

Euro-limpacs



Project no. **GOCE-CT-2003-505540**

Project acronym: **Euro-limpacs**

Project full name: **Integrated Project to evaluate the Impacts of Global Change on European Freshwater Ecosystems**

Instrument type: **Integrated Project**

Priority name: **Sustainable Development**

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RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Integrated Management of Projects Using the Ecosystem Approach To Understand Science and Society (IMPEATUSS)

Preparation Date: October 2005
Type of instrument: Specific Support Action

Participant no.	Participant organisation name	Participant org. short name
1 (coordinator)	University of Liverpool	UoL
2	University College London	UCL
3	Entera	Entera
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Proposal summary page

Proposal full title: Integrated Management of Projects Using the Ecosystem Approach To Understand Science and Society

Proposal acronym: IMPEATUSS

Topics addressed: (If more than one, indicate their order of importance to the project)
Ecosystems approach (50%), management of integrated projects (50%)

Proposal abstract:

copied from Part A (if not in English, include an English translation)

It is widely recognised that there is a need to provide tools to assist in the integration and dissemination of large and complex multidisciplinary projects. Integration is needed to link different natural sciences and socio-economic disciplines in order to provide a broader perspective on the issues being considered and break down sectoral isolation. There is also a need for better integration between projects and potential end-users and among projects that are undertaking complementary activities. The ecosystem approach, which is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way, can provide the basis of such tools.

The IMPEATUSS project (Integrated Management of Projects Using the ecosystem approach To Understand Science and Society) will develop a methodology, based on the ecosystem approach, for the assessment of integrated projects in order to identify areas where strengthening or creation of new linkages within projects and between projects and the end-users is required. This approach will allow a greater degree of coherence within integrated projects than is possible with existing tools and approaches. The methodology developed will be formalised as a software tool and made available to stakeholders. The project will also develop a model for a web based interface for stakeholders to access the broad range of outputs generated by large projects. Using the Euro-limpacs project as a case study, these new tools will be tested through workshops addressing the priority actions needed to ensure that it conforms to the ecosystem approach framework and the implementation of a web based interface that encompasses the full range of information and outputs being generated. The testing of these tools on the Euro-limpacs project will ensure that the integration and coherence of the project is enhanced beyond that which can be currently achieved with currently available tools.

B.1 Scientific and technological objectives of the project and state of the art

When considering large multi-disciplinary projects there are two main aspects to integration: the integration of the elements of the project itself, in terms of linking scientific areas and disciplines to provide a broader perspective on the issues being considered, and the integration of the project with the wider stakeholder community to ensure that the results of the project are known and understood, and therefore contribute to improving policy or practice.

It is widely recognised that there is a need to provide tools to assist in the integration and dissemination of large and complex multidisciplinary projects, especially the Integrated Projects introduced by the EU in FP6. There is also a need for better integration between projects that are undertaking complementary activities (e.g. Euro-limpacs and Ensembles). The ecosystem approach¹, which is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way, can provide the basis of such tools. This approach has been adopted by the Convention on Biological Diversity as the primary mechanism for delivery of the objectives of the Convention. It has also been endorsed by the European Commission at the World Summit for Sustainable Development and by the Ramsar Convention. There is currently ongoing work to identify how the Water Framework Directive (WFD) relates to the ecosystem approach and how the latter may be used to help implement the Directive². It has been recognised, however, that there is a need for further practical guidance on the implementation of the ecosystem approach.

The overall objectives of this project – Integrated Management of Projects Using the Ecosystem Approach To Understand Science and Society (IMPEATUSS) – is to develop a methodology, based on the ecosystem approach, for the evaluation of integrated projects identify areas where strengthening or creation of new linkages within the project and between the project and to the end-users is required. This approach will allow a greater degree of coherence within Integrated Projects than is currently possible with existing tools and approaches. Using the Euro-limpacs project (Contract No: GOCE-CT-2003-505540) as a case study, this new tool will be tested and the integration and coherence of the project enhanced beyond that which can be currently achieved.

To achieve these objectives the IMPEATUSS will:

- Appraise the Euro-limpacs project, and other integrated projects, against the twelve ecosystem approach principles to distil best practice in project integration, determine which actions in the projects are currently addressing the ecosystem approach and, for Euro-limpacs, where the future integration needs are
- Enhance the integration of the elements of the Euro-limpacs project.
- Enhance the integration of Euro-limpacs with the end-user community through the organisation of targeted workshops.
- Develop a user-friendly web-based Stakeholder Interface that provides an interface to all of the outputs from the Euro-limpacs project as a model for other Integrated Projects to adopt.
- Develop a software expert-system tool for the management and development of integrated projects and research strategies based on the ecosystem approach

B.2 Relevance to the objectives of the Sustainable development, global change and ecosystems Priority

As a demonstration of best practice and a provider of tools for dissemination and project assessment, the IMPEATUSS project is directly contributing to the priorities of the Global Change and Ecosystems Sub-Priority *viz.* the implementation of the work programme, the analysis and dissemination of results and the

¹ Convention on Biological Diversity, Conference of Parties 7, Decision V/6 (UNEP/CBD/COP/7/21)

² Expert Workshop “Implementing the Ecosystem Approach of the CBD – The opportunities provided by the Water Framework Directive of the European Union”. Convened by the German Federal Agency for Nature Conservation at the Isle of Vilm, Germany 28.09.05 to 01.10.05

preparation of future activities. The outputs provided by the IMPEATUSS project will strengthen the scientific basis of the of the programme of activities being carried out by this FP6 Priority, in particular in the provision of tools and management practices for the future orientation of the Sustainable Development Strategy and the Sixth Environment Action Programme. The geographical spread of the consortium that has been established to implement the project, and the connections established with international conventions, will ensure that the scientific and technological capacities needed for Europe to understand and control global change, preserve ecosystems and protect biodiversity will be strengthened. The application of the ecosystem approach will contribute to the development of common strategies at an international level to respond to global change issues. The project proposed here will also support the Euro-limpacs project by adding new elements to the organisation, packaging and dissemination of the results of the project so that it has the greatest possible impact. It will also generate key outputs that will support the development of further projects in this area, in particular a generic tool for project evaluation and the development of research strategies using the ecosystem approach and a model Stakeholder Interface to facilitate access to project outputs.

By promoting greater engagement with the end user community, the project will make a significant contribution to the implementation of the Water Framework Directive as well as the Convention on Biological Diversity and the EU commitments to the WSSD made in Johannesburg. IMPEATUSS will give the outputs from the Euro-limpacs project a greater coherence that will facilitate the end users applying the results in the development of strategies for improving the ecological status of water bodies and will facilitate the further dissemination of the science.

Climate change and loss of biodiversity are identified in the EU strategy for sustainable development as two of the main threats to sustainable development in Europe. Both of these issues are at the core of Euro-limpacs, which is examining the key environmental changes that can be expected in freshwater systems under a warming climate, the extension of which is the impact on biodiversity. The strategy also states that ‘the role of science and research is to help identify the nature of the risks and uncertainties we face, so as to provide a basis for solutions and political decisions.’ It is, therefore, imperative that the science being conducted within Euro-limpacs is expressed in a way that makes it accessible to policy makers. Improving the communication of science to the public is also identified as a key action in order to achieve the ambitions of the strategy. The identification of the nature of the risks and uncertainties we face with climate change is a key aim of the Euro-limpacs project, as is the identification of effective adaptation strategies, in particular through the development of a Decision Support System. The implementation of the proposed project would have clear benefits in supporting and extending the work of the Euro-limpacs project and ensuring its dissemination to the widest possible audience.

In an international context, there are three key areas where the Euro-limpacs project and IMPEATUSS supports the Plan of Implementation for the World Summit on Sustainable Development at Johannesburg, which has been endorsed by the EU: developing strategies for the protection of ecosystems, improving water resource management and the scientific understanding of water and the promotion of integrated water resource development. The Plan states that:

‘..it is necessary to implement strategies which should include targets adopted at the national and, where appropriate, regional levels to protect ecosystems and to achieve integrated management of land, water and living resources..’

The Plan also states that it is necessary to:

‘..promote integrated water resources development and optimize the upstream and downstream benefits therefrom, the development and effective management of water resources across all uses and the protection of water quality and aquatic ecosystems...’

