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JOINT NATURE CONSERVATION COMMITTEE

DEVELOPMENT OF A FRAMEWORK FOR MAPPING EUROPEAN SEABED HABITATS - A PROGRESS REPORT ON THE MESH PROJECT

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1. Background

- 1.1 JNCC, together with 11 partner organisations drawn from Netherlands, Belgium, France, Ireland and UK, successfully gained funding from the INTERREG IIB North West Europe (NWE) programme to undertake a project called 'The Development of a Framework for Mapping European Seabed Habitats', or MESH. It aims to present seabed habitat maps covering the marine waters of north-west Europe via the internet, and to develop internationally agreed standards for future seabed mapping campaigns. A paper describing the MESH Project was presented to the Joint Committee at its March 2004 meeting (JNCC 04 D03).
- 1.2 The project was proposed at the OSPAR Biodiversity Committee meeting in January 2003. It is intended to facilitate:
 - i. spatial planning and decision-making in the marine environment;
 - ii. the establishment of an ecologically-coherent network of marine protected areas;
 - iii. the protection of internationally-threatened marine habitats and species.
- 1.3 In May 2004, the NWE Secretariat gave its final approval for the project and confirmed the funding arrangements through a formal Grant Offer Letter to JNCC on 1 June 2004. The total cost over the 4 years of the project is calculated at €8.125 million (£5.3 million), of which the INTERREG contribution will be 52%. The cost to JNCC over the 4 years of the project¹ is calculated at €1.674 million (£1.088 million), of which INTERREG will contribute 50%. The JNCC contribution will comprise existing staff resources and approved Corporate Plan commitments. Technical work commenced on

¹ NWE Secretariat consider the year in which the application was prepared (May 2003-April 2004) as 'Year 1'.

1 May 2004 and will finish on 30 April 2007. JNCC, as the lead partner, are responsible to the NWE Secretariat for the management and successful delivery of the project.

- 1.4 The MESH project comprises the following seven Actions, three of which are led by JNCC although it also contributes to the technical work of the Actions led by other partners:
 - i. Generating habitat maps for north-west Europe (JNCC)
 - ii. Developing standards and protocols for marine habitat mapping
 - iii. Testing these protocols
 - iv. Predictive modelling
 - v. Demonstrating the application of habitat maps for spatial planning and environmental management
 - vi. Communicating the results (all Partners led by JNCC)
 - vii. Project Management (JNCC)
- 1.5 The purpose of the present paper is to provide an update on the progress of the MESH Project during its first year and seek advice on stakeholder engagement within the country agency community to help refine the projects outputs.

2. Project organisation and reporting

- 2.1 JNCC as the Lead Partner for the MESH Project is responsible to the Office of the Deputy Prime Minister for the successful delivery of the project's outputs. It is also responsible for all financial and management reporting to the INTERREG NWE Secretariat on behalf of the other project partners.
- 2.2 Organisation and financial management of INTERREG IIIB projects revolves around retrospective claims for real costs. The Project is organised into 'Phases' that relate to these claim periods, although 'Phase 1' covers the 12 month preparation year. MESH will have seven phases with the final claim submitted in June 2007. On behalf of the project partners, JNCC submits a detailed report covering the project's activities during each phase, and the proposed work programme for the subsequent phase, together with the financial claim for last phase.

3. Progress to February 2005

- 3.1 The MESH project is currently in its third Phase and the following text describes the progress to date, organised by theme rather than chronologically.

