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PANDA

Permanent network to strengthen expertise on infectious diseases of
aquaculture species and scientific advice to EU policy

Coordination Action

Scientific support to policies

Deliverable 12 - Network of experts

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Dr Barry Hill,
Centre for Environment, Fisheries and Aquaculture Science
United Kingdom

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CO	Confidential, only for members of the consortium (including the Commission Services)	

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1. Aim

The aim of this deliverable was to develop a permanent network of experts to provide scientific advice to the Commission on policy/legislation issues in aquatic animal health

2. Recruitment of experts to the network

2.1 Development of links with Associated organisations, networks and projects

Crucial to the development of a broad network is the development of relationships with as many existing networks and organisations concerned with aquatic animal health in order to enrol experts.

European Association of Fish Pathologists (EAFP)

The EAFP is the most comprehensive scientific association in Europe in the field of aquatic animal health with approximately 1225 members of which 75% are resident in Europe. It holds biannual conferences and publishes a peer reviewed bulletin several times a year. Some members of the PANDA consortium are on the EAFP council, and many members of the wider PANDA network are also members of the EAFP.

The PANDA project has been publicised through the EAFP via articles in their bulletin and a promotional stand at the EAFP conference in 2005. Relationships with the EAFP have been developed throughout the PANDA project lifetime through meetings with the EAFP council. The EAFP president attended the PANDA Weymouth workshop and indicated that although some members of the council were sceptical about what the PANDA project was likely to achieve, it is apparent that the project has produced some high quality outputs, and the EAFP council should be encouraged to support the project where possible.

The minutes of a meeting of the EAFP council meeting held in April 2007 record that 'future links between the EAFP and PANDA will depend to an extent on future financial support for PANDA but it is hoped that EAFP members will register with the PANDA network'. An EAFP forum has been constructed on the PANDA website for use by EAFP members.

National Reference Laboratory (NRL) Networks for Fish and Mollusc diseases

The NRL networks are the backbone of fish and mollusc disease diagnosis in the EU. The co-ordinators of these networks are both members of the PANDA steering group giving strong links to the PANDA project. PANDA presentations, meetings, workshops and recruitment drives have been held at NRL meetings.

OIE Aquatic Animals Commission (AAC)

The OIE AAC is responsible for the development of zoo-sanitary guidelines for aquatic animals and therefore is the frontline of areas covered by the project. Linking with the AAC is of importance to maintain work at its higher international level. The

current Vice-President of the AAC is a member of the PANDA consortium (co-ordinator).

The OIA AAC is interested in and supportive of the project. An OIE representative who attended the PANDA Weymouth workshop indicated that PANDA may be able to provide useful feedback on OIE work, for example the definition of safe commodities, as long as it is scientifically based and useful.

ICES Working Group on Pathology and Disease of Marine Organisms (WGPDMO).

ICES has experience in gathering scientific information and producing synthesis and reviews. The WGPDMO has considerable knowledge and expertise in aquatic animal diseases.

Links have been forged with the WGPDMO, and as well as its members contributing to the scientific outputs of the PANDA project, a forum has been set up on the PANDA website to allow the WGPDMO to draw from the wider PANDA network in matters such as discussing the WGPDMOs terms of reference.

Network of Aquaculture Centres in the Asia Pacific (NACA).

NACA has considerable experience in networking and in the development of aquatic animal health management programmes. NACA has specific experience of many diseases exotic to the EU, and hence of interest to the PANDA project.

Good links between PANDA and NACA have been developed. Recognizing the importance of networking and knowledge sharing, NACA wishes to explore opportunities to network with European aquatic animal health networks (e.g. PANDA) with the intention of building partnerships between Asia and Europe to work together on aquatic animal health issues of common interest and concern to both regions.

Network of Aquaculture Centres in Eastern Europe (NACEE)

This extensive network emerged in 2003, and has formal links with the FAO. A representative of NACEE attended the PANDA Weymouth workshop, and it is hoped that links between the two networks can continue to be strengthened.

FAO, Fisheries Department

FAO provides technical advice on global aquaculture issues and has considerable experience and expertise in development of networks and databases, and as a consequence is very well connected globally.