With support from IMPEATUSS, the Euro-limpacs project will be able to extend greatly the ability of end users to implement strategies for the sustainable management of freshwaters and the achievement of good ecological status through improved scientific understanding of catchment management issues in the context of climate change and the dissemination and organisation of the outputs. IMPEATUSS will also allow the evaluation of the integration already achieved within the project through the implementation of cross-cutting themes.

In addition, this proposal responds to a number of the points made in the external review of the Euro-limpacs project, in particular the reviewers comments that there is a need to get the results of this 'ambitious project' out to the widest possible audience.

B.3 Potential impact

The main aims of the project are:

- to develop a methodology and tool, based on the ecosystem approach, for the evaluation of integrated projects with respect to their degree of cross sectoral integration and coherence
- test the methodology against a number of integrated projects and, using the Euro-limpacs project as a case study, apply the methodology in order to make the project more effective through achieving a degree of improved integration, both within the project and between the project and the potential end-users, that is not possible with currently available tools
- provide a model Stakeholder Interface tool for projects to facilitate end-user access to project outputs

Given these principal aims, the issue of dissemination is fundamental to the whole project and the impact of the project and the use of the results will go well beyond the participants in IMPEATUSS. In addition to the targeted and direct dissemination to the end users of the Euro-limpacs project, IMPEATUSS will contribute to the wider development of the ecosystem approach through input to the Convention on Biological Diversity web-based source book on the ecosystem approach.

The IMPEATUSS project will be closely linked to the Euro-limpacs project and, through this link, is networked to other national and international research activities. Part of the proposal process for Euro-limpacs was to review the current status of research in the areas covered by the project, and the researchers involved in the project have continued to take new developments into account through attendance at international conferences and the publication of results in international journals.

The further dissemination of the project will be carried out through a number of routes. Through the implementation of the project, a network of integrated projects will be developed. Periodic updates and the results of IMPEATUSS will be disseminated to the co-ordinators of these projects directly and to participants in these projects through their own partner networks. Many of these projects will be actively involved in the implementation of IMPEATUSS throughout its duration. A project website will also be developed, linked to the Euro-limpacs project website, to engage the wider community of stakeholders. This website will contain a description of IMPEATUSS and the rationale behind the project and will provide a point of access to the project outputs. Those outputs from IMPEATUSS that particularly relate to Euro-limpacs will be disseminated through the Euro-limpacs website, meetings and conferences.

With regard to the value of carrying out the work at a European level, because of the close association between the Integrated projects that will be considered within the IMPEATUSS project and the Water Framework Directive, it will also contribute to greater understanding of the link between the Directive and the ecosystem approach and, in doing so, provide greater policy coherence and assist in the implementation of the Directive

Through the increased effectiveness of projects enabled by the tools and methods to be developed by the IMPEATUSS project, it will also make an important contribution to the Sustainable Development Strategy of the Commission.

Internationally, there is considerable interest in tools for the implementation of the ecosystem approach. Through the development of such tools the IMPEATUSS project will make a significant contribution to the Convention on Biological Diversity, with which the co-ordinator has longstanding links. IMPEATUSS will be disseminated to this international constituency through the Secretariat of the Convention of Biological Diversity. In particular, IMPEATUSS will put forward a proposal to the Secretariat of the CBD to present at the Conference of Parties to the Convention and will contribute to the developing Source Book, which provides case studies and a suite of tools and methods for the application of the ecosystem approach. This will place the FP6 programme at the heart of science and interdisciplinary inputs to this global convention.

B.4 The consortium and project resources

The consortium brings together complementary interdisciplinary strengths from the Euro-limpacs project, combining universities and an SME, with the strong network of a well established technical team in a new member state of the EU.

IMPEATUSS project partners

The University of Liverpool

The Institute for Sustainable Water, Integrated Management and Ecosystem Research (SWIMMER), which is part of the University of Liverpool, will lead the implementation of IMPEATUSS, given:

- the complementarity with the DSS development in the Euro-limpacs project;
- the fact the University of Liverpool is leading the cross-cutting theme on integration within the Euro-limpacs project and;
- the expertise within the Liverpool team on the ecosystem approach³.

SWIMMER is a new interdisciplinary institute focussing on water and sustainable development issues. The SWIMMER project team have previously coordinated a range of EC projects and in doing so have demonstrated the capacity to co-ordinate an initiative such as IMPEATUSS. These previous projects include: Functional Assessment of European Wetland Ecosystems (projects FAEWE I, Contract STEP CT90 – 0084 & II, Contract EV5V-CT95-0060), PROTOWET (Contract ENV4-CT95-0060) extended the work of FAEWE into different wetland types, EVALUWET (Contract EVK1-CT-2000-00070), TECWET (Techniques and Procedures for the Functional Analysis of Wetland Ecosystems) (EVK1-2001-80001), ECOFLOOD (Towards Natural Flood Reduction Strategies) EVK1-2002-00579. SWIMMER are also a lead partner in a recently awarded a LIFE project: SuRCaSE.

University College London

UCL will also have a key role, given their position as project co-ordinator for Euro-limpacs. UCL will be responsible for developing the Stakeholder Interface for IMPEATUSS. UCL have considerable website and database experience as part of the current Euro-limpacs team. As part of their responsibilities as project co-ordinators, an extensive website has been developed to support the Euro-limpacs project.

Entera

Entera will play a leading role regarding focusing and harmonizing the different workshops. Entera (former name ARUM) has longterm experience in user oriented landscape and environmental planning as well as evaluation of EU-funded structural programs. Recently the combination of planning and stakeholder participation through GIS and interactive participation tools is a main field of work.

³ Recent publications include:

Laffoley, D.d'A., Maltby, E., et al. 2004. The Ecosystem Approach : Coherent actions for marine and costal environments. A report to the UK Government. Peterborough, English Nature, 65pp.

Maltby, E., 1999 Some European perspectives of the Ecosystem Approach. In: Korn et al 1999, The Ecosystem Approach: What does it mean for European ecosystems? International Academy for Nature Conservation, Isle of Vilm, Germany. November 26/27, 1998, BFN – Skripten 78, Germany

Entera is an interdisciplinary SME, with scientists from different professions including social science, biology, agriculture, landscape planning and economy. It can draw on experience from more than 200 projects, ranging from local to national levels. Research work includes projects for federal ministries and offices. In the FP5-project EVALUWET (Contract EVK1-CT-2000-00070) entera worked on the stakeholder participation in the Elbe catchment; within Euro-limpacs entera is responsible for the end-user engagement.

Warsaw Agricultural University

The Department of Hydraulic Engineering and Environmental Recultivation which is part of the Warsaw Agricultural University (WAU) will take part in promoting the internal and external integration of the Euro-limpacs project. The Department's research focuses on: hydrology of agricultural watersheds, water resources management, river engineering, conservation and restoration of wetlands. The Department has gained extensive experience in integrating different types of research and education activities having been involved in the EU TEMPUS – PHARE Programme. In the period 1991-2005 the Department participated in 11 different TEMPUS Projects, and acted as a coordinating institution for some. Data processing and communication between and outside the research community was an important part of the EU projects including:

- 5th EU Framework Programme Project “Data assimilation within a unifying modelling framework for improved river basin water resources management - DAUFIN” (2000-2001),
- 5th EU Framework Programme Project “Centre of Excellence in Wetland Hydrology – WETHYDRO” (2003-2005),
- 5th EU Framework Programme Project “Towards Natural Flood Reduction Strategies – ECOFLOOD” (2003-2005).

In addition to the partners identified above, as the project develops and the specific needs for integration are identified the most appropriate partners to address those needs from within the current Euro-limpacs consortium will be involved as a subcontractor. Alternatively, if an issue is identified where expertise is needed from outside the Euro-limpacs consortium, project funds will be used to support that expertise.

The resources required to carry out the project have been considered carefully. The resources are needed predominantly to provide personnel resources and fund the participation of the planned workshops. The personnel resources required to carry out the project are detailed in Table 2 and will provide approximately four full time equivalent staff for the duration of the project. These personnel resources have been fully costed in to the proposed budget. In the view of the IMPEATUSS consortium, this level of project effort is necessary ensure that the outputs are delivered effectively and efficiently but will also ensure cost-effective delivery.