Project planning

- 3.2 An implementation strategy was submitted with the approved application that set out the overall work programme for the entire project. It also provided a work programme showing the key tasks for Phase 2 (the first technical phase) as set out below:

Strategic Focus for Phase 2 (May to October 2004)

- i. to establish key staff in post within each Partner, including the Project Management Team;*
 - ii. to develop in detail the management practices of the Partnership, including necessary financial and administrative arrangements to ensure effective and efficient running of the project;*
 - iii. to develop and agree the detailed aspects of the project actions and initiate the technical work – particularly the data collation under Action 1, review techniques under Action 2 and field survey work under Action 3;*
 - iv. to promote the project externally to raise awareness of its scope and to encourage external participation in it, especially with external data holders and end-users.*
- 3.3 As the project only gained its formal approval in April 2004, JNCC as the Lead Partner needed to move quickly to initiate implementation of Phase 2. In summary, JNCC achieved all these key tasks although the progress on external promotion was less than originally anticipated. More detail on the progress is set out below.

- 3.4 MESH is currently working on Phase 3 and the overall focus is set out below:

Strategic Focus for Phase 3 (November 2004 to April 2005)

- i. now that the project is firmly established, the main focus of attention will be detailed planning by Action Leaders to ensure effective delivery of the Actions during the remainder of the project, with particular attention to integration of activities across the partnership. This will ensure most effective use of resources, exchange of expertise across the countries and institutes and the focused delivery of products for the project;*
- ii. continue the technical work on data collation and initiate the modelling part of the programme;*
- iii. develop a prototype of the MESH mapping website;*

iv. *there will continue to be liaison with stakeholders in each country to ensure effective exchange of information between the project and its key stakeholders; whilst this will occur across most of the actions of the project, it will increasingly also be via the project website.*

3.5 JNCC is currently working with Project Partners to deliver these tasks and, in particular, to produce an updated plan for the remainder of the project, which will more clearly specify the objectives and deliverables in the light of progress to date and practical experience gained in the initial technical phases.

Project management

3.6 A successful start-up workshop was hosted by the University of Gent, Belgium, in May 2004 where the Partners set out their plans for the project, and where the basic protocols for the project implementation were established. This workshop was the first opportunity for many project staff to meet their colleagues from other Partners and develop a shared understanding of the aims and objectives of the MESH Project.

3.7 Governance of the MESH Project was planned to operate through three groups: a Steering Group, a Management Group and a JNCC-based Project Team. Furthermore, a legal agreement, known as the Joint Convention, would establish the necessary legal, financial and administrative framework between JNCC and the Partners.

3.8 JNCC has organised and chaired three meetings of the Management Group at which the Project Leaders consider the basic management framework and progress for the project. A draft Joint Convention had been drafted during the application process but further consideration highlighted a number of aspects, particularly in relation to confidentiality, data ownership and intellectual property rights of the products to be generated during the project, which needed further work. JNCC sought legal advice and re-drafted the Joint Convention and after a number of iterations, successfully gained the agreement of all partners.

3.9 JNCC established an internal Project Team during Phase 2 which achieved full capacity in November 2005. The Project Team comprises David Connor (Project Manager - part time), Jon Davies (Project Co-ordinator - full time), Gez Thulbourn (Project Administrator - full time), supported by JNCC's Finance Team, and the technical team comprising Natalie Coltman (Mapping Scientist) and Neil Golding, supported by the marine data scientists and JNCC's Data Services Team. Initial delays in recruitment impacted on the early progress of the project, particularly in establishing the overall project management procedures and providing appropriate guidance to the Partners. Additional staff changes in JNCC have reduced the staff input to the technical aspects of the project, which has adversely affected our progress on the initial work to collate existing data.

Finance

- 3.10 JNCC established the necessary financial and administrative systems, supported with guidance for Project Partners, to meet the reporting requirements of the INTERREG IIIB NWE Secretariat. We successfully submitted our first claim in July 2004 for Phase 1 that covered the preparation costs, and the first full claim covering the technical work undertaken during Phase 2 in January 2005. All partners experienced some initial slowness in implementing the project within their organisations and, therefore, the overall progress was less than anticipated. These delays were reflected in the financial claims where only 61% of the available budget was claimed; JNCC claimed 59% of its budget.

