

# MarinERA Legacy

April 2009

EU FP6 ERA-NET Project



www.marinera.net

## MarinERA

# Facilitating Cooperation between National Marine Research Programmes in Europe (2004 - 2009)

The MarinERA project (2004-2009) was an EU FP6 funded pilot European Research Area Network (ERA-NET) project. MarinERA involved 16 partners including leading Marine Research Funding Organisations from 13 European countries. The legal and financial coordination was provided by Ifremer (France), while the directional and operational coordination was provided by the Marine Board-European Science Foundation.

# The specific objectives of the MarinERA project were to:

- Map European Marine Research Programmes and Specialised Infrastructures to contribute towards the development of the marine component of the European Research Area, facilitating the development of joint calls for proposals and documenting the existing European marine research capacity;
- Facilitate the networking of Marine Research Funding Organisations in Europe, leading to a more targeted and enhanced use of national resources;
- Contribute to the development of the European Marine and Maritime Research Policy, identifying future challenges and opportunities and priority research areas for both EU and national funding programmes:
- Provide a basis for sharing available resources to deal with priority issues that are beyond the capacities of individual countries; and
- Progress the cooperation between, and opening of national Marine Research Programmes - a key objective of the European Research Area.

#### The MarinERA project partners:

- French Institute for Exploitation of the Sea (Ifremer), France
- Marine Board-European Science Foundation (MB-ESF)
- Marine Institute (MI), Ireland
- · Research Council of Norway (RCN), Norway
- Jülich Research Centre GmbH Project Management Organisation Jülich (FZJ-PTJ), Germany
- Spanish Ministry of Science and Innovation (MICINN), Spain
- · Academy of Finland (AKA), Finland
- Netherlands Organisation for Scientific Research (NWO), The Netherlands
- Natural Environment Research Council (NERC), UK
- General Secretariat for Research and Technology, Ministry of Development (GSRT), Greece
- Foundation for Science and Technology (FCT), Portugal
- Belgian Federal Science Policy (BELSPO), Belgium
- Flemish Economy, Science and Innovation Administration (EWI), Belgium
- Malta Council for Science and Technology (MCST), Malta
- National Center for Research and Development (NCBiR), Poland
- Institute of Oceanology of the Polish Academy of Sciences (IOPAN), Poland

MarinERA aimed at building the confidence to create a favourable climate in which to pursue enhanced cooperation between, and reciprocal opening of, national Marine Research Funding.

M. Héral (MarinERA Coordinator; Ifremer, France)



## Introduction

# A network of European Marine Research Funding Organisations emerges

In 2002, the European Union launched the pilot ERA-NET (European Research Area Network) scheme, with funding support under the 6<sup>th</sup> Framework Programme (FP6; 2002-2006). The aim of the ERA-NET scheme was to support:

- The networking of research activities conducted at national and/or regional levels;
- The mutual opening of national and/or regional research programmes.

The ERA-NET scheme was designed for Research Funding Organisations, specifically those managing competitive research funding programmes. From the outset, it was clear that the marine research sector would benefit significantly from engagement in trans-national cooperation.

The genesis of the MarinERA partnership can be found in the *ad hoc* Scientific and Technical Research Committee (CREST) on the Mutual Opening of Member States Programmes in Marine Science (2002-2003) and in the membership of the Marine Board. The announcement of the ERA-NET call for proposals in 2003 provided the necessary stimulus for a partnership of 16 organisations, including Marine Research Funding Organisations from 13 countries, to come together

under the leadership of Ifremer and the Marine Board, to submit a competitive proposal to establish a network of Marine Research Funding Organisations, namely: MarinERA.

MarinERA, as the second ERA-NET to emerge in a suite of marine-related ERA-NETs, developed a mentoring role in particular for the thematic ERA-NETs, such as MariFish and AMPERA. While strong and regular interactions among these and other environmental ERA-NETs (e.g. BiodivERsA, BONUS, CIRCLE, CRUE, ERA-Chemistry, EuroPOLAR) were established for exchange of experience and information, it quickly became apparent that there was a significant degree of overlap – a result of the obligatory structure of ERA-NETs – which needed to be addressed.

