DIPNET

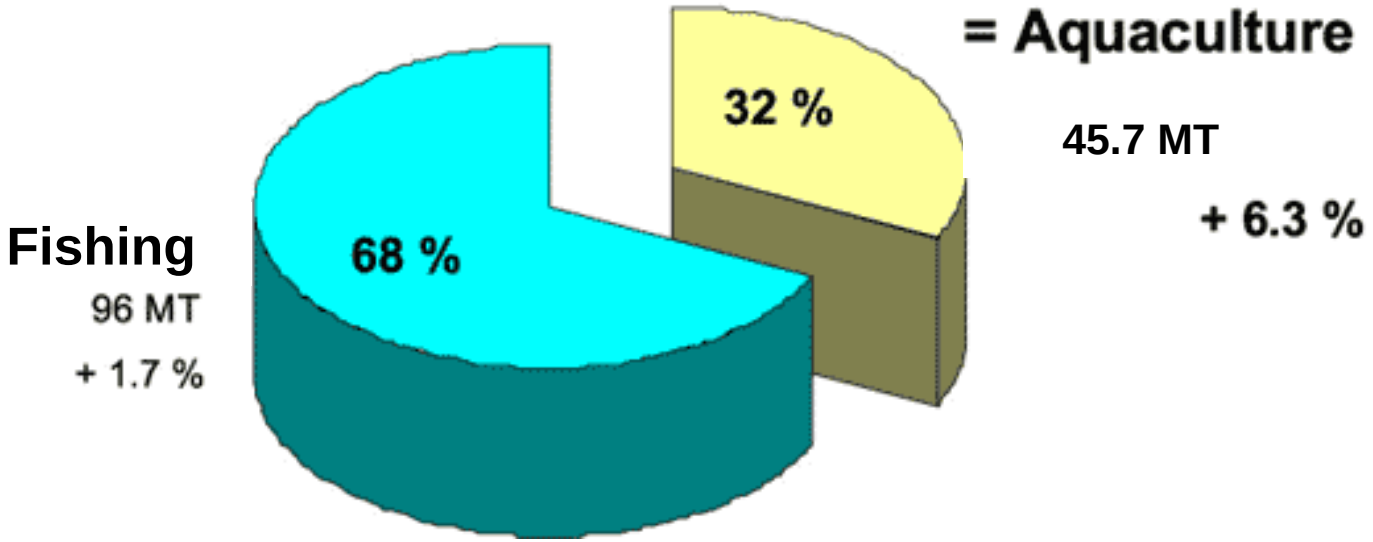
Disease Interactions and Pathogen Exchange NETwork

Nantes 1-2 February 2005

www.dipnet.info/

World aquatic living ressources (2000)

141.8 Million tons



FAO, 2002

In Europe:

- **1980**: 0.64 millions tons
- **1990**: 0.94 million tons (+47%)
- **2000**: 1.32 million tons (+39.3%)

1.32 million of tons = 3% of world aquaculture production

Main species

Fish: trout, salmon, sea bass, sea bream
Molluscs: oysters, mussels and clams

Marginal production of **Crustaceans** (except for crayfish)

- ✓ Importance of Aquaculture in the **EU policy**
- ✓ Aquaculture improvement is one the priority measures of the **DG FISH** to accomplish environmental integration

DIPNET: European project

Scientific support to the development of **EU Policy** :

1/ control and reduce the impact of diseases in wild animals and ecosystems,

2/ reduce constraints on aquaculture,

3/ prevent and respond to new, emerging or re-emerging diseases.

DIPNET

* a co-ordination action
* started on the 1st of October 2004
* Project duration : 24 months

Objectives

✓ To integrate and strengthen current scientific knowledge on the potential transfer of pathogens and diseases between wild and cultured aquatic animal populations

✓ To give support to the development of European policies protecting the health of aquatic animal populations while allowing responsible use of the aquatic environment for aquaculture purposes

✓ To disseminate the current knowledge towards knowledge users, other stakeholders and the wider European public

Impact on fishing activities: decreasing catches, economical losses

Wild exploited populations

Cultured populations

Pathogens exchanges

Impact on aquaculture production: mortalities, Economical losses

Wild non exploited populations

Impact on environment: reduction of biodiversity

Gyrodactylosis caused by ***Gyrodactylus salaris***:

- pathogenic parasite of wild and farmed Atlantic salmon parr (*Salmo salar*) and smolt

- originally found in some Baltic stocks of Atlantic salmon (western Sweden, northern Finland and Northern Russia), less susceptible as Atlantic stocks

- probably introduced in Norway via salmon parr imported from Sweden in the early seventies.