Good links between PANDA and the OIE have been developed. The OIE would like the relationship with PANDA to broaden and strengthen global networks and has a particular interest in Eastern Europe. Considering the complementarity that have been proven in collaborative work of FAO with its partners, linking FAO aquatic animal health programme with PANDA in improving dissemination of knowledge would be highly desirable.

Federation of European Aquaculture Producers (FEAP)

The FEAP is currently composed of 28 National Aquaculture Producer Associations of 23 European Countries who represent nearly 1.36 million tons of finfish production worth more than M€ 3,250. Its main role is to provide a forum for the Member Associations to be able to establish common policies on questions relating to the production and the commercialisation of aquaculture species that are reared in Europe. Such decisions or Resolutions are communicated to the appropriate authorities, European or National.

FEAP is one of the project partners, and so FEAP has been aware and supportive of the project from the start. This, together with a workshop held immediately after the FEAP General Assembly in 2005 which was well attended by FEAP members has facilitated the participation of producers and other industry players such as fish veterinarians.

International Society for Aquatic Animal Epidemiology (ISAAE)

This society was formed from members of the International Society for Veterinary Epidemiology and Economics. It is an active, voluntary network with considerable expertise in the field of epidemiology, and holds workshops, seminars and training courses and its members meet and communicate electronically.

Close links have been developed through the President of the ISAAE who is an active member of one of the PANDA task forces.

DIPNET

The FP6 DIPNET project is a similar project to PANDA, with many PANDA participants also being members of the DIPNET network, and although no formal links have been developed there has been a strong spirit of collaboration between the two projects. A forum for use by the DIPNET project has been opened on the PANDA website.

EPIZONE

This is large recently started EU project with similar but much broader objectives to PANDA. A few PANDA members are also involved in the project, and although the project is at an early stage the EPIZONE network contains much expertise on principles of disease control, and offers access to experts concerned with terrestrial animals as well as aquatic ones.

2.2 Recruitment drives

Many initiatives have been undertaken to encourage experts to join the network. Major actions are listed in the Table 1. In addition to these, other experts have been encouraged by word of mouth to join, either through existing members or associated organisations. Although it is not possible in most cases to directly attribute increases

in membership to each initiative, some tentative assessment of the success of these initiatives can be made.

The most effective individual initiative for recruiting new members was through the promotional stand at the EAFP international conference in September 2005, where experts could discuss the project with consortium members, and enrol on-line there and then. Although an enthusiastic response was usually encountered during oral and poster presentations this did not always translate to additional members joining the network when they returned home. A number of experts are believed to have joined simply by finding the project website with no prior prompting or awareness of the project.

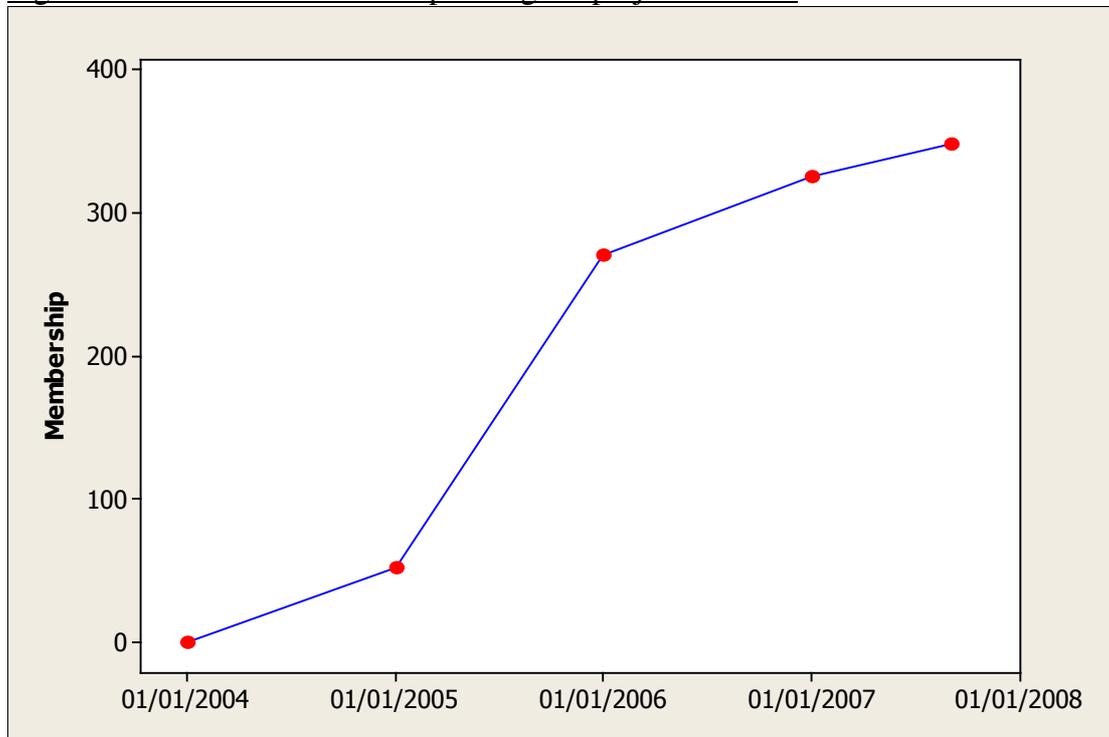
Table 1. Main initiatives taken to increase network membership