Improved cohesion continues to be addressed in the proposed evolution of MarinERA towards phase 2 within the 7th Framework Programme (FP7; 2007-2013), where it develops into the SEAS-ERA (2010-2013), Towards integrated European marine research strategy and programmes, ERA-NET proposal, which will build on the momentum generated by MarinERA and others.



The MarinERA project, in providing a Forum for the Programme Managers of major European Marine Research Funding Organisations, also provided an important platform and focal point for interaction and dialogue with the wider European marine science community.

N. Connolly (MarinERA deputy Coordinator; Marine Board-ESF)

# Information exchange

### Getting to know each other

A key component and pre-requisite of enhanced cooperation, collaboration and mutual opening of research funding programmes is knowing about and understanding respective national funding programmes and mechanisms. Accordingly, the first step in MarinERA was to organise a number of networking workshops to exchange such information and to compile a preliminary description of each of the participating organisation's marine research funding programmes and implementation procedures.

This work, involving the active participation of Marine Research Funding Organisations from Belgium, Finland, France, Germany, Greece, Ireland, Malta, The Netherlands, Norway, Poland, Portugal, Spain and UK, was completed in 2005-2006 and resulted in the development of the Database of the Member Organisations' Research Funding Programmes, as well as two key publications:

MarinERA Publication N°1

A Preliminary Description of MarinERA Member State Marine Research Funding Programmes and Implementation Procedures (2006)

MarinERA Brochure N°1

Short Guide to MarinERAPartners: Competitive Marine Research Funding Programmes, Marine Science & Technology Policies, Specialist Marine Research Infrastructures (2007) In 2008, in order to update the Database, and to extend its geographical coverage to include those European Marine Research Funding Organisations that were not included in the original partnership, a suite of three Regional Workshops was held, addressing the sea regions of the Baltic (Tallinn, April 2008), the Atlantic (Oslo, May 2008) and the Mediterranean and the Black Sea (Athens, June 2008). The updating and expansion of the Database culminated in the production of two further publications:

MarinERA Brochure N°3

The 2008 MarinERA Guide to European Marine Science & Technology Policies and Research Funding Programmes (2008)

MarinERA Publication N°8

European Coastal State Competitive Marine Research Funding Programmes: The MarinERA Reference Manual 2008 (2009)

Data collected during the development of the Database of Member Organisation Research Funding Programmes and Implementation Procedures was used to inform subsequent work and the MarinERA Joint Call for Proposals.

Spotlight on Europe: the geographical scope of *The MarinERA Reference Manual 2008* includes:

MarinERA partner countries: Belgium, Finland, France, Germany, Greece, Ireland, Malta, The Netherlands, Norway, Poland, Portugal, Spain, UK,

**And also** Bulgaria, Croatia, Cyprus, Denmark, Estonia, Iceland, Italy, Latvia, Lithuania, Romania, Slovenia, Sweden, Turkey.



# Strategic Activities

### Paving the way to cooperation

Although administrative barriers for joint calls exist, the collective will for constructing the ERA has allowed us to successfully overcome them.

B. Morales-Nin (MICINN, Spain)



In order to explore opportunities for enhanced cooperation and collaboration, and to initiate jointly funded calls for proposals, the MarinERA partners initially needed to increase their awareness of both the potential barriers to, and enablers of, cooperation. Familiarisation with issues relating to common evaluation procedures and performance indicators was also necessary. Two publications were produced in addressing this objective, namely:

MarinERA Publication N°2

Barriers to Cooperation in MarinERA Partner State Marine RTD Programmes (2007) provides an analysis of administrative, legal and technical barriers to the successful opening and/or coordination of trans-national research programmes and suggested possible solutions.

MarinERA Publication N°3

Common Evaluation Procedures and Performance Indicators (2008) provides guidelines on the identification of suitable themes for funding calls, and subsequent implementation procedures, including proposal evaluation, ranking, feedback and result monitoring, and the types and organisation of the decision making bodies.



In the frame of ERA-NET joint calls, not only performance by individual research groups but also the added value that the research collaboration brings should be evaluated.

