The Network of European Marine Stations

MARS

Conference of the Directors

The future of marine research stations in Europe

Amsterdam 25-26 November 2003

Present: P. MATHY (Bruxelles EU), J. MEES (Oostende BE), S. MONCHEVA (Varna BG), A.B. JOSEFSON (Roskilde DK), H. KUOSA (Hanko FI), G. BOEUF (Banyuls s/m FR), J.-C. DAUVIN (Wimereux FR), J.-P. FERAL (Marseille FR), M. GLASS (Villefranche s/m FR), B. KLOAREG (Roscoff FR), P. LASSERRE (Paris FR), D. VAULOT (Roscoff FR), F. BUCHHOLZ (Helgoland DE), O. KINNE (Oldendorf DE), D. SCHIEDEK (Rostock DE), K. WILTSHIRE (Bremerhaven DE), A. ELEFTHERIOU (Heraklion GR), F. BOREO (Lecce IT), A. IANORA (Napoli IT), P. MAGNI (Torregrande IT), J. DE LEEUW (Yerseke NL), C. HEIP (Yerseke NL), H. HUMMEL (Yerseke NL), P. VAN AVESAATH (Yerseke NL), A. JOHANNESSEN (Bergen NO), A. SZANIAWSKA (Gdynia PL), J.M. WESLAWSKI (Sopot PL), R. SERRAO SANTOS (Horta PT), A. MALEJ (Piran SI), S. HAWKINS (Plymouth UK), G. SHIMMIELD (Oban, UK).

Apologies: F. BONHOMME (Sète FR), J. MARKS (Den Hagen NL), H. OJAVEER (Tallinn, Estonia), M. THORNDYKE (Fiskebäckskil, SE), M. VINCX (Gent, BE).

16 European countries were represented, mostly from Western Europe. The absence of Spain was underlined.

Introductive talks and a point on the programmes

After the opening of the conference, Carlo Heip summarized the previous Conference of Directors in Venice (2000). Major roles in marine biodiversity studies including molecular approaches and ecosystem functioning, genomics, cell biology and development studies, marine stations as observatories of the marine environment, experimental facilities and access to infrastructures, training and mobility were pointed out.
Some weaknesses were also underlined such as failed interactions between research and decision makers or isolation, marine stations being generally far from industry and sometimes from universities.

Heip then introduced the programmes realized thanks to the MARS network and the marine stations.
The way towards a European joint action on marine biodiversity was long and difficult, and in absence of true national support which, when existing, were mainly directed towards the ‘terrestrial continent’. Concerning the marine realm, the step started in 1993-94, under the aegis of ECOPS and the ESF, to lead to a "grand challenge" for a European co-operation on marine sciences (Strömberg *et al.* 1995). It was a false start. In 1996, the network of the European marine stations (MARS) was created (http://www.marsnetwork.org).

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A workshop supported by CEC/MAST, EERO and MARS led to an inventory of the 'marine biodiversity' actions carried out and programmed in the countries of the European Community (Warwick *et al.* 1997). A working group supported by ESF-EMaPS and MARS worked out finally a European action plan on marine biodiversity (Heip *et al.* 1998). This same group then established bases of a European networking (Heip & Hummel 2000). To concretise this network, it answered a European call for proposal. The project was selected and financed. BIOMARE was launched the following year.

BIOMARE (*implementation and networking of large scale, long term MARine BIOdiversity research in Europe*) is a concerted action which proceeded during the 5th European FP, in 2001 and 2002. The objective was to establish the infrastructure and the conditions required for research on the marine biodiversity in the long term and on a European scale. This action was financed by the EU program '*energy, environment and sustainable development'* (support for infrastructures) and was coordinated by NIOO-CEMO, Yerseke, NL (C. Heip and H. Hummel).

21 laboratories or institutes, mainly members of the MARS network, took part in BIOMARE. BIOMARE had 3 principal objectives which were achieved thanks to 3 work packages (WPs): (1) To select recognized reference sites and to establish a network as basis for long-term large-scale research on marine biodiversity in Europe (WP1 led by R. Warwick, Plymouth Marine Laboratory, UK), (2) To make an inventory and to choose internationally recognized and standardized measurements and to evaluate the relevance of indicators and indices of the biodiversity and to propose a number of agreed indicators in Europe (WP2 led by J.-P. Féral, then based at the Observatoire Océanologique Banyuls-sur-Mer, FR), and (3) To acquire means of dissemination and accessibility of the results and network management of research in marine biodiversity (WP3 led by M. Costello and C. Emblow, Ecological Consultancy Ltd. Services, Dublin, IE). At the international level, associated right from the start to 3 global initiatives, IBOY (*International Biodiversity Year Observation*), DIVERSITAS and CoML (*Census of Marine Life*), the BIOMARE concerted action drew the attention worldwide as being a major effort to coordinate biodiversity research at a European scale and beyond.