Target Audience	Date (and venue)	Action
European Association of Fish Pathologists (EAFP)	February 2004	Article presenting the PANDA project published in the EAFP Bulletin
Federation of European Aquaculture Producers (FEAP)	March 2004, Budapest	Oral presentation giving overview of PANDA project at FEAP Presidents meeting
ICES Working Group on Pathology and Diseases of Marine Organisms (WGPDMO)	March 2004, Åbo, Finland	Oral presentation giving overview of PANDA project
National Reference Laboratory for Fish Diseases Network	June 2004, Brussels	Oral presentation giving overview of PANDA project at annual meeting
National Reference Laboratory for Mollusc Diseases Network	June 2004, Brussels	Oral presentation giving overview of PANDA project at annual meeting
Fish Health Commission of Greek Maricultures	October 2004, Greece	Oral presentation giving overview of PANDA project at meeting
Asia-Europe Meeting (ASEM)	October 2004, Barcelona	Oral presentation giving overview of PANDA project at workshop on Aquatic Animal Health Improvement
Technical Assistance Information Exchange Unit (TAIEX)	February 2005, Ljubljana, Slovenia	Presentation and discussion of PANDA networking activities at TAIEX seminar on Networking on Aquatic Animal Health in Adriatic Countries
National Reference Laboratory for Mollusc Diseases Network	March 2005, La Tremblade, France	Oral presentation on project and promotional leaflet distribution at annual meeting
Society for Veterinary Epidemiology and Preventative Medicine (SVEPM)	April 2005, Nairn, Scotland	Poster presentation at SVEPM conference
National Shellfish Association Congress	April 2005, Philadelphia, USA	Poster presentation and promotional leaflet distribution
Federation of European Aquaculture Producers (FEAP)	May 2005, Hydra, Greece	Oral presentation on project and promotional leaflet distribution at FEAP General Assembly
Readers of Aquacultuur, the branche bulletin (in Dutch)	May 2005	Article entitled 'Het EU PANDA project' published in Auacultuur
National Reference Laboratory for Fish Diseases Network	June 2005, Aarhus, Denmark	Two oral presentations
American Fisheries Society (AFS)	July 2006, Minneapolis, USA	Promotional leaflet distribution at AFS Eastern Fish Diseases Workshop
European Association of Fish Pathologists (EAFP)	September 2006, Copenhagen, Denmark	Promotional stand, leaflets and newsletters at EAFP conference
Shellfish culturists	October 2006, Brest, France	Poster presentation at 8th International Conference on Shellfish Restoration
Fish Health Section of Asian Fisheries Society	October 2006, Colombo, Sri Lanka	Presentation on the PANDA project and circulation of leaflets at Symposium on Diseases in Asian Aquaculture
International Society for Veterinary Epidemiology and Economics (ISVEE)	August 2006, Cairns, Australia	Promotional stand, leaflets and newsletters at the International Symposium for Veterinary Epidemiology and Economics

Attempts to involve experts from the more general field of veterinary medicine (e.g. those working with terrestrial animals) have been channelled through the Society for Veterinary Epidemiology and Preventative Medicine, and the International Society for Veterinary Epidemiology and Economics. Although several members are or have been to some extent involved in terrestrial animals, the vast majority are specialists of aquatic animals.