T. Aarnio & J. Roos (AKA, Finland)

#### MarinERA Publication N°7

Future Looks: Strategic Analysis for New Activities (2008)

MarinERA Publication  $N^{\circ}7$  profiles current and future research priorities, as identified by the MarinERA partner organisations. Research priorities of other marine ERA-NETs, the ESF European Collaborative Research scheme (EUROCORES), FP6 Networks of Excellence and of International Organisations were also taken into account. The resultant synthesis ultimately works towards the identification of research priorities for future joint activities.

MarinERA Publication N°7 provides information relevant for the identification of national marine research funding priorities, as evident, for instance, from its use in the development of: *Target objectives in Spanish Marine Science within the European context* (2003-2007)¹. Publication N°7 has also set the foundations for future strategic analysis, including those made possible through a future FP7 funded marine over-arching ERA-NET (see p11).

<sup>&</sup>lt;sup>1</sup> B. Morales-Nin and S. Ramos (March 2009)

# MarinERA Call for Proposals

# Circa € 5M granted by five MarinERA partners supporting five collaborative projects

Five MarinERA partners (FZJ-PTJ, Germany; GSRT/HCMR, Greece; RCN, Norway; FCT, Portugal; MICINN, Spain) joined together in a ca. € 5M Call for Proposals on Changes in marine ecosystems and functional biodiversity in relation to global change and other anthropogenic impacts, covering the geographical areas: (i) the North Sea, Channel and adjacent areas; and (ii) the Mediterranean and exchanges with adjacent basins.

The successful implementation of the MarinERA Call is concrete evidence of the commitment and progress towards cooperation and partnership between national Research Funding Organisations, which resulted in the funding of the five collaborative research projects profiled here (p6-7).

Ecosystem Change in the North Sea: Processes, Drivers, Future Scenarios: ECODRIVE unites the international expertise of climatologists, modellers, planktologists, fisheries experts and ecophysiologists to assess and model historical and projected future changes in the trophodynamic structure and function of the North Sea ecosystem. ECODRIVE advances our predictive understanding of the impacts of various drivers of ecosystem change including those acting via climate change and variability as well as those acting more regionally via anthropogenic forcing (e.g. fisheries exploitation, eutrophication).

#### **Partners**

- Leibniz Institute for Baltic Sea Research Warnemünde, Germany - Coordinator
- Alfred Wegener Institute for Polar and Marine Research, Germany
- Geophysical Institute, University of Bergen, Norway
- Institute of Marine Research, Norway
- Institute of Oceanography, Hamburg University, Germany

- Sir Alister Hardy Foundation for Ocean Science (SAHFOS), UK (no funds through MarinERA)
- Wageningen IMARES, The Netherlands (no funds through MarinERA)

Duration: April 2009 - March 2012

**Total grant aid:** €1,417,500

Inter-basin exchange in the changing Mediterranean Sea - Impact on the ecosystem in the vicinity of the Straits connecting the Mediterranean Sea with adjacent basins: MedEX will geographically zoom over the entire Mediterranean Sea, the Gulf of Cadiz and the Alboran Sea to the west and the North Aegean Sea to the east and will focus on the changing inter-basin exchange processes impacting the ecosystems. MedEX will complement existing knowledge on local ecosystem dynamics, especially what concerns the processes that are directly dependent on the exchange between the Mediterranean and adjacent seas (the North Atlantic and the Black Sea).

#### **Partners**

- Faculty of Sciences of the University of Lisbon, Portugal - Coordinator
- Department of Marine Sciences, University of the Aegean, Greece
- Hellenic Centre for Marine Research (HCMR), Greece
- Institute of Accelerating Systems and Applications (IASA-UAT), Greece
- Institute of Marine Science of Andalucía (ICMAN-CSIC), Spain
- Mediterranean Institute for Advanced Studies (IMEDEA), Spain
- National Institute for Biological Resources (INRB), Portugal
- University of Málaga, Spain

**Duration:** May 2009 – May 2012

**Total grant aid:** € 811,356

The MarinERA Call was an open process and active participation of research teams from non-funding countries was also made possible.

