The posters presented at the various meetings/workshops contained the results of the RTD activity carried out within the project. Paper and/or electronic copies have been distributed on request. A Power Point presentation is also available on the web site. The newsletters and articles on the specialised press gave information on the potential exploitation of the Aquaetreat results to the SMEs operating in the aquaculture sector. The Regional workshops presented the state-of-art of the effluent treatment technology, integrated aquaculture, recirculation system and sludge re-use and new perspectives under the Aquaetreat project.

Since the project started in May 2004 the results arisen from the RTD activity of the project have been continuously disseminated at the proper targets by developing specific articles and presentations for use by project participants in small or large meetings or on press
Within the structure of the FEAP, each Association (29) has received periodic updates of the project activity and results.
Additionally, all the participants to the project have provided widespread information on it at international and national meetings attended during the project life and besides.

Publishable results

All the relevant material arisen from the project (vulgarised documents, manuals, etc.) have been published on the web site. An “advertising-like” brochure was prepared by the IAG and widely distributed to the EU citizen community in order to promote its awareness of the topics and to stimulate consciousness of the possibility to implement environmentally safe systems and processes in the reared fish production cycles. Standard, high-diffusion advertisement practises were considered for a more wide dissemination of the results to the entire EU citizen community (radio and TV broadcasting, newspapers, magazines, etc.), with the objective on one hand to contribute to the growth of the EU environmental consciousness and, on the other hand, to mark as environmentally concerned the aquaculture production of the EU fish farming SMEs.

All the relevant data arisen from the project activities will be available in the CORDIS Results database which is open to the public and may be used by the Commission in its own promotional material.