The number of experts registered on the database has increased steadily throughout the project lifetime, with the biggest increase being in 2005. On 31/8/07 there were 348 members of the network

Figure 1. Increase in membership during the project lifetime.



3. Network statistics and capabilities

Details of all members and their areas of expertise and interest are stored in a database on the project website.

A brief analysis of membership demographics and capabilities is presented in Table 2 and Figures 2-4. Members are resident in 55 countries around the world. Although the majority of members (67%) are European residents, network members represent all inhabited continents.

A wide range of primary specialisms are listed covering all relevant disciplines. Although the majority work with fish diseases, molluscs and crustaceans are also well represented.

Table 2. Membership by country

Country	Registered experts
United Kingdom	60
Spain	30
France	19
Norway	19
Greece	13
Portugal	12
Denmark	10
Germany	9
Ireland	9
Finland	8
Italy	8
Netherlands	7
Belgium	6
Poland	3
Switzerland	3
Hungary	2
Iceland	2
Lithuania	2
Slovenia	2
Austria	1
Czech Republic	1
Macedonia	1
Romania	1
Slovakia	1
Yugoslavia	1
Sweden	1
Ukraine	1
<i>Europe total</i>	<i>232</i>
United States	23
Chile	12
Canada	8
Mexico	3
Peru	2
Argentina	1
Brazil	1
Colombia	1
Haiti	1
Ecuador	1
Panama	1
<i>Americas total</i>	<i>54</i>
India	12
Turkey	9
Russian Federation	5
Iran	4
Vietnam	2
Bangladesh	2
China	2
French Polynesia	2
Japan	2
Taiwan	2
Israel	1
New Caledonia	1

Philippines	1
Thailand	1
<i>Asia & Middle East total</i>	<i>46</i>
Australia	12
<i>Antipodes total</i>	<i>12</i>
Egypt	2
Malawi	1
South Africa	1
<i>Africa total</i>	<i>4</i>

Figure 2. Membership by continent of residence

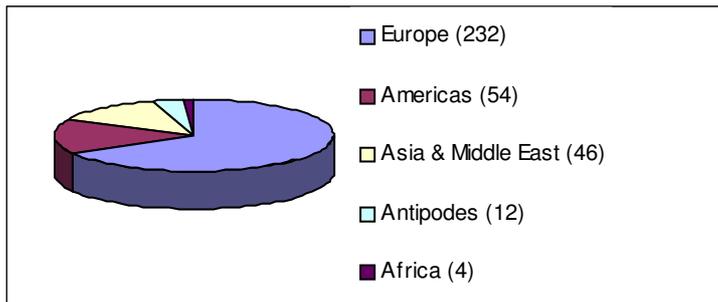


Figure 3. Primary specialism (where specified)

