Regional Meeting
Horta, 19-20 April 2002

WP1 EMBiF Sites

A proposal was made for or the nomenclature and the description of the different sites.
The system of European Marine Biodiversity Focal Sites

Flagship Sites

- ATBI Sites

Sites intended for a complete inventory of marine biodiversity in a set of marine environments approaching pristine conditions (reference sites). These environments have been selected as small islands which are protected against direct human impact with different conditions and are for the moment restricted to full salinity conditions – with the exception of the Baltic.

- LTER Sites

Sites intended for long-term ecological research aiming at understanding the processes that govern the origin, maintenance and change of marine biodiversity, including human impacts. LTER sites are managed by one or several committed institutes and are nodes of regional networks involving a number of satellite sites from the same region. LTER sites are therefore representative for a larger biogeographical region and must be natural or pristine relative to the region.

- SSBI Sites

Sites under this heading are sites of exceptional or unique biodiversity that are unimpacted and may be studied in their own right or may be part of a European efforts aimed at inventorying marine biodiversity. These sites could be unique habitats, transition zones, biogeographical boundaries etc. They may also serve as reference sites.

Satellite/Complementary/Extensive Sites
(the terminology is still undecided)

Satellite/Complementary/Extensive sites are sites where biodiversity research or monitoring is going on or has been going on and where the data will be made available for European efforts aimed at understanding large-scale patterns of distribution or long-term changes. Preferably the sites within a region should be linked to a flagship site and become part of a regional network. The institutes responsible for the research at a satellite site will commit to make the data freely available and agree on a series of protocols aiming at the long-term study of marine biodiversity in Europe

EMBiF Flagship sites

Northern part of the transect
The group was satisfied with the coverage of primary sites along the northern part of the transect.

Some discussion rose about the close proximity of the UK Scilly Isles site and those in NW France. The presence of the two sites was considered justified because the sites represent different ecoregions.

Southern part of transect
Southern part:

France and Spain:	There are gaps along the coast of France and Spain. However biogeographically the proposed site at the NW coast of France covers this region.
Portugal:	A site will be proposed by Isabel Sousa Pinto: Gulf of Biscay: Litoral Norte. She should fill in the secondary questionnaire. Arrábida Marine Park was proposed as a complementary site but should be upgraded. Ria Formosa is proposed as a flagship site. It should be discussed whether this is appropriate.
Madeira	It was proposed to combine this site with Ilhas Desertas, a protected national reserve. However, a proposal has not yet been received. *Action*: Ricardo Santos to follow up
Azores	Vila Franca islet and Caloura coast will be proposed as a Flagship site instead of the presently listed candidates sites.
Canaries	According to the evaluation of this site (Southern Tenerife) by the independent panel the status as flagship site is doubtfull. It was the general impression that the evaluation was influenced by the quality of the information provided in the secondary questionnaire. The proposers should be invited to submit an appeal. If the site will not be accepted as a Flagship site there will be an important gap in the geographical coverage by the flagship sites. *Action* Jorge Nunez Fraga to follow up

The evaluation criteria of the Flagship sites

The Flagship sites have been evaluated by a panel of independent scientist. They evaluated all the candidate flagship sites using a standard set of criteria. The participants agreed on the used criteria.

During the meeting, the use of the term 'pristineness' was discussed repeatedly.

Commitment was not yet included in the evaluation, but should be. A document was prepared at which the institutes that are involved can indicate their intent of commitment.

Some sites have been classified as special site but do not have a further specification (ATBI-LTER, SSBI). The general coordinators will study this. If the sites will not have a further specification it will be considered to downgrade the classification of these site to complementary sites.

Appeal procedure

There will be a possibility to make an appeal to the evaluation of the individual candidate flagship sites. The evaluation is mainly based on the information of the second questionnaire of work package 1. The evaluation and selection is mainly based on the provided information, and this could be influenced by the way the questionnaire has been filled out.

The EMBiF Complementary sites.

Gaps:

Milport: (UK?)	It is possible to get data from BIOFAR
Oban (Scotland):	The institute that is possible to provide information has been contacted, but did not respond
Stanford Lough (N. Ireland)	

Some candidate sites that have been proposed by the MBA consist of very large areas, encompassing impacted as well as protected areas. The area should be better defined. Paul Sommerfield will contact the MBA to discuss possibilities for this.

Evaluation of the complementary sites

The sites should be evaluated in the same manner as the flagship sites. The evaluation of the sites requires more information than is presently available. Also the number of sites is too large for an evaluation by a committee. Therefore it was decided to ask the persons that proposed the sites to fill in the forms themselves. The statement of intended commitment has to be included in the questionnaire.

The results of the evaluation will be compiled by the general coordinators.

Regions
There is no uniform picture of the regions. The regions should be better defined. The provinces considered by OSPAR could be adopted by BIOMARE. In this case each province should be represented by at least one ATBI site. There are 7 ATBI sites and 8 provinces.