Partner	Personnel Resources
University of Liverpool	0.05 Full Time Equivalent (FTE) Project Director
	0.72 FTE research associate (project manager)
	0.92 FT Software engineer
	0.2 FTE programmer
UCL	0.60 FTE web designer/programmer
	0.33 FTE research associate
Entera	0.05 FTE Project manager
	0.43 FTE Scientist
WAU	0.70 FTE

Table 1 Summary of personnel resources required for IMPEATUSS

In order to encourage participation of suitable participants within the workshops, the IMPEATUSS project will fund travel and subsistence expenses for the participants at the eight workshops planned over the duration of the project. This has been budgeted for on the basis of 20 participants per workshop up to approximately €500 per participant. Total workshop organisation costs will be approximately €100,000.

<i>Other significant resource categories</i>	
Workshop organisation	approximately €100,000 1 workshop in WP1 and 7 in WP2
Travel and subsistence for project partners	approximately €42,000
Fund for external expertise	€21,000

Table 2 Summary of resources required for IMPEATUSS project

B.4.1 Sub-contracting:

It is foreseen that there will be considerable benefit in engaging experts from outside the IMPEATUSS consortium who can bring different expertise to the project. These experts will be engaged to assist with the development of the workshop agendas in Workpackage 2, based on a brief from the project consultative group. It is envisaged that in many cases the most appropriate external experts will be from within the Euro-limpacs consortium but where necessary the sub-contracting funds will be used to engage expertise from outside IMPEATUSS or Euro-limpacs.

While it is known that the subject of these workshops will be organised around seven 'areas of coherence' (see section B.6), it cannot be determined in advance what the agendas of these workshops will be given that the analysis of the project against the ecosystem approach and the identification of priorities for actions is part of Workpackage 1 of the project. Subcontracting is therefore the best approach for assisting with the technical content and agendas for the workshops as it is not known whether the specific expertise required exists within the IMPEATUSS consortium. It is envisaged that the amount sub-contracted will be €3000 for each of the seven workshops planned for Workpackage 2.

B.4.2 Other countries:

No partners in the project consortium are based outside the EU or Associated states.

B.5 Project management

The project will be overseen by a project consultative group composed of members of the Euro-limpacs coordination team and executive committee. Representatives of appropriate external organisations will also be invited to participate in the consultative group (e.g. Convention on Biological Diversity, European Environment Agency and UK Joint Nature Conservation Committee, who have supported technically the development of the CBD Source Book). The consultative group will principally work electronically but will hold yearly meetings to coincide with the Euro-limpacs steering group meetings. The consultative group will agree the priorities for action to be pursued by workshops in workpackage 2.

The University of Liverpool will manage the running of the project, headed by a project co-coordinator. Reporting to the project co-ordinator (UoL) will be the UoL and UCL project managers.

The UoL project manager will be responsible for overseeing the financial and administrative management of the project.

The UCL and UoL project managers, in collaboration with the project co-ordinator, will be responsible for ensuring the production of deliverables in the tasks and workpackages they are leading as specified above.

The project managers will also be jointly responsible for interim and yearly management reports. The management reports to be produced are as follows:

- An annual progress will be produced in month 12
- An interim management progress report will be produced in month 18
- A Year 2 annual progress report will be produced in month 24
- The Year 3 interim report will be produced in month 30
- The final management report will be produced in month 36

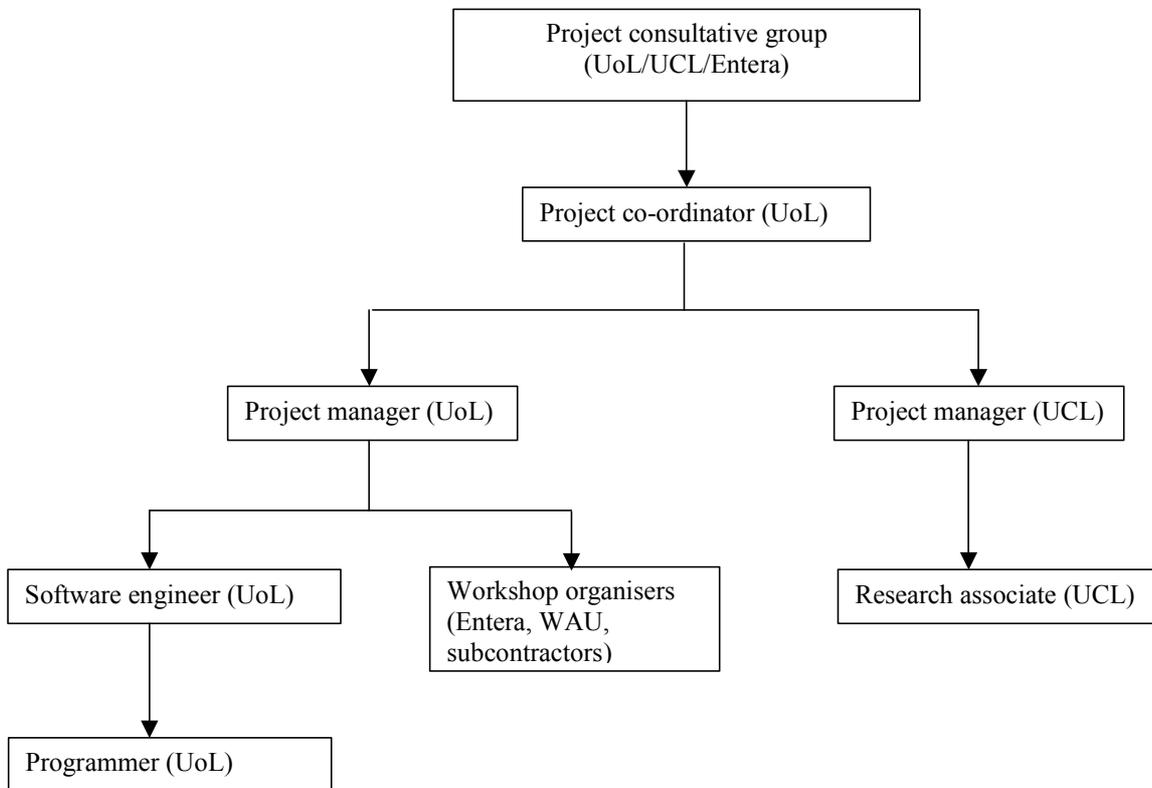


Figure 1 Project management structure

The project duration will be 30 months as this will ensure that IMPEATUSS extends to the completion date for Euro-limpacs so that the Stakeholder Interface developed within Workpackage 3 will be able to incorporate all of the outputs from Euro-limpacs.

The principal areas where intellectual property will be generated within the project are the development of the Stakeholder Interface and the generic tool for project management. The intellectual property rights for these components of the project will rest with the principal partner involved in its development. In the case of the Stakeholder Interface this will be UCL and in the case of the generic tool this will be UoL.

B.6 Detailed Implementation plan

Introduction

The overall objectives of IMPEATUSS are to develop a methodology, based on the ecosystem approach, for the evaluation of integrated projects and, using the Euro-limpacs project as a case study, identify areas where strengthening of linkages within the project and between the project and the end-users is required and address those needs. IMPEATUSS will also develop, using Euro-limpacs as a case study, a model interface for providing access for stakeholders to the numerous and wide-ranging outputs from integrated projects.

Euro-limpacs is an integrated project to evaluate the impacts of global change and its interactions with other drivers of change on European freshwater systems encompassing streams, lakes and wetlands. It considers the direct effects of Climate Change in tandem with changes driven by hydromorphological and land use change, eutrophication, acidification and deposition of toxic substances. A new system of ecological indicators for monitoring freshwater ecosystem health is being developed, together with new methods for defining reference conditions and restoration strategies. Euro-limpacs will also develop other practical tools for management based including a decision support system to facilitate catchment management. The methods used to assess the impacts of global change are wide ranging and include mesocosm and other experiments, modelling, spatial surveys, statistical analysis of long-term datasets, palaeolimnology and monitoring. Work and data analyses are being undertaken for hundreds of sites from lakes in Northern Finland to Mediterranean streams and from Greek wetlands to Canadian lakes. This work is organised into 10 work packages which are divided into a total of 88 tasks. One hundred and 46 deliverables are planned over the course of the first 30 months of the project including reports, databases and software packages. The Euro-limpacs Bibliography indicates 93 manuscripts have been published or have been submitted and planning is already underway to produce several dedicated special issues.