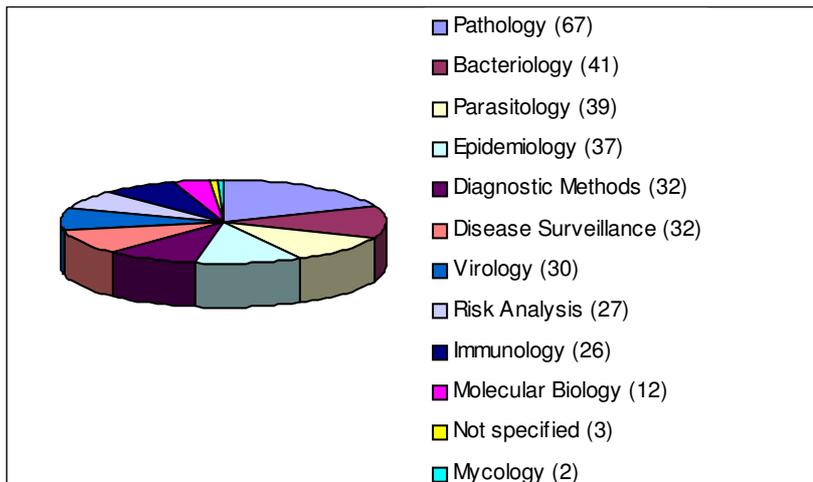
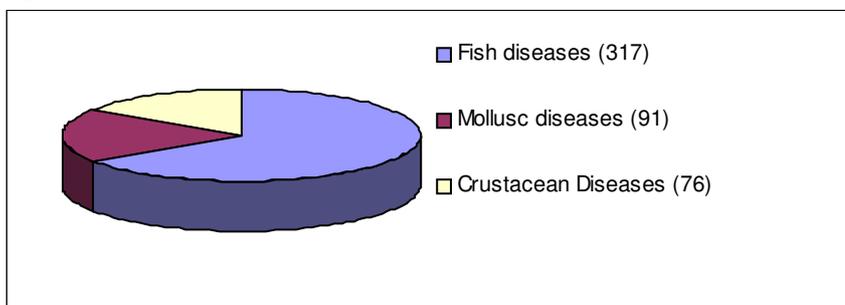


Figure 4. Diseases of interest



4. Using the Network expertise to address the scientific work packages

Each scientific work package leader formed a small task force of core experts selected from the network. Through meetings of these task forces, and through contributions from the wider network (via workshops, presentations at conferences, the website etc) the scientific questions posed at the start of the project have been answered. Travel costs of experts invited to meetings were met by the project, although in many instances this was not necessary as meeting/workshops were held alongside conferences and other scientific meetings ensuring relevant experts were already present.

One concern with this method of working is that members of the task forces and sub-networks need to contribute a relatively large amount of their time on a voluntary (unpaid) basis in order to contribute to the PANDA project. Level of commitment to the project varies within the network, but in some cases this has resulted in delays due to their heavy official work commitments, which take a higher priority. Some work package leaders have reported that the majority of progress is made during task force meetings, and outside of these it can be difficult to maintain the momentum.

Although face to face meetings of the task forces have been very productive, the involvement of the wider network through the website and discussion forums has not been quite as effective to date but could be stimulated into action if the network continues to operate after the end of the project.

5. Potential future activities

The network has a broad range of capabilities, and contains sufficient expertise to effectively answer most questions concerning aquatic animal health within the EU. On the few occasions where suitable expertise is not available within the network, it is likely that this expertise could be found from outside the network through contacts of existing network members.

The most effective method of drawing advice from the network appears to be by assembling a small group of relevant experts and arranging a convenient meeting to discuss face to face the issue under consideration and to draft a report. This can be posted on the website, and the wider network of members can be invited to comment.

Network members may also be able to offer highly specialised training and guidance on request.

The network will require continued co-ordination to maintain its momentum, and the website which is the hub of the network will require minor maintenance work from time to time.

6. Permanence

At the start of the project, it was envisaged that the Commission would develop a mechanism for the PANDA network to continue providing advice in scientific advice in support of policy after the end of the project. During the course of the project, responsibility for the provision of 'risk based' scientific advice to DG SANCO was

transferred to the European Food Standards Agency (EFSA). Therefore, any future information or advice provided by the PANDA network involving risk assessment will likely be commissioned directly by EFSA.

The project was extended and discussions were held with EFSA. Although EFSA expressed an interest in the network and its capabilities, they have established their own mechanism for obtaining expert advice but would like to see the continuation of the PANDA network in the future and are exploring possible means to provide financial support to achieve this.

The formation of the European Aquaculture Technology Platform (EATP) has been noted and discussed by the PANDA consortium. Although there is overlap in the expertise involved, EATP is primarily concerned with the commercial development of the industry so its purpose differs from that of the PANDA network. Although some experts who are members of the PANDA network will be involved in the EATP, the EATP has developed its own *modus operandus* and may not be willing to provide support for the continuation of the PANDA network in its current form.