Conclusions
The Arctic-Atlantic group concluded the following:

- No changes needed in evaluation criteria
- Passive to "neighbor-evaluation" scheme for extensive sites, but expressed a desire for some kind of limited higher review or other form of giving "value"
- Geographic gaps present and identified
- We prefer to discuss WFD/BIOMARE and OSPAR in cohesion
- Agreement on "focal" site terminology
- Positive to further plans – formulation in progress.

EMBiF: Flagship <-> Complementary sites
A proposition was made to decrease the differences between the two categories of sites. The proposal was based on the nested approach as mentioned in the BIOMARE proposal. In this approach the ATBI sites are not separated from the rest but are imbedded in a network. The approach is more flexible and not really different from the present approach but illustrates the interconnection between the sites instead of the differences.

EUROPEAN MARINE BIODIVERSITY FOCAL SITES

Level 1

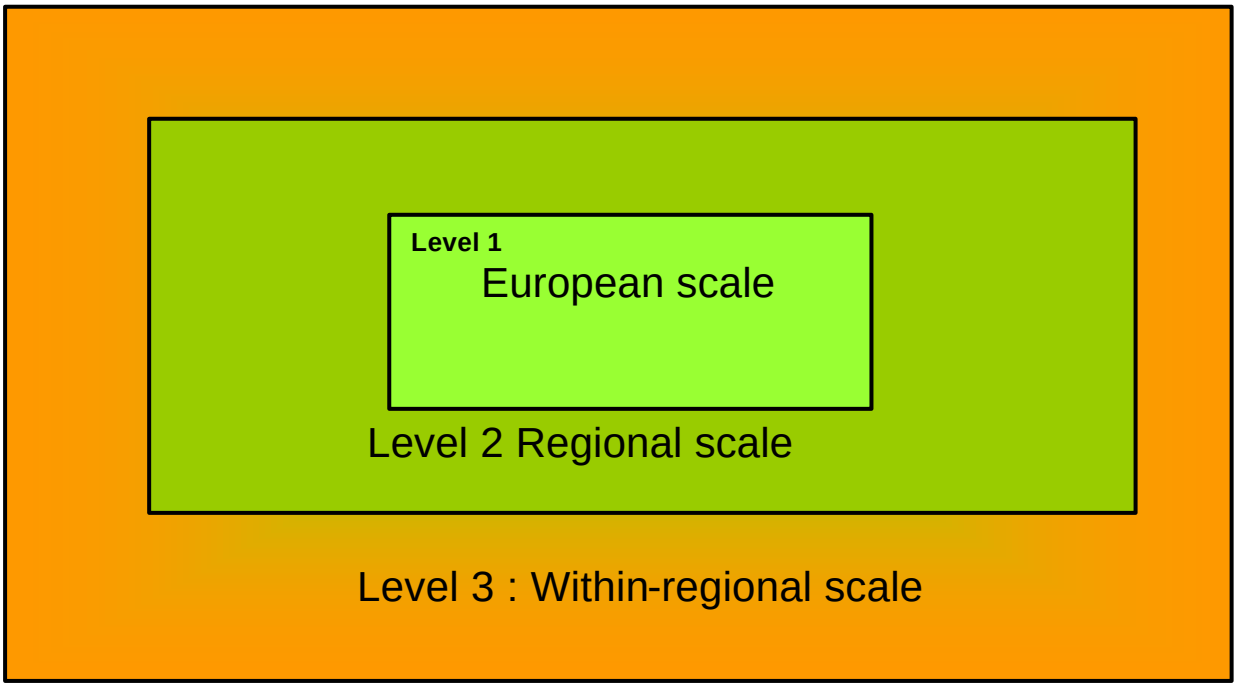
- Relatively few sites (currently ATBI sites).
- Sites representative of their region and together represent a large percentage of European coastal biodiversity.
- Sites which enable comparisons to be made at a pan-European level. They will act as sites from which large scale patterns in biodiversity can be studied.
- Research questions: impacts of climate change, patterns in community structure and function; taxon inventories

Level 2

- Larger number of sites (currently ATBI, LTER and SSBI sites and will most likely include additional extensive sites following evaluation).
- Sites representing regional biodiversity.
- Sites at which regional biodiversity issues can be addressed.
- Research questions: national impact studies; taxon inventories

Level 3

- Large number of sites (currently ATBI, LTER and SSBI sites and all extensive sites, that is ALL SITES).
- Sites representing within regional biodiversity.
- Sites at which sub regional biodiversity issues can be addressed.
- Research questions:



7 SITES: EUROPEAN SCALE

- Natural sites
- Want to make an inventory of taxa
- Will give indication of most of european taxa
- Will help to calibrate other sites

APPROX. 20 SITES: REGIONAL SCALE

- Regionally or biogeographically important
- Aim to inventory/research as much as possible
- Not necessarily compile ATBI

APPROX 200 SITES: WITHIN REGIONAL SCALE

- Important for variety of reasons
- Selected as extensive sites
- Useful resources, but not fulfilling the “main” criteria

“NATURALNESS

IMPACT

Pan-European scale need replicates around Europe
Limited number
Representative of area and “natural”
Applies to the 7 sites

If studying regional issues-
Series of sites, within a specific region (assess representativity).

