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ORION, a LEONARDO DA VINCI Pilot Project, has created a pilot 'Virtual' Marine Environment Department which delivers Open and Distance Learning (ODL) courses in several languages (English, Portuguese, Swedish and Greek). The ORION project links universities recognised as centres of excellence but which are situated on the far-flung edges of Europe.

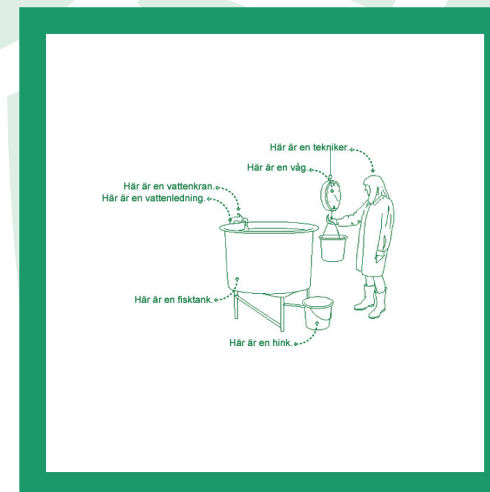
THE GOALS OF ORION

Its major goal was to develop a powerful state-of-the-art ICT (Information and Communication Technology) learning/teaching tool which could be used within a Virtual Learning Environment located in the ORION Distributed Network. The subject area, the marine environment, covers fields relevant to different levels of higher education and the vocational sectors. Its multi-disciplinary scope includes aspects such as pollution studies, marine ecology, tropical ecology, marine biodiversity as well as larval rearing (aquaculture). However, the unique language learning units, available to all users in ORION, will facilitate actual as well as virtual student mobility.

PARTNERS

Coordinator : HCMR (Hellenic Centre for Marine Research (formerly IMBC), Greece.

- The National Centre for Marine Research (NCMR), Greece.
- The Department of Zoology & Ecology and Plant Science, The National University of Ireland (Cork) The Environmental Research Institute (Cork), Ireland
- The Center of Marine Sciences of the Algarve (CCMAR), University of Algarve, Portugal.
- Department of Systems Ecology, University of Stockholm, Sweden.
- The Federation of European Aquaculture Producers (FEAP), Belgium
- TEREUS S.A. (Athens) Greece.
- AMC Ltd., (Dublin) Ireland



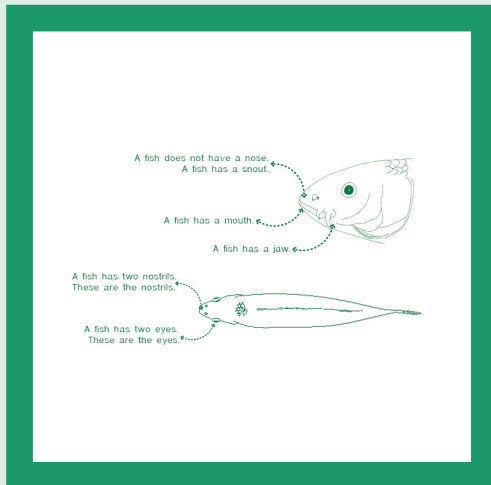
LIBRARY RESOURCES

The Reference Resource Centre houses the wide range of resources used by the project but also functions as an **online Library**, complete with all of the bibliographic and reference facilities provided by the partnership. These include access to the AQUALEX glossary in 6 languages - English, French, German, Spanish, Norwegian and Italian.

There is also a specialised bibliography concerning aquaculture and the environment (formerly BIMAQUE), which includes more than 800 new references to chemical pollutants.

The Library Resources are freely available to any interested person and presently contains:

- A bibliography on Aquaculture/Environment interactions, updated with more than 800 references to chemical pollutants.
- A 'Meristics' unit; a valuable reference base with descriptions of fish, shellfish and crustacean body parts in three languages - English, Greek and Norwegian (still under development).



THE ORION NETWORK

The present partnership, which comprises European universities and research organisations in Greece, Ireland, Portugal and Sweden, has developed a pilot online Marine Environment Course delivered in 4 languages - English, Greek, Portuguese and Swedish. ORION links its partner universities, situated at the four corners of Europe, by means of a distributed network which links the jointly-run courses, course resources and language learning modules. Recognising the crucial importance of language learning in the diverse academic and cultural mix that is present-day Europe, ORION has created a unique set of freely available basic language modules in English, Greek, Portuguese and Swedish, in a marine science framework.

DIFFERENT PHASES

Academic Courses, as:

- Age Determination of Marine Fish (English)
- Larval Rearing (Portuguese)
- Marine Pollution (Greek)
- Endocrine disruptive chemicals (Greek)
- Tropical Ecology (Swedish)
- Marine Biodiversity (English)
- Introduction to the Marine Environment (English and Greek)

The Virtual Courses can be accessed by students throughout Europe who are registered users.

Accreditation at the University:

In order to gain credits for these online courses, students must be enrolled at one of the partner universities.

Innovative learning tool

The ORION **online** Pilot courses in Marine Environmental Science play an active and innovative role in promoting the learning of languages. The Language courses section includes the basic self-learning modules in English, Greek, Portuguese and Swedish. Based on subject areas within marine environmental science, these are intended to help students from the partner universities to access course materials in all partner languages. The aim is to help promote the linguistic diversity of students. To further facilitate language learning, the website contains the ORION glossary which gives instant access to definitions of marine science terms, in the languages of the different modules.