The final goal of integrated projects, such as Euro-limpacs, is to enable society to better understand environmental issues in a more holistic way that is useful for informed decision making. It is now necessary to develop effective overarching demonstration tools for the integration of scientific findings, societal priorities and economics within a single methodological framework, such as the ecosystem approach. Such tools will assist in bridging the gap between the research community and the water and environmental policies of the European Community. They will assist in the sustainable management of the Community natural resources in the face of anticipated climate change.

Within IMPEATUSS it is proposed that the ecosystem approach will be used as the framework for a new tool that will contribute to the integration of large interdisciplinary projects. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way and, as such, it forms a methodological framework for implementing projects. The ecosystem approach is underpinned by twelve principles. In summary, these principles are:

1. The objectives of management of land, water and living resources are a matter of societal choice.
2. Management should be decentralised to the lowest appropriate level.
3. Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.
4. Recognising potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem-management programme should:
 - a) Reduce those market distortions that adversely affect biological diversity;
 - b) Align incentives to promote biodiversity conservation and sustainable use;
 - c) Internalise costs and benefits in the given ecosystem to the extent feasible.
5. Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.
6. Ecosystems must be managed within the limits of their functioning.
7. The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
8. Recognising the varying temporal scales and lag-effects that characterise ecosystem processes, objectives for ecosystem management should be set for the long term.
9. Management must recognise that change is inevitable.
10. The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.
11. The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.
12. The ecosystem approach should involve all relevant sectors of society and scientific disciplines.

The ecosystem approach has been endorsed by the Convention on Biological Diversity (CBD) as the primary framework for the implementation of the Convention. It has also been endorsed by the European Commission at the World Summit on Sustainable Development and by the Ramsar Convention. There is currently ongoing work to see how the ecosystem approach relates to the WFD. However, there is still a

considerable need to mainstream the ecosystem approach in different sectoral activities involved in the use of natural resources. The ecosystem approach can also help to challenge the natural science community to widen their perspective on how detailed science fits into the overarching policy framework.

Figure 2 below shows a conceptual representation of how a balance between the three aims of the CBD and ecosystem approach, sustainable use, conservation and equitable sharing of the benefits, are achieved through a number of key actions.

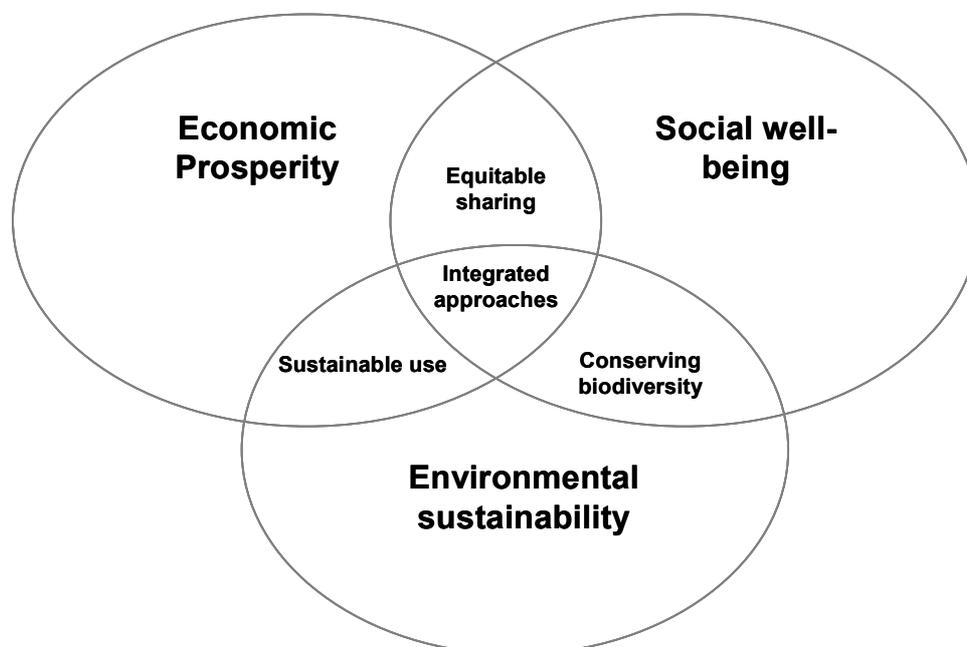


Figure 2 Structure and outcomes of the ecosystem approach

It should be remembered that the principles of the ecosystem approach form a methodological framework rather than a methodology in itself. Recent work has suggested that methodologies developed around the ecosystem approach should pay particular regard to the coherence of the actions taken to translate it into reality. There are seven specific areas of coherence which will be explored.

1. Environmental coherence
2. Economic coherence
3. Social coherence
4. Spatial coherence
5. Temporal coherence
6. Scientific coherence
7. Institutional coherence

The Euro-limpacs project has achieved considerable success in achieving integration of the elements of the project but the degree of integration that can be achieved in integrated projects is limited because of a lack of tools to achieve greater coherence. Experience of carrying out Euro-limpacs has shown that more effective integration and dissemination could be achieved if suitable tools were available.

The Euro-limpacs project provides an unparalleled opportunity to use and test the added value that can be provided by implementing the ecosystem approach. Though the identification of integration needs, the ecosystem approach provides an appropriate framework for the improved integration of large interdisciplinary such as Euro-limpacs as it is based on the application of fundamental ecological knowledge to deal with major issues, such as those Euro-limpacs is addressing. For example, Principle 6 refers to the management of ecosystems within the limits of their functioning - Euro-limpacs is helping to define where those limits are in the context of climate change. Principle 8 points out that ecosystems operate at varying temporal scales and have inherent lag effects – the Euro-limpacs project is helping to define what the key temporal scales are for catchments through, for example, the exploration of paleodata and other modelling activities, and the investigation of lag effects, in particular for nutrient dynamics.

Workplan

The IMPEATUSS will be organised around five work packages that are detailed below. These workpackages will be as follows:

- Work package 1 – Distilling best practice to achieve project integration
- Work package 2 – Promoting internal and external integration of Euro-limpacs
- Work package 3 – Euro-limpacs Stakeholder Interface
- Work package 4 – Generic tool for management of integrated projects and development of research strategies
- Work package 5 – Project management

Work package 1 – Distilling best practice to achieve project integration

Task 1 – Appraisal of Integrated Projects (UoL, UCL Entera, WAU)

Task 1.1 Workshop for Integrated Projects(UoL)

The main opening activity within the IMPEATUSS project will be to review and distil best practice on integration from large multi-disciplinary projects funded under Framework 6. This will be done through the convening of a workshop with approximately 20 participants from a range of appropriate projects. A preliminary analysis has been undertaken to identify projects from FP5 and FP6 that would provide good case studies⁴. The workshop will provide an opportunity to share best practice, allow the IMPEATUSS project to gather information on the structure of other integrated projects and allow discussion of the development of the evaluation tool for Workpackage 4.

The University of Liverpool will host the workshop.

Task 1.2 Questionnaire and telephone interviews (UoL)

The workshop in Task 1.1 will be supplemented by a questionnaire and telephone interviews with the coordinators of a number of additional projects in order to broaden the scope of the review.

Task 1.3 Appraisal of projects(UoL, UCL, Entera, WAU)

The information gathered from the workshop, questionnaire and interviews will allow the projects to be appraised against the ecosystem approach so that best practice across the range of projects can be distilled. For each of the ecosystem approach principles the entire activity of the projects will be reviewed in detail to determine which activities meet the requirements of the principle.

The table below shows an outline of how the evaluation of the projects against the ecosystem approach principles might be conducted, using Euro-limpacs project as an example.