Remaining challenges:
– Questions to be asked for future research, using the sites:
– Research objectives
– Site nomenclature.

Examples of tools:
– Inventory of taxa
– Phylogenetic structure
– Rapid assessment method
– Develop biodiversity measures

Extensive sites – role:
– Map patterns of biodiversity on finer scale
– Assess mans impact on biodiversity
– Long term monitoring

In this approach the following long-term ecological research can be defined:

Level 1
Aims
Overall specific aims (i.e. NOT covered by any other level): compile ATBI.

To determine relationships between regional species pool and total European species pool under unimpacted conditions.

Approaches

- Used for pan-European inventory AND to calibrate level 2. Special effort required to find and identify difficult taxa.

Usefulness

- Baseline of expectation in unimpacted areas across Europe

- Taxon comparison/ overview
- Community structure (phylogenetic, functional, “diversity” etc)

Level 2
Aims
To determine the appropriate species pool within specific groups for regional studies and how taxa are assembled from these under relatively unimpacted conditions.

Approaches
- Baseline for regional studies, requiring calibration from ATBI within region.
- Measurement of habitat diversity to calibrate level 3. Baseline habitat mapping with appropriate ground truthing (e.g. relevant environmental parameters).
- Ongoing sampling for a subset of the biota.
- Survey of target species sensitive to environmental change (geographic distribution).
- Measurement of genetic diversity (not biomarkers) within populations of regionally important species

Usefulness
- Baseline of expectation in unimpacted areas within region
- Taxon comparison/ overview through time
- Community structure (phylogenetic, functional, “diversity” etc)

Level 3
Aims
To determine how species pools deviate from expectation in response to specific stressors.

Approaches
Subset of appropriate level 2 activities which are appropriate to the question being asked.

WP2: Indicators

General remarks

- Biomarkers should be treated by BEEP. There is an overlap between BEEP and BIOMARE.
- Rapid assessment techniques were not presented.
- Bio-indicators should be calibrated.
- Indicators should be addressing large-scale long-term marine biodiversity issues, preferably at Pan-European scale.
- The list of bio-indicators should be linked to a list of stressors. Overexploitation is not mentioned in the latter.
- What is the level of generalization when species are going to be used as bio-indicators?
- For the ATBI surrogates of biodiversity could be very useful. It will be a subject of future research.
- Rapid assessment methods should be developed for measuring Biodiversity that are independent for samples size.
- The presented table should be filled out, putting region and stress in a table. This will give insight in the use of the indicators.
- The proposed tables should be sent back to the regional leaders with the kind request to help filling the scheme. Because the results should be available quickly the entry of indicators should be limited to 2 to 3 per habitat/region/stressor.
- OSPAR has already a list of indicator-species per region. This information should be gathered. Unfortunately OSPAR does not cover the Mediterranean.
- A literature survey cold reveal useful indicators.
- Only a few (if any) indicators are available that are usable at large (Pan-European) scale. Some methods are proposed in the questionnaires. Richard Warwick and Paul Sommerfield offered to write something about the use of species lists for this purpose.
- Ricardo Santos is going to write something about habitat cartography.
- Herman Hummel is going to fill in the chapter about genetic methods
- Jean-Paul Ducrotoy is going to be invited to write a paragraph about indicators at the population level.
- The list of indicators should be available at the end of May.

Summary of the subgroup discussion

Challenges identified for the task of producing lists of indicators.

– need to define the questions asked before prescribing tools;
– need full knowledge of the specific relevance of the tools before selecting the appropriate method.

Need identified for:

– a clear outline of aims and target end-users;
– recapping “nested” research questions, addressed to the different types of site;
– overview of uses and limitations of tools/methods.

All sites aim to describe and assess biodiversity, on some level. Questions asked first on a general scale (all sites relevant). More specific questions asked appropriate to aims of the different types of reference sites.

Overall aims are to say something about biodiversity

– on the appropriate scale
– using tools appropriate to the questions
– because all methods contribute some kind of biodiversity info., need to sort into categories for ease of use.

In summary, we identified the need to outline various general approaches for describing/assessing biodiversity, then break this down into successive levels of detail. Also to separate indicators of biodiversity from indicators of environmental health. All these can include bioindicators (in the strict sense), but not restricted to them.

Tools need to be specified as to how appropriate they are for different levels (eg. of sites) and also for different research questions. Geographic applicability also needs to be identified (pan-European to regional scales).

WP3. Dissemination and Capacity building

The database about available long-term biodiversity datasets was filled during the meeting.

The information gathered by MARS will be used to make a contact database. A questionnaire will be developed and sent to the BIOMARE and MARS members.

The flyers should be ready as soon as possible. During the meeting it was still possible to change/ add to the text.