It has been widely spread within Europe with the movement of live Rainbow trout

Bonamiosis, caused by ***Bonamia ostreae***

- suspected to be introduced in France and Spain with infected *Ostrea edulis* oysters imported from California at the end of the seventies

- now occured from Spain to The Netherlands including Britain and Ireland

- spread by means of cultural practices and commercial exchanges

-caused the decline of flat oyster production (aquaculture and natural beds)

Astacus astacus

Procambarus clarkii

Crayfish plague caused by the fungus-like agent *Aphanomyces astaci* introduced into Europe in the mid-ninetheenth century

- Role of North American crayfish as vectors (natural hosts of the fungus and subclinical carriers)

- The disease had spread and affected crayfish populations in most of European countries

- Disease spread facilitated by North american crayfish introduction and fish transfer (*A. astaci* remains viable on fish scales and in cuticles in fish gut)

Project consortium

IFREMER (French Research Institute for Exploitation of the Sea) co-ordinator of the project: **Dr Laurence Miossec**

VESO (Centre for Veterinary Contract and Commercial Services - Norway): **Dr Paul Midtlyng and Dr Ase Helen Garseth**

FRS (Fisheries Research Services - UK): **Dr Rob Raynard**

CEFAS (Centre for Environment, Fisheries and Aquaculture Science - UK): **Dr Ed Peeler**

UZ (University of Zaragoza - Spain): **Dr I. de Blas**

5 work packages

WP1: Literature review of disease interactions and pathogen exchange **Rob Raynard**

WP2: Risk assessment and modelling of pathogen exchange **Ed Peeler**

WP3: Epidemiology of infectious diseases in wild fish and shellfish **Ignacio de Blas**

WP4: Network building and knowledge dissemination **Ase Helen Garseth**

WP5: Project management **Paul Midtlyng and Laurence Miossec**

Expected results (1)

Scientific publications and technical papers

✓ **WP1**: Review of the literature on disease interactions and pathogens exchange (published and unpublished data)

✓ **WP2**: Review on risk assessment of disease exchange between farm to wild populations

✓ **WP3**: Review on methods for monitoring and surveillance of diseases and pathogens in wild and farmed population

Expected results (2)

Seminars for user groups and stakeholders:

- ✓ **WP2**: On risk assessment and modelling

- ✓ **WP3**: On disease epidemiology, surveillance and gene banking

Knowledge, dissemination and popularisation (WP4):

Through Web site, leaflets, posters, communications, newsletters

Website DIPNET: www.dipnet.info/

http://www.dipnet.info/index.htm

Disease Interactions and Pathogen exchange between farmed and wild aquatic animal populations - a European network

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The **principal objective** of this project is to integrate and strengthen the current scientific knowledge on the potential transfer of pathogens and diseases between wild and cultured aquatic animal populations, and thereby to support to the development of European policies protecting the health of wild aquatic animal populations while allowing responsible use of the aquatic environment for aquaculture purposes. Integration of on-going research activities and dissemination of current knowledge towards knowledge users, other stakeholders and the wider European public are further aims of the project.

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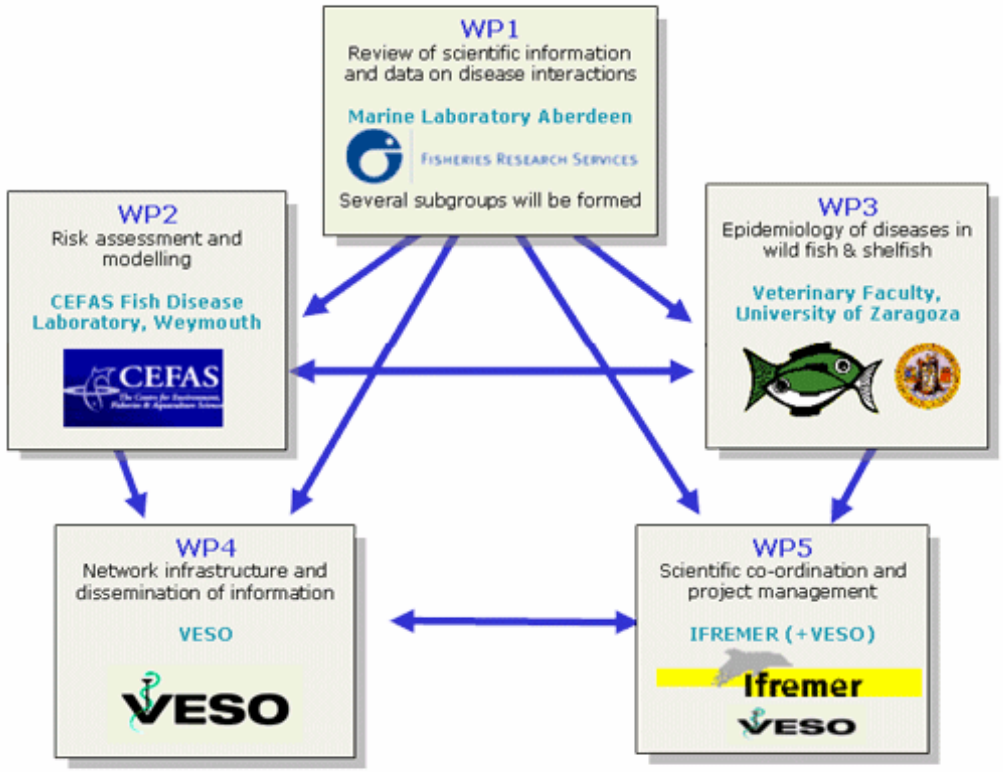
500 visits
from 01/12/2004



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Web designer: Ignacio de Blas ; Web administrator: Ase Helen Garseth

Newsletters publication (twice a month)

Nantes 1-2 February 2005

Publication: Ase Helen Garseth

Expected results (3)

PIP (Policy Implementation Plan) for the commission:

Application of the results at the fishery policy management level