The methodology in each of the WPs was similar: inventory, review and evaluation made by the WP leaders after consultation of the members of BIOMARE. Regional meetings and workshops were organized to discuss the choices, the recommendations and the drafting of the intermediate reports. The decisions were made by the Scientific Steering Committee after general meetings. The 3 'selected regions' were: Atlantic Ocean + Arctic, the Mediterranean + Black Sea and the North Sea + the Baltic.

The results are consigned in 2 published books and 1 CD on which one finds notably the Internet site of BIOMARE (WP3).
The first book (WP1) describes 100 sites of research on all the European coasts which constitute the logistic and scientific skeleton of the network. Only 12 of them are sites of reference, selected as being less possible impacted by the human activity and representative of the European coastal habitats. These sites of references with a certain number of focal sites will be more particularly the frame of intensive surveys (LTBR sites: long term biodiversity research sites). The majority of these sites are close to marine stations which can provide the infrastructure required for the operations of monitoring, exploration and experimental work (Warwick *et al.* 2003).
The second book (WP2) is devoted to the indicators of biodiversity. It presents the current situation of the European policy in this matter, a strategy for the choice of the indicators according to the target to reach. It also gives a catalogue of used or recommended indicators

and for which there is a European consensus as for their reliability and utilisation. The challenge was to build a scientifically solid system of interest to as well the scientist as the environmental manager or general public. This book is a first step (Féral *et al*. 2003).

Reports and CD are available on request to H. Hummel <h.hummel@nioo.knaw.nl>. The cost is 30 € to cover the mailing expenditure

BIOMARE (http://www.biomareweb.org) generated 2 Euro-conferences (ESF), in Greece and Holland, 1 electronic conference M@RBLE (http://www.vliz.be/marble) on the marine biodiversity in Europe, 1 other joint action MARBENA (http://www.vliz.be/marbena) '*Creating a long term infrastructure for MARine Biodiversity research in the European economic area and the Newly Associated states*' and 1 European network of excellence MARBEF (http://www.marbef.org) '*Marine Biodiversity and Ecosystem Functioning'*, within the 6th EC-FW which kick off meeting will be held in Bruges (17-19 March 2004). BIOMARE also published a newsletter (http://www.biomareweb.org/newsletter.html).

Perspectives and the rolesof the MARS institutes

The aim of the Amsterdam conference of director was to give complementary issues concerning the future of marine research stations in Europe.

Contributions were presented by:
- Pierre Mathy. DG Research, EC, BE: Marine research and the framework programmes of the EC.
- Pierre Lasserre, UNESCO and MAB, FR: MARS may become a NGO under UNESCO
- Fred Buchholz, AWI, Helgoland, DE: The role of the MARS network in the future
- Bernard Kloareg, Roscoff, FR: 6th FP NoE Marine Genomics
- Carlo Heip, Yerseke, NL: 6th FP NoE Marine Biodiversity and Ecosystem Functioning – MARBEF
- Jan Marcin Weslawsky, Gdansk, PL: The rise of central and eastern Europe, strength and weakness
- Paolo Magni, Oristano, IT: The MAMA project (Mediterranean network to Assess and upgrade the Monitoring and forecasting Activity in the region) = first MedGOOS project.
- Alenka Malej, Piran SLO: UNEP Mediterranean action plan
- Ricardo Serrão-Santos, Horta, PT: Research and implementation of the Natura 2000 directives, and beyond, in the Macaronesian Archipelagos (Azores, Madeira and the Canaries).
- Carlo Heip, Yerseke, NL: The Census of Marine Life (CoML).
- Daniel Vaulot, Roscoff, FR: Oceanic pico-plankton: from ecology to genomics
- Steve Hawkins, Plymouth, UK: Long term changes in the Western Europe.
- Karen Helan Wiltshire, AWI, DE: 40 years of time series – PANGAEA a Network for Geological and Environmental Data (www.pangaea.de)
- Gilles Boeuf, Banyuls-sur-Mer, FR: Does physiological research still need sea side laboratories?
- Fernando Boero, Lecce, IT: What's going on in the Mediterranean ?
- Jan de Leeuw, Den Burg, NL: POGO, Partnership for Observation of the Global Ocean

General discussion: action points

The discussion focused on how to organize MARS and its institutes for the future: how to make the role of marine institutes more explicit and visible.

Instead of making separate proposals in the field of marine research, it was proposed to make chains of institutes around strategic issues. For each of these issues a strategic paper can be

composed, including general policies, using FP6 or EPBRS, and anticipating at FP7. In this way MARS can serve as a (non-governmental) ERA net, being a consultable think-tank and actor in policy issues, e.g. advising committee members and national representatives, thereby influencing the content of the national and international (e.g. the 7th FP) research agenda.