⁴ Projects may include: Harmoni-CA - Harmonised Modelling Tools for Integrated Basin Management, ENSEMBLES, Rebecca, Eugris, Cycleau, Aquaterra, NeWater, SCOUT-O3, Alter-Net, Ecoflood, Carboeurope, Star, Uroharp, Bioman, floodsite, BMW, HarmonIT, Catchmod Cluster Projects

Ecosystem Approach Principles	Work Packages / Tasks addressing the principle
1. Objectives are societal choice	WP9.3 Stakeholder engagement
2. Decentralised management	WP9.4 Development of GIS based planning tools (at catchment scale which is considered as the lowest appropriate level for catchment management)
3. Indirect effects	No consideration on other ecosystems, but their effects (e.g.. land ecosystem) on freshwater system
4. Economic context	WP9.1 Social-economic pressures and global change WP9.4.2 Development of socio-economic valuation tools and integration into the DSS WP6.4 Integration of component models and socio-economics
5. Ecosystem structure and function	WP7.3 Indicators of ecosystem health WP1.2.2 Impacts on ecological functioning as a response to changing discharge regimes
6. Manage within limits of ecosystem functioning	WP8 Reference conditions and restoration strategies
7. Spatial and temporal scales	Long-term, catchment scale Cross cutting themes
8. Objectives for long-term	All the WPs
9. Recognising change is inevitable	WP8.3 Evaluation of current restoration strategies and determination of the extent that climate change may influence recovery
10. Integration and balance between conservation and use	WP8 Reference conditions and restoration strategies WP9.1 Socio-economic pressures and global change
11. All relevant forms of information	Integration of all the WPs
12. Relevant sectors of science and society	Integration of all the WPs

Table 3 Outline evaluation of Euro-limpacs against the ecosystem approach principles

Task 2 – Euro-limpacs case study (UCL, UoL, Entera, WAU)

Task 2.1 Identification of priorities for action under the areas of coherence

Once the broad multi-project evaluation in Task 1 has taken place the IMPEATUSS project will focus on how particular elements within the Euro-limpacs project are contributing to each of the ecosystem approach principles and how best practice is implemented. Using the Euro-limpacs project as a case-study, this Task will extend this analysis to the identification of the areas where there are integration needs in the project, both where integration is needed between the different elements of the project and where there is a need for further integration with the potential end-user community. For example, testing the project against Principle 1⁵ may lead to recommendations for stronger end user engagement while the application of Principle 3⁶ may lead to a recommendation for a cross-cutting theme workshop on ecosystem connectivity.

The analysis will identify priorities for action under each of the areas of coherence given earlier that will address the ecosystem approach principles not currently being implemented in the project. These areas of coherence will form the themes for workshops to be organised in Workpackage 2 to address these priorities. This analysis will be carried out as a think-tank of IMPEATUSS and Euro-limpacs project members and invited representatives of external groups (e.g. CBD, JNCC). This think-tank will also identify any external expertise that is necessary to assist with the development of the workpackage agendas and technical content. These external experts will be engaged using the sub-contracting funds indicated above (€3000 for each of the seven workshops).

⁵ The objectives of management of land, water and living resources are a matter of societal choice.

⁶ Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.

Given the in depth understanding of the Euro-limpacs project UCL will lead on this Task with other partners providing input on the ecosystem approach.

Work package 2 - Promoting internal and external integration of Euro-limpacs

Overview

The results from Workpackage 1 will provide a better understanding of the areas within the Euro-limpacs project where the project meets the requirements of the ecosystem approach and where the project meets the best practice integration techniques used across the range of integrated projects assessed. It will also lead to the identification of priorities for action under each of the areas of coherence where further action is needed.

Within this workpackage, each of the areas of coherence (environmental, economic, social, spatial, temporal, scientific, and institutional) will form the themes for targeted workshops to address the identified priorities for integration. For example, if Workpackage 1 shows that the Euro-limpacs project has identified a key process that will be impacted by climate change and it will have important implications for economic activity, then those implications will be explored in the workshop under the theme of 'Economic Coherence'. The development of the theme of scientific coherence may, for example, enhance the understanding of the connectivity between lakes, rivers and wetlands, which would be a key component in developing effective strategies for improving ecological status. A report of each of these workshops will be produced and disseminated to the project partnership and wider stakeholders.

The organisation of the workshops will be carried out by IMPEATUSS partners. Where determined to be necessary from Workpackage 1 Task 2.1, the organisation of the technical content of the workshops will be assisted by external expertise. This expertise may be necessary as it is not possible to determine in advance what the specific topics of these workshops will be.

For each of the workshops, specific and appropriate rapporteurs will be identified who, in collaboration with the workshop organiser and Workpackage leader, will compile the outputs from the workshop and produced the workshop report.

To facilitate participation, invited participants will have travel and accommodation expenses funded from the project budget. Each workshop will have approximately 20 participants.

Entera will lead the workpackage and manage the organisation of workshops and the subcontracting of the organisation of the technical content of the workshops and the report writing. In order to do this Entera will develop guidelines for running the workshops and producing the workshop reports, which the project partners carrying out the workshops will follow. Entera will also organise administrative issues with the subcontractors, attend workshops, collect workshop results/reports and align them with Euro-limpacs workshop results.

Entera and UoL will each organise and host one of the seven workshops with WAU having responsibility for the organisation of and hosting of the remaining 5 workshops. The majority of the workshop organisation has been allocated to WAU as they have considerable expertise as the co-ordinators of the wetHYDRO Centre of Excellence in Wetland Hydrology (Contract n°: EVK1-CT-2002-80011 WETHYDRO). As a location, Warsaw also offers a relatively low cost alternative when compared with the locations of the other IMPEATUSS partners and it provides an opportunity to engage recent accession countries more easily. The hosting and organisation of the workshops will comprise the practical management of the workshops, organising venues, delegate management, accommodation, food and other requirements.

Following completion of the workshops Entera will identify interdependences/congruences/contradictions between the results from the different workshops and all Workpackage participants will draw conclusions/give recommendations from the workshop results. The review and editing of these reports will be jointly undertaken with UoL.

The workpackage will be split into seven Tasks following the seven areas of coherence, with each covering one workshop and associated report writing:

- Task 1 – environmental coherence priority actions
- Task 2 – economic coherence priority actions
- Task 3 – social coherence priority actions
- Task 4 – spatial coherence priority actions
- Task 5 – temporal coherence priority actions
- Task 6 – scientific coherence priority actions
- Task 7 – institutional coherence priority actions

Work package 3 - Euro-limpacs Stakeholder Interface

Overview

An important part of applying the ecosystem approach to Euro-limpacs will be to develop a means of disseminating output to the full range of stakeholders and end users in a user friendly and coherent way. This will promote the transfer and take-up of the results of the project. The ecosystem approach recognises the need to engage stakeholders and develop effective overarching demonstration tools for the integration of scientific findings, societal priorities and economics within a single methodological framework. The wide ranging scope of, and nature of, output generated by Euro-limpacs will make it difficult to provide a comprehensive and integrated means for end users and stakeholders to gain access to, and make use of, the output. Within Workpackage 3 a Web based ‘Stakeholder Interface’ will be developed which will encompass the full range of information / output being generated from Euro-limpacs. This will provide a very useful tool for environment agencies, conservation bodies, environmental consultants, local stakeholders, agencies charged with implementing water quality directives, government bodies, EU organisations and the wider scientific community. It will also enable all Project output to be consolidated in a way that provides a window on the project from outside.

Task 1 – Creation of a relational database structure linked to the Euro-limpacs website (UCL)

The IMPEATUSS ‘Stakeholder Interface’ will take the form of a dynamic relational database cross referencing all aspects of the Project (Stressor types, ecosystem types, approaches, databases, Policy relevance etc). This would be progressively updated as more results were generated during the course of the Euro-limpacs. Access to the Stakeholder Interface would be through a user friendly, menu driven Web based front-end (with search facility) linked to the Project Web page and existing project databases (e.g. Project bibliography, various biological indicators databases, palaeolimnological database, reference condition and restoration databases. Users will be able to navigate across the project outputs querying outputs relating to specific sites, stressor and / or ecosystem types, methodological approaches and policy perspectives. This will be developed using MYSQL and PHP.

For example, a user interested in work Euro-limpacs has undertaken on the effects of sulphur deposition can build a query based on methods used to assess this or tap into databases where such studies have been undertaken. If a modelling approach is of interest the user can identify which models have been used and go on to see where these models have been applied. It will be possible then to link to manuscripts or reports describing the results of these or persons responsible who can provide further information. The ‘Stakeholder Interface’ front end will be designed in consultation with end users.

Task 2 – Design of a user-friendly Web based front end linked to the Euro-limpacs Website (UCL, UoL)

To link with the data structure designed in Task 1, a user-friendly interface will be constructed that links with the current Euro-limpacs website. This interface will provide an easy to use and intuitive means for users to access the diverse range of outputs being created by the Euro-limpacs project.

Task 3 – Population of the database (UCL)

When the data structure and interface have been completed the database will be populated with the outputs from the Euro-limpacs project. This Task will be split into 10 sub-tasks that relate to each of the nine Euro-limpacs Workpackages plus the outputs from the cross-cutting themes. These sub-tasks will be:

- Task 3.1 – Population of database – Euro-limpacs WP1 output
- Task 3.2 – Population of database – Euro-limpacs WP2 output
- Task 3.3 – Population of database – Euro-limpacs WP3 output
- Task 3.4 – Population of database – Euro-limpacs WP4 output
- Task 3.5 – Population of database – Euro-limpacs WP5 output
- Task 3.6 – Population of database – Euro-limpacs WP6 output
- Task 3.7 – Population of database – Euro-limpacs WP7 output
- Task 3.8 – Population of database – Euro-limpacs WP8 output
- Task 3.9 – Population of database – Euro-limpacs WP9 output
- Task 3.10 – Population of database – Euro-limpacs cross cutting theme output

Task 4 – Outreach – links with other projects, stakeholders and launch of the website (UCL, UoL)

A key component of the development of the Stakeholder Interface will be its dissemination to the widest possible audience. As part of this it will also be important to ensure that the scope of the interface reflects the pivotal role played by Euro-limpacs in addressing some of the key issues related to climate change impacts on freshwaters, the strengths of the links between Euro-limpacs and related EU and national programmes across Europe (and beyond) and its relevance to policy and management practice. Additionally, it will be important to ensure that the design of the Interface meets the needs of the end-user community in terms of access, ease of use and relevance of material available. Task 4 will focus on ensuring that links with other Projects and stakeholders are maintained throughout the development of the interface. End user Workshops (held as part of ongoing Euro-limpacs Project activities) will provide the fora for stakeholder input into the design and content of the Interface during the course of the Project. The end user interface will also provide links with other related work being undertaken across Europe and these will be developed in discussion with Project Managers during meetings held as under Task 1. Those responsible for management and implementing policy will also be involved to ensure that the design of the Interface includes explicit reference to the policy and management relevance of all Euro-limpacs output. Once completed, the Interface will be launched at appropriate conferences and national meetings across Europe.

Work package 4 - Generic tool for management of integrated projects

Overview

In addition to making the Euro-limpacs project itself more effective through the identification and addressing of priority integration actions and end user engagement, IMPEATUSS will develop a generic tool for the management and development of other integrated projects and research strategies with a water theme. This tool will be based on the ecosystem approach and will provide specific recommendations for the implementation of integrated projects. This will, in effect, capture the experience from IMPEATUSS itself rather than the Euro-limpacs project and make it available to other integrated research projects to help with their design and management. In effect, this tool will formalise and generalise the process that will be undertaken in Workpackages 1 and 2 and make the process available to a wider audience.

Users of the tool will be guided through each of the principles and will be asked a series of pertinent questions about their project and guided to appropriate tools, methods or information resources for implementing the principle. In this way the tool can directly contribute to the Sourcebook being developed by the Convention on Biological Diversity, which gives an indication of types of tools and approaches which can be used to meet the ecosystem approach principles. The IMPEATUSS project tool will provide an interactive guide to a subset of these tools that are appropriate for the particular types of projects being considered here, plus others not included in the CBD sourcebook. The aim of this process is to ensure that managers of integrated projects take into account the range of issues that successful integrated projects should consider and to aid users in the interpretation of the ecosystem approach principles. For example,

Principle 4 advises that ecosystems should be managed in an economic context. For this principle the tool would recommend the types of economic issues that need to be considered (CAP, crop prices etc.) and would suggest appropriate tools for economic impact assessment. It would also, based on information provided by the user on the type of project being implemented, require the user to answer questions about which stakeholder groups would potentially benefit and which would potentially lose if the outputs from the project were to influence policy.

The tool will also provide a database offering information on the suites of models and methodologies that could be applied to successfully implement the ecosystem approach. This source book will also be published in hard copy.

Task 1 – Development the expert system (UoL)

Task 1 will involve the analysis of the process undertaken in Workpackage 1, which tests integrated projects against the ecosystem approach, and Workpackage 2, which implements the ecosystem approach within the Euro-limpacs project, to determine what the essential elements are in the application of the ecosystem approach to integrated projects. These essential elements will be formalised as an expert system so that users can be guided through the process of assessing their project against the ecosystem approach. Within Task 1, the appropriate tools and models that can be used to apply the ecosystem approach in the context of integrated projects will also be identified.

Task 2 – Programming the tool (UoL)

Once the expert system has been structured and the tools and models have been identified the system will be programmed as a software tool. This tool will be distributed through the Euro-limpacs website and also in CD format.

Work package 5 - Project management

Overview

The project will be overseen by a project consultative group composed of members of the Euro-limpacs co-ordination team and executive committee. Representatives of appropriate external organisations will also be invited to participate in the consultative group (e.g. Convention on Biological Diversity, JNCC, European Environment Agency). The consultative group will principally work electronically but will hold yearly meetings to coincide with the Euro-limpacs steering group meetings. The consultative group will agree the priorities for action to be pursued by workshops in Workpackage 2.

The University of Liverpool will manage the running of the project, headed by a project co-coordinator. Reporting to the project co-ordinator (UoL) will be the UoL and UCL project managers. The UoL project manager will be responsible for overseeing the administrative and financial management of the project and the dissemination of outputs. As part of the dissemination strategy outlined above a simple website will be produced that links to the Euro-limpacs website and provides information on the project, contact details and access to the project outputs.

The UCL and UoL project managers, in collaboration with the project co-ordinator, will be responsible for ensuring the production of deliverables in the tasks and workpackages they are leading as specified above. The project managers will also be jointly responsible for interim and yearly management reports. The management reports to be produced are as follows:

- An annual progress will be produced in month 12
- An interim management progress report will be produced in month 18
- A Year 2 annual progress report will be produced in month 24
- The final management report will be produced in month 30

Figure 3 shows a GANTT chart which illustrates the workpackage activity. Figure 4 shows the relationship between the Workpackages in the form of a Pert diagram.

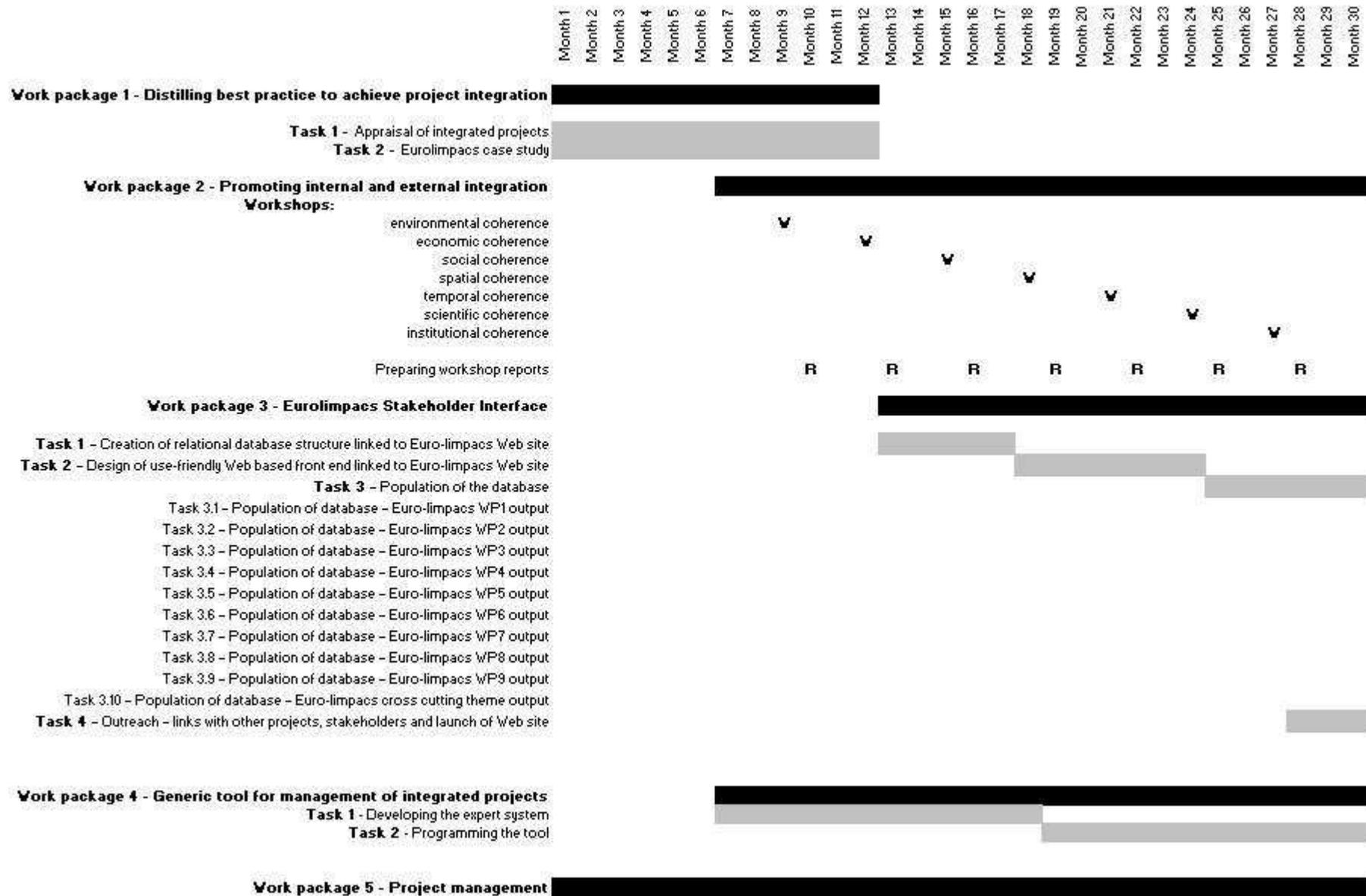


Figure 3 GANTT chart showing scheduling of workpackage activity (W = Workshop, R = Report)

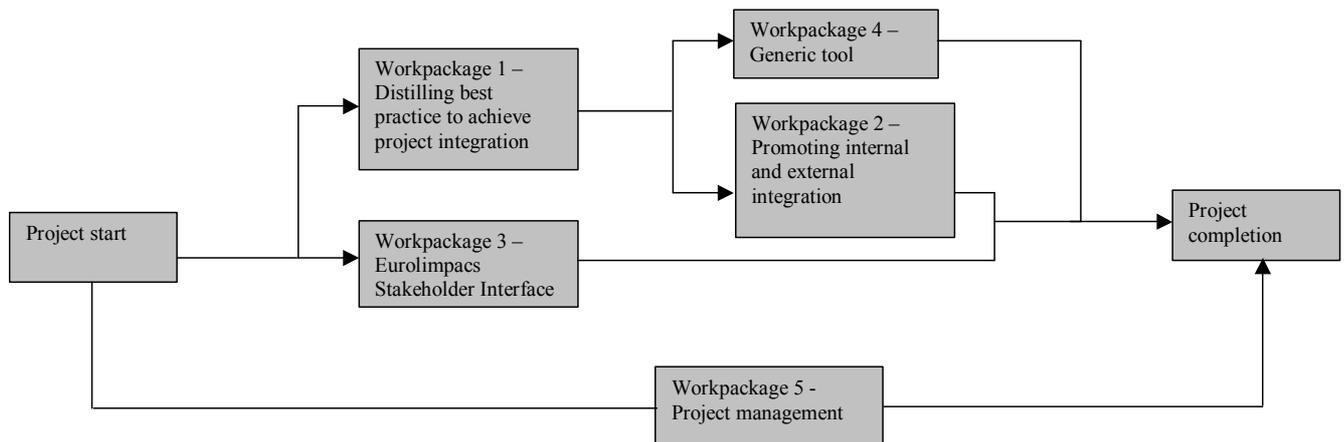


Figure 4. Pert diagram showing relationship between the IMPEATUSS project workpackages

B.7 Other issues

B.7.1 Ethical issues:

No ethical issues with the subject of the proposal have been identified.

B.7.2 Gender issues:

No gender issues with the subject of the proposal have been identified.

B.7.3 Policy issues:

As indicated, the project is highly significant in relation to EU policy in the fields of water, sustainable development, climate change and biodiversity. It will contribute to the enhancement of Europe's knowledge based economic development, increased competitiveness and wealth creation, especially through the more effective management and use of natural resources in a changing climate.

Dissemination is a key element of this proposal and the project consortium are enthusiastic to engage with actors beyond the research. The overall aim of the project is to make the research being carried out within integrated projects more effective at influencing policy and practice. To this end, the project consortium are very willing to undertake any actions that may be needed to explore the wider societal implications of the proposed work.

SSA Project Effort Form**Full duration of project**

(insert person-months for activities in which participants are involved)

Project acronym - IMPEATUSS

	UoL	UCL	Entera	WAU			TOTAL PARTICIPANTS
Support activities							
WP1 Distilling best practice to achieve project integration	6.6	3	1.5	1			12.1
WP2 Promoting internal and external integration of Euro-limpacs	1.4	3	12	20			36.4
WP3 Euro-limpacs Stakeholder Interface	0.5	20	0	0			20.5
WP4 Generic tool for management of integrated projects	41.1	0	0	0			41.1
Total Support activities	49.6	26	13.5	21			110.1
Consortium management activities							
WP5 Project management	6.9	2	0.5	0			9.4
Total consortium management	6.9	2	0.5	0			9.4
TOTAL ACTIVITIES	56.5	28	14	21			119.5

Workpackage list (full duration of project)

Work-package No ⁷	Workpackage title	Lead contractor No ⁸	Person-months ⁹	Start month ¹⁰	End month ¹¹	Deliverable No ¹²
1	Distilling best practice to achieve project integration	UoL	12.1	1	6	1, 2
2	Promoting internal and external integration of Euro-limpacs	Entera	36.4	7	30	3, 5, 6, 8, 9, 11, 13
3	Euro-limpacs Stakeholder Interface	UCL	20.5	1	30	12
4	Generic tool for development and management of integrated projects	UoL	41.1	7	30	14, 15, 16
5	Project management	UoL	9.4	1	30	4, 7, 10, 17
	TOTAL		119.5			

⁷ Workpackage number: WP 1 – WP n.

⁸ Number of the contractor leading the work in this workpackage.

⁹ The total number of person-months allocated to each workpackage.

¹⁰ Relative start date for the work in the specific workpackages, month 0 marking the start of the project, and all other start dates being relative to this start date.

¹¹ Relative end date, month 0 marking the start of the project, and all ends dates being relative to this start date.

¹² Deliverable number: Number for the deliverable(s)/result(s) mentioned in the workpackage: D1 - Dn.

Deliverables list (full duration of project)

Deliverable No ¹³	Deliverable title	Delivery date ¹⁴	Nature ¹⁵	Dissemination level ¹⁶
1	Analytical report evaluating a range of integrated projects against the ecosystem approach principles	6	R	PU
2	A case study report for the Euro-limpacs project identifying priorities for action to enhance integration	6	R	PP
3	Environmental coherence workshop and report	10	R	PU
4	Annual progress report 30	12	R	RE
5	Economic coherence workshop and report	13	R	PU
6	Social coherence workshop and report	16	R	PU
7	An interim management progress report	18	R	RE
8	Spatial coherence workshop and report	19	R	PU
9	Temporal coherence workshop and report	22	R	PU
10	Year 2 annual progress report	24	R	RE
11	Scientific coherence workshop and report	25	R	PU
12	Web-enabled Stakeholder Interface providing an interface to the suite of outputs generated by the Euro-limpacs project	27	O	PU
13	Institutional coherence workshop and report	28	R	PU

¹³ Deliverable numbers in order of delivery dates: D1 – Dn

¹⁴ Month in which the deliverables will be available. Month 0 marking the start of the project, and all delivery dates being relative to this start date.

¹⁵ Please indicate the nature of the deliverable using one of the following codes:

- R** = Report
- P** = Prototype
- D** = Demonstrator
- O** = Other

¹⁶ Please indicate the dissemination level using one of the following codes:

- PU** = Public
- PP** = Restricted to other programme participants (including the Commission Services).
- RE** = Restricted to a group specified by the consortium (including the Commission Services).
- CO** = Confidential, only for members of the consortium (including the Commission Services).

14	Software tool for the design and management of integrated projects using the ecosystem approach	30	O	PU
15	Database of tools and models available to implement the ecosystem approach in the context of integrated catchment management	30	O	PU
16	Publication detailing tools and models available for implementing the ecosystem approach in a catchment management context	30	R	PU
17	Final management report	30	R	RE

Workpackage description (full duration of project)

Workpackage number	1	Start date or starting event:						
Workpackage title Distilling best practice to achieve project integration								
Participant id	UoL	UCL	Entera	WAU				
Person-months per participant:	6.6	3	1.5	1				

Objectives

To appraise the Euro-limpacs project and a range of other integrated projects against the twelve ecosystem approach principles in order to distil best practice in project integration and determine which actions are currently addressing the ecosystem approach. With the Euro-limpacs project as a case study, this evaluation will be used to identify a series of priority actions to be taken forward in Workpackage 2 to address the integration needs.

Description of work

Task 1 – Appraisal of Integrated Projects (UoL, UCL, Entera, WAU)

Task 1.1 – workshop for Integrated Projects to share best practice, gather information on structure and practices of other integrated projects and discussion of the development of the evaluation tool for Workpackage 4.

Task 1.2 – questionnaire and telephone interviews

Task 1.3 – appraisal of projects, including Euro-limpacs, against the ecosystem approach

Task 2 – Euro-limpacs case study (UCL, UoL, Entera, WAU)

Task 2.1 – identification of priorities for action under the areas of coherence

Deliverables

- Analytical report evaluating a range of integrated projects against the ecosystem approach principles (Month 8)
- A case study report for the Euro-limpacs project identifying priorities for action to enhance integration (Month 8)

Milestones¹⁷ and expected result

- Completion of the evaluation of the integrated projects against the ecosystem approach principles (Month 6)
- Completion of the case study report for the Euro-limpacs project identifying priorities for action to enhance integration (Month 6)

¹⁷ Milestones are control points at which decisions are needed; for example concerning which of several technologies will be adopted as the basis for the next phase of the project.

Workpackage description (full duration of project)

Workpackage number	2	Start date or starting event:						
Workpackage title Promoting internal and external integration of Euro-limpacs								
Participant id	Entera	UoL	UCL	WAU				
Person-months per participant:	12	1.4	3	20				

Objectives

The objectives of this workpackage are to enhance the integration of the elements of the Euro-limpacs project and to enhance the integration of the project with the end-user community, through the organisation of targeted workshops to address the priority actions under the areas of coherence.

Description of work

Workshops to address priority actions and summary reports (**Entera**, UoL, UCL, WAU):

- Task 1 – environmental coherence priority actions
- Task 2 – economic coherence priority actions
- Task 3 – social coherence priority actions
- Task 4 – spatial coherence priority actions
- Task 5 – temporal coherence priority actions
- Task 6 – scientific coherence priority actions
- Task 7 – institutional coherence priority actions

Deliverables

- Seven targeted workshops and reports on outputs to address identified integration needs based around the ecosystem approach areas of coherence (environmental, economic, social, spatial, temporal, scientific, and institutional)
 - environmental coherence workshop and report– Month 10
 - economic coherence workshop and report– Month 13
 - social coherence workshop and report– Month 16
 - spatial coherence workshop and report– Month 19
 - temporal coherence workshop and report– Month 22
 - scientific coherence workshop and report– Month 25
 - institutional coherence workshop and report– Month 28

Milestones and expected result

- environmental coherence workshop and report completed – Month 10
- economic coherence workshop and report completed – Month 13
- social coherence workshop and report completed – Month 16
- spatial coherence workshop and report completed – Month 19
- temporal coherence workshop and report completed – Month 22
- scientific coherence workshop and report completed – Month 25
- institutional coherence workshop and report completed – Month 28

Workpackage description (full duration of project)

Workpackage number	3	Start date or starting event:						
Workpackage title Euro-limpacs Stakeholder Interface								
Participant id	UCL	UoL	Entera	WAU				
Person-months per participant:	20	0.5	0	0				

Objectives

Development of a user-friendly web-based Stakeholder Interface that provides an interface to all of the outputs from the Euro-limpacs project.

Description of work

Task 1 – Creation of relational database structure linked to Euro-limpacs Web site (UCL)

Task 2 – Design of user-friendly Web based front end linked to Euro-limpacs Web site (UCL, UoL)

Task 3 – Population of the database (UCL)

Task 3.1 – Population of database – Euro-limpacs WP1 output

Task 3.2 – Population of database – Euro-limpacs WP2 output

Task 3.3 – Population of database – Euro-limpacs WP3 output

Task 3.4 – Population of database – Euro-limpacs WP4 output

Task 3.5 – Population of database – Euro-limpacs WP5 output

Task 3.6 – Population of database – Euro-limpacs WP6 output

Task 3.7 – Population of database – Euro-limpacs WP7 output

Task 3.8 – Population of database – Euro-limpacs WP8 output

Task 3.9 – Population of database – Euro-limpacs WP9 output

Task 3.10 – Population of database – Euro-limpacs cross cutting theme output

Task 4 – Outreach – links with other projects, stakeholders and launch of Web site (UCL, UoL)

Deliverables

- Web-enabled Stakeholder Interface providing an interface to the suite of outputs generated by the Euro-limpacs project (Month 27)

Milestones and expected result

- Completion of underlying database structure (Month 8)
- Workshop to discuss Stakeholder Interface with Euro-limpacs participants and end users (Month 9)
- Completion of beta version of Web interface (Month 17)
- Population of database (Month 27)
- Final version of Web interface completed (Month 27)
- Launch of Stakeholder Interface (Month 30)

Workpackage description (full duration of project)

Workpackage number	4	Start date or starting event:						
Workpackage title	Generic tool for development and management of integrated projects							
Participant id	UoL	UCL	Entera	WAU				
Person-months per participant:	41.1	0	0	0				

Objectives

Develop a software expert-system tool for the management and design of integrated projects based on the ecosystem approach

Description of work**Task 1** – Development the expert system (UoL)

- analysis of the process undertaken in workpackages 1 and 2
- formalisation as an expert
- appropriate tools and models that can be used to apply the ecosystem approach identified.

Task 2 – Programming the tool (UoL)

- programming of the structure of the expert system as a software tool

Deliverables

- Software tool for the design and management of integrated projects using the ecosystem approach (Month 30)
- Database of tools and models available to implement the ecosystem approach in the context of integrated catchment management (Month 30)
- Publication detailing tools and models available for implementing the ecosystem approach in a catchment management context (Month 30)

Milestones and expected result

- Complete development of expert system – Month 18
- Complete generic tool – Month 30
- Complete database and publication on tools and models for assisting with the implementation of the ecosystem approach – Month 30

Workpackage description (full duration of project)

Workpackage number	5	Start date or starting event:						
Workpackage title Project management								
Participant id	UoL	UCL	Entera	WAU				
Person-months per participant:	6.9	2	0.5	0				

Objectives

The objective of this workpackage is to manage the project efficiently and effectively to ensure maximum benefit is gained from the project activities and to report progress to the EC

Description of work

- administrative management of the project
- financial management of the project
- ensuring the production of deliverables in the tasks and workpackages they are leading as specified above
- production of interim and yearly management reports

Deliverables

- An annual progress will be produced in month 12
- An interim management progress report will be produced in month 18
- A Year 2 annual progress report will be produced in month 24
- The final management report will be produced in month 30

Milestones and expected result

- Annual progress completed – Month 12
- Interim management progress completed – Month 18
- Year 2 annual progress report completed – Month 24
- Final management report – Month 30

Ethical issues checklist

Table A. Proposers are requested to fill in the following table

Does your proposed research raise sensitive ethical questions related to:	YES	NO
Human beings		X
Human biological samples		X
Personal data (whether identified by name or not)		X
Genetic information		X
Animals		X

If you answer “YES” to any of the above, please include in your proposal section B7.1 the more detailed version of Table A (“Crucial information”) obtained from:

http://europa.eu.int/comm/research/science-society/ethics/rules_en.html

and also incorporate in section B.7.1 and in other appropriate parts of your proposal comments corresponding to the detailed instructions given in sections C-D at the above address

Table B. Proposers are requested to confirm that the proposed research does not involve:

Research activity aimed at human cloning for reproductive purposes,

Research activity intended to modify the genetic heritage of human beings which could make such changes heritable¹⁸

Research activity intended to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.

	YES	NO
Confirmation : the proposed research involves none of the issues listed in Table B		X

Further information on ethics requirements and rules are given at the science and ethics website at http://europa.eu.int/comm/research/science-society/ethics/ethics_en.html

¹⁸ Research relating to cancer treatment of the gonads can be financed