Communication with Stakeholders

- 3.11 Publicising the project to reach key stakeholders is perhaps considered the most important measurable target by the NWE Secretariat. Clearly, for the INTERREG IIIB fund, such publicity demonstrates the value of financial support to Member States in delivering structural benefits to European citizens. The MESH Project will achieve its publicity targets through a combination of printed material, a website and direct contact with Stakeholders. A significant achievement by JNCC in Phase 2 was the launch of the project website, www.searchMESH.net, developed and delivered through JNCC's new website content management system (CMS, see Figure 1). Developing and launching the MESH website proved to be a valuable test for the new CMS ahead of the launch of the main JNCC website in January 2005. Currently during Phase 3, we have further extended the functionality of the website, most importantly by establishing a secure 'Partners area' for the dissemination and archiving of project management material such as meeting papers, financial guidance etc.



Figure 1: The home page from the MESH website (<http://www.searchMESH.net>)

- 3.12 During Phase 2, JNCC gained further exposure for the project through a number of external publications, including an article in the newsletter of the International Council for the Exploration of the Seas (ICES); this article resulted in a query from a similar project in Australia, offering advice and seeking collaboration.
- 3.13 Establishing direct contact with key stakeholders including the country agencies (other than English Nature who are a Project Partner) is underway, but needs further effort. In Phase 3, JNCC has established formal collaboration with the HABMAP project, another INTERREG-funded project, led by the Countryside Council for Wales, and with the INTERREG CHARM (Eastern Channel Habitat Atlas for Marine Resource Management) project. MESH and HABMAP are aiming to share the same protocols and standards so that the outputs of the two projects will be compatible. HABMAP partners have agreed that their project outputs will cover the Southern Irish Sea (in terms of biotope mapping) for the MESH project. In return, MESH will share data it collects for the area that HABMAP covers. Also JNCC has met formally with the Environment Agency and reached other government organisations through a presentation to the Marine Environmental Data Action Group (MEDAG), a sub-group of the Inter-Agency Committee on Marine Science and Technology (IACMST).

- 3.14 The MESH Project is currently refining the definition of the main products, including the mapping website, and it is essential that these products are carefully tailored to the requirements of the end users. Input from key stakeholders will be required over the next six months to finalise the nature of eventual products. The country agencies are considered to be one of the main customers and, therefore, it is essential that potential country agency users input their ideas and requirements at this stage to ensure the final MESH products are best suited to their specific needs. While the MESH team will be consulting country agency staff on this issue, any advice from the Joint Committee on the process of consultation, and on additional benefits (other than those referred to in paragraph 1.2 of the paper) that could potentially accrue from the project if its products were tailored appropriately, would be welcomed. Furthermore, if any Joint Committee members are aware of any other projects within or outside the country agencies that could contribute to the MESH Project, either in terms of providing data or which might make use of the MESH products, this information would again be very welcome.

Technical work

- 3.15 JNCC had already started a programme to collate and disseminate marine mapping data prior to the MESH Project. We had commissioned external consultants to identify relevant mapping studies and secure copies of data where possible. These projects ensured that JNCC was well placed to lead the data collation activities of the MESH Project, and undertake the data collation for UK on behalf of the other UK MESH Partners. In Phase 2, JNCC successfully drafted specifications for a data exchange format and a meta-database, gaining the agreement of all Partners for its implementation. One of the main successes of Phase 2 was the release of a prototype online catalogue of the meta-database on the MESH Project website (see above), offering users the tools to search for datasets on the basis of their geographic location or the type of data.
- 3.16 JNCC started the technical work of collating map data and developing data standards in Phase 2 and have continued through into Phase 3. JNCC staff have developed tools to assist the Partners in converting their data to a standard habitat classification, and convert their information to the project's standard meta-data format. CEFAS (UK) and IFREMER (France) successfully co-ordinated the preparation of a series of review papers on existing mapping protocols. These papers were reviewed at the second Project Workshop in Nottingham in November 2004, attended by representatives from all the Partners, together with invited specialists from other organisations. These review papers are being revised following the workshop and will soon be published on the project website. Project Partners will test these protocols through bespoke field surveys over the next two years before they are finalised at the end of the project. English Nature and JNCC are actively contributing to this testing through their seabed mapping programmes for SAC site selection and monitoring.

- 3.17 Following the success of the marine landscape work under the Irish Sea Pilot Project, a consortium which includes English Nature and JNCC are extending this work to the UK continental shelf: the Broadscale Mapping of the Seas around the UK. JNCC are undertaking the practical work on behalf of the consortium. English Nature will contribute their part of this project to the MESH project. MESH project partners in other countries agreed to try to apply this approach to their territorial waters so the MESH project can present a single marine landscape map for the entire study area. This work on marine landscapes will make an important contribution to the modelling action in the MESH Project that is led by the University of Gent.
- 3.18 JNCC is further contributing its work on developing a software tool for the automated assignment marine survey data to habitat types, to this modelling action. This tool is currently being tested and JNCC hope to release it more widely later in 2005.
- 3.19 Unfortunately, delays in recruitment and other high priority work continue to affect our ability to commit sufficient staff resources to the MESH Project during Phase 3, leading to an estimated 10-20% underspend to date. The Project Team has concentrated on the re-planning of the work programme and budget for the remainder of the project to ameliorate this recent under commitment, and help ensure that the project can deliver its key outputs in a timely manner. Nevertheless, there remains a risk of non-delivery if insufficient resources are committed to accelerate progress in key technical areas during Phases 4 and 5 (2005-6).

4. **Summary**

4.1 *Achievements:*

- i. JNCC and its 11 project partners successfully initiated the implementation of the MESH Project within their organisations. JNCC has recruited staff to the Project Management and Technical Teams to deliver of the project outputs;
- ii. project governance is established with the project holding three management meetings and two technical workshops to date;
- iii. JNCC has successfully compiled two financial claims and progress reports and submitted them in a timely manner to the satisfaction of the NWE Secretariat;
- iv. the MESH project has developed its publicity profile through a combination of written articles, presentations at conferences and meetings with stakeholders. JNCC developed and launched the project website (www.searchMESH.net);
- v. data standards and data exchange formats are agreed and work on collating existing mapping data has progressed. A proto-type data catalogue is available on the MESH website;

- vi. a programme to review existing mapping standards and protocols was successfully concluded, which has resulted in a series of reports and which has given direction for protocol-testing later in the project.

4.2 *Risks*

- i. lower than planned contact with key stakeholders has reduced the profile of the project and may result in the planned outputs not meeting the stakeholder requirement;
- ii. transnational co-operation needs to be further improved to meet the requirements of INTERREG IIIB Programme better;
- iii. the lower than planned input of JNCC staff resources has restricted technical delivery on some key aspects; an enhanced staff contribution over the coming year is planned to recover ground;
- iv. delays in re-recruiting JNCC Marine Data Staff, or reduced allocation of resources in subsequent years, would severely compromise the delivery of the MESH Project. This would leave JNCC exposed to a possible breach of contract with the NWE Secretariat, with the risk of having to return project funds.

5. **Conclusion**

- 5.1 Overall, the MESH project has made a promising start towards meeting its challenging objectives of delivering seabed habitat maps for NW European Seas. A number of problems have slowed progress against the original targets but a re-programming exercise is underway to ensure the project delivers its planned outputs. External interest in the project remains high, due to stakeholder interest either in habitat mapping products or technical mapping issues. Even at this early stage, the advantages of trans-national co-operation for seabed mapping are being realised by the Project Partners for the benefit of marine environmental management.
- 5.2 The Joint Committee is invited to **note progress** and achievements to date on the project, and the challenges which will need to be met, and to **advise** on any preferred process for country agency involvement in the design of the final products, additional benefits that could accrue from the project if these were tailored appropriately, and on any additional projects that could contribute to the MESH Project.