The following themes (research priorities) are proposed (between brackets those who will write a paragraph on what it is about and what do we have):

- Biodiversity, including taxonomy and ecosystem functioning (roles of human activity and climate change) (Heip)
- Marine genomics and molecular biology (Vaulot & Kloareg)
- Marine model organisms and natural products (Boeuf)
- Climate change problems (Hawkins, Buchholz, Dauvin)
- Sustainable ecosystems and human factors (Austin)
- Marine stations as observatories (including vessels and mesacosmes)(Hawkins, Buchholz)

For each theme the contributing institutes can be listed, making the role of marine stations in these themes explicit. For such the existing MARS/BIOMARE inventory on institutes can be helpful. The list can maybe extended with overviews of culture collections (algi-net), existence of time-series …

Communication, i.e outreach, is important to make the role of MARS and marine stations visible. Several ideas to support this are proposed, such as:

- strengthen the links with other organizations (link with MAB, EMMS), and eventually harmonize together the strategy for public outreach
- give the science to managers, e.g. emphasize the role in nature conservation (e.g. on basis of the above research priority "Sustainable ecosystems and human factors")
- prepare publications of interest for the public, e.g. an encyclopedia of organisms in he North Sea
- make unified CDs and/or posters (text in different languages can then be inserted)
- organize a competition with as prize a sailing trip of 1 day at a research vessel
- make a list of courses with special prices for MARS members
- support a series of grants
- combine efforts in Marie Curie applications
- organise Summer school and regular university courses

MARS business

1/ Membership

The members are the Marine Stations. It was proposed that under certain conditions, inland laboratories / universities may participate. In this case they must have been sponsored by/associated with a marine laboratory. There was no proposition of associate members. The category of "Associated members" is not functional anymore and can be deleted.

2/ Fee

The fee is now 500 € for full membership. For certain countries, this may represent a large amount of money. Special support or exceptional status should be sought for these countries. Three categories of laboratories / institutes will be distinguished and the membership fees will be respectively:

- 150 € for labs with less than 20 total personnel
- 250 € for labs with between 20-50 total personnel
- 500 € for labs with more than 50 total personnel

A symbolic fee (100 € for 2 years) should be asked from the Eastern and Central Europe countries.

3/ Special actions
In specific areas some special actions should be initiated because of a low number of members. Firstly towards Spain since it is absent in MARS (action: Ricardo: Canaries, Boeuf: Mediterranean Spain). Secondly towards East Europe (Lasserre, Malej: twinning East-West, North-South)

A discussion about sites out of Europe such as French Departments (e.g. La Réunion, Guyane) should be continued during the next MARS executive meeting.

An E-mail list will be made by the VLIZ (Mees).

4/ External relations
- ESF/ESF marine board: MARS will be invited as a guest organisation to the meetings of the Marine Board for the open agenda points.
- CoML: a EuroCoML is now firmly established, chaired by Ulf Lie, Bergen, NO
- MAML: MARS is on the mailing list. However, nothing happened recently.
- DIVERSITAS: A marine biodiversity cross cutting theme is to be developed. It will be discussed by the SSC in April 2004 in Paris.
- IMBER (Integrated Marine Biogeochemistry and Ecosystem Research): The science plan was on the web during some weeks for discussion. It has been submitted to SCOR/IGPB for approval (http://www.igbp.kva.se/obe/recentupdates.html).

6/ Outreach
The web page and newsletter are downloadable from the MARS web site.

7/ MARS travel awards
This only concerns young scientists (max 35 years old) of regular members (full payment institutes). They will travel from one MARS lab to another MARS lab.
The sum of 6000 € was distributed in 2003 for 2 grants and 2 half grants.
Instead of 2 “MARS Travel Awards for Young Scientists” for the future 3 awards can be offered, whereby 1 award will be given to a candidate from East and Central Europe.

8/ MARS medal of honour
The MARS medal of honour 2002 was awarded to Professor Otto Kinne, for his longstanding contribution to the marine science community. The medal was handed during the banquet of the conference of the directors.

9/ Financial situation
The financial report was approved during the meeting of the SSC in Barcelona (02/03/03). Because of the positive financial situation, 10,000 Euro can be deposited on a bank account with a high interest rate.

10/ other financial points
Cost of the secretariat: maximum 16000€ / yr
VLIZ web page conception and updating: 2000€ / yr
Advertisement in the Parliament journal: 4554 €

11/ Summer course

10-17 May 2004: Baltic Course on *Adaptive Strategies of Benthic Animals in Tidal and Non-tidal Systems*, organised under the colours of Gdansk university (Poland) in cooperation with CEME-NIOO, the Netherlands. Contact: H. Hummel.

12/ ELECTIONS

Mandate 2004-2007

The following people were nominated to the electoral commission (replacing G. Bernardi, A. Eleftheriou, J.-P. Féral, C. Skora & C. Heip)

President : Fred Buchholz (Helgoland, DE)
Mireille Harmelin-Vivien (Marseille, FR)
Adrianna Ianora (Naples, IT)
Vangelis Papathanassou (Athens, GR)
Anna Szaniawska (Gdansk, PL)

Co-opted: Pierre Lasserre (Paris, FR, international affairs)
Mike Thorndyke (Fiskebäcskil, SE, infrastructure and transnational access)

Secretary: Herman Hummel (Yerseke, NL)

Past president: Carlo Heip (Yerseke, NL)