R. Schorno (MarinERA Technical Committee Chair (2007 – 2009); NWO, the Netherlands) and H. Beadman (NERC, UK)



**Decadal scale Variability of the Mediterranean Ecosystem: MedEcos** aims to improve our understanding and predictive capacity of the evolution of the Mediterranean marine ecosystem at decadal time scales by:

- Hindcasting conditions at the vicinity of connecting Straits; and
- Attempting worst-case scenario predictions.

#### **Partners**

- University of the Aegean, Department of Marine Sciences, Greece - Coordinator
- Hellenic Centre for Marine Research (HCMR), Institute of Oceanography, Greece
- University of Athens, Faculty of Geology and Geo-environment, Greece
- Spanish National Research Council (CSIC),
   Spain
- Institute of Environmental Science and Technology (ICTA), Spain

Duration: June 2009 - May 2012

Total grant aid: € 512,901

Marine phylogeographic structuring during climate change - the signature of leading and rear edge of range shifting populations: The marine phylogeographic structuring during climate change project aims to monitor, sample and genotype a number of target species, in predetermined rockyshore stations in the Mediterranean and along Western Europe, with special attention to species having distributional limits within this area.

#### **Partners**

 Institute for Applied Psychology (ISPA), Eco-Ethology Research Unit (UIEE), Portugal -Coordinator

- Alfred Wegener Institute for Polar and Marine Research, Germany
- Center for Marine Sciences, University of Algarve, Portugal
- Mediterranean Institute for Advanced Studies (IMEDEA), Spain
- Institute of Marine Research, Flødevigen, Norway
- University of Cadiz, Spain

Duration: January 2009 - December 2011

Total grant aid: € 915,987

Regional Drivers of Ecosystem Change and its Influence on Deep-Sea populations in the Mediterranean: ReDEco will study the effects of regionally driven ecosystem changes in selected deep-sea habitats of the Mediterranean Sea and will focus on key drivers of climate change such as temperature changes, shifts in surface productivity and cold water cascading, and will examine their impacts on deep-sea populations.

#### Partners

- Hellenic Centre for Marine Research (HCMR), Greece - Coordinator
- Institute of Marine Research (IMAR), Portugal
- University of de Aveiro, Centre for Environmental and Marine Studies (CESAM), Portugal
- University of Barcelona / Faculty of Geology (UB), Spain
- University of Piraeus, Department of Maritime Studies (UP), Greece
- National Centre for Scientific Research (CNRS), CEFREM, France (no funds through MarinERA)

**Duration:** April 2009 – April 2011 **Total grant aid:** € 924,753



The Memorandum of Understanding of the MarinERA Call provided a tested model for future and expanded joint calls for proposals between funding agencies within the ERA-NET scheme or beyond.

N. Hedlund (MarinERA Call Secretariat; RCN, Norway) and K. Nittis (GSRT/HCMR, Greece)

# MarinERA Infrastructure Strategy

### Beyond the fleet-based focus

#### **Horizontal Approach to Infrastructures**

The topic of marine infrastructures was identified from the initial stages as a core component of MarinERA. Availability of, and reciprocal access to, suitable infrastructures represented one of the driving forces for the implementation of joint activities and the identification of common strategies among the partners. MarinERA moved from the traditional fleet-based focus of previous inter-agency cooperative activities to incorporate four infrastructure fields, namely: (i) research fleets; (ii) observing and

monitoring systems; (iii) land-based infrastructures; (iv) data management.

A horizontal approach was adopted to address infrastructure activities within MarinERA, and facilitated the establishment of: (i) the MarinERA Infrastructure Workshops Series (see below), (ii) the Marine Infrastructure Forum, and (iii) the MarinERA Marine Research Infrastructures Portal (www.marinera.net/marine/index.html).

#### **MarinERA Infrastructure Workshops Series**

Infrastructure experts were convened through the MarinERA Workshop Series on three occasions to: (i) discuss both management and technical matters of strategic pan-European importance, and (ii) foster, initiate and consolidate networking activities in the frame of EU Framework Programmes. The following MarinERA Infrastructure Workshops were convened to progress the preparation of a Marine RTD Infrastructure Strategy and explore issues related to improved access to specialist marine RTD infrastructures and facilities:

- Observing and Monitoring Systems (Brest, 2006).
- Research Fleet Management issues at the European level (Brussels, 2007).

 Towards a Long-term and Sustained European Network of Coastal Observatories (Marseilles, 2009).

The Workshops were successful in transmitting the needs and expectations of the policy-makers and the research community to the MarinERA consortium. The MarinERA Fleet Management Workshop helped to consolidate and progress a successful proposal to the FP7 Capacities Programme for the EUROFLEETS Project (Towards an Alliance of European Research Fleets; Coordinator: Ifremer), pioneered by the Marine Board's Ocean Fleets Working Group and the Group of European Research Vessel Operators (ERVO).

#### **MarinERA Publication N°10**

A Marine RTD Infrastructure Strategy for Member States (2009) summarises the main recommendations that emerged from the MarinERA Infrastructure Fora and Workshops, and assesses general trends and future challenges.

MarinERA Publication N°10 provides the basis for further elaboration of infrastructure priorities within the possible future, FP7 marine overarching ERANET proposal (see p11).



The MarinERA Infrastructure horizontal approach was necessary to enhance synergies, assess commonalities and gaps, and create a dynamic and proactive approach in relation to the four different infrastructure fields.

B. Tanner & P. Seifert (FZJ-PTJ, Germany)

## MarinERA relations with the wider community

### MarinERA and its role as a platform for interaction

The joint annual MarinERA - AMPERA Forum Series, established by the Marine Board, strengthened the links between marine and environmental FP6 ERA-NETs, facilitating regular updates on programme management, strategic activities and exchanging information pertinent to the European marine research landscape. The Forum convened on four occasions in Brussels:

- Initiation of the Marine and Environmental ERA-NET Forum (2005)
- Best Practices: Joint Calls, Funding Procedures, Overall Coordination (2006)
- Complementarities among Marine ERA-NETs and Programme Implementation Procedures (2007)
- The Regional Approach: the Appropriate Scale to Support and Strengthen Marine Research Cooperation Schemes? (2008)

Networking Existing Projects and identifying future Research Priorities. The identification of marine research topics of common interest to the European Marine Research Funding Organisations and the wider European marine research community was facilitated through a further targeted series of Workshops. These Workshops brought together research teams currently funded under Member State programmes (or under EU Framework Programme for the Workshop with Networks of Excellence) with a view to networking existing projects and identifying future research priorities. The outputs of these Workshops were published in the following:

- MarinERA Publication N°4 Thermohaline Circulation in European Seas and Oceans (2007)
- MarinERA Publication N°5 Anthropogenic and Climate Change Impacts on Marine Biodiversity and Ecosystem Function (2007)
- MarinERA Publication N°6 Meeting between the EU FP6 funded Networks of Excellence and the MarinERA Marine Research Funding Organisations (2008)
- MarinERA Publication N°9 New Developments in Marine Sensor Technologies:
   Opportunities and Challenges (2009)

The MarinERA Projects' Database provides a unique source of material for marine scientists and policy-makers to access information on current marine research projects and to identify potential research partners and nodes of specialist expertise.

T. Carvalho (FCT, Portugal)

MarinERA Projects' Database gathers over 900 marine research projects competitively funded by the MarinERA partners (representing over € 275M in grant-aid), and is hosted side-by-side with EurOcean's EU funded Marine Projects' Database (www.eurocean.org) with a common search engine.

http://marinedb.marinera.net/

MarinERA on-line Map of Atlantic European Marine Research Centres facilitates closer cooperation in marine research between those Centres, and complements similar regional databases, e.g. for the Baltic Sea (www.bonusportal.org) and for the Mediterranean and Black Seas (www.ciesm.org/online/institutes/marin.htm).

http://marineinstitutes.marinera.net/

## Conclusions

### MarinERA life beyond its contractual duration

The MarinERA project (2004 – 2009) has been a highly successful pilot ERA-NET project and has succeeded in:

 Fostering an operational European Research Area Network of leading Marine Research Funding Organisations from 13 European coastal states.

At the outset of the MarinERA project, the diversity of research funding structures (e.g. Research Councils, Government Ministries, Research Funding Agencies), the scope of eligible topic areas that could be addressed, and the range of implementation procedures applied by the various agencies seemed an almost insurmountable obstacle to cooperation. However, recognising the great benefits of cooperation in terms of adding value to existing national budgets, sharing the cost (and risk) of large scale projects, providing improved access to specialist expertise and research infrastructures, the MarinERA partners persisted towards the ultimate realisation of a joint call of mutual benefit.

 Implementing a ca. € 5M competitively funded Joint Call for Proposals involving five participating partner countries (with associated infrastructure support representing a total estimated at € 8M).

As anticipated, diversity proved to be a challenge that could be successfully addressed and answered through partnership, good will, and an appreciation of the scientific and financial benefits of cooperation.

 Laying the basis for a pan-European Marine Research Funding Organisation Network, specifically delivering opening of national funding programmes.

The MarinERA project was also successful in establishing operational links with other marine related ERA-NETs, such as BONUS and ECORD-Net, and developed an advisory role towards AMPERA and MariFish, while providing a focal point for regular interaction with the wider European marine science community. Indeed, MarinERA successfully addressed all of the concepts encapsulated in its first five original objectives, and has gone beyond them to achieve a level of cooperation that will endure beyond its lifetime.

#### Towards integrated European marine research strategy and programmes

The SEAS-ERA FP7 proposal, submitted in April 2009, for an Over-Arching Basin Scale Marine ERA-NET, aims to bring together 22 major European Marine Research Funding Organisations from 20 countries in the basin regions of the Atlantic, the Mediterranean and the Black Sea. The success of the MarinERA partnership, coupled with the publication of An Integrated Maritime Policy for the European Union (October 2007) and the European Strategy for Marine and Maritime Research (September 2008) were critical catalysts

in the preparation of the SEAS-ERA proposal, which in turn is poised to play a major role in the implementation of both these policies. This evolution to a partnership of 22 Research Funding Organisations from 20 countries within SEAS-ERA, from the original MarinERA consortium, confirms the realisation of the impact of the MarinERA project, and awareness of the benefits and opportunities for increased cooperation between national funding programmes.



Within the MarinERA consortium, diversity was a challenge rather than a barrier to cooperation.

G. O'Sullivan (Chair of MarinERA Technical Committee (2004 – 2007); MI, Ireland).

#### **MarinERA Publications**

MarinERA Publication N°1 A Preliminary Description of MarinERA Member State Marine Research Funding Programmes and Implementation Procedures (2006)

MarinERA Publication N°2 Barriers to Cooperation in MarinERA Partner State Marine RTD Programmes (2007)

MarinERA Publication N°3 Common Evaluation Procedures and Performance Indicators (2008)

MarinERA Publication N°4 Thermohaline Circulation in European Seas and Oceans (2007)

MarinERA Publication N°5 Anthropogenic and Climate Change Impacts on Marine Biodiversity and Ecosystem Function (2007)

MarinERA Publication N°6 Meeting between the EU FP6 funded Networks of Excellence and the MarinERA Marine Research Funding Organisations (2008)

MarinERA Publication N°7 Future Looks: Strategic Analysis for New Activities (2008)

MarinERA Publication N°8 European Coastal State Competitive Marine Research Funding Programmes: The MarinERA Reference Manual 2008 (2009)

MarinERA Publication N°9 New Developments in Marine Sensor Technologies: Opportunities & Challenges (2009)

MarinERA Publication N°10 A Marine RTD Infrastructure Strategy for Member States (2009)

MarinERA Brochure N°1 Short Guide to MarinERA Partners: Competitive Marine Research Funding Programmes, Marine Science & Technology Policies, Specialist Marine Research Infrastructures (2007)

MarinERA Brochure N°2 ERA-NETs, FP6 Marine and Environment Consortia (2007)

MarinERA Brochure N°3 The 2008 MarinERA Guide to European Marine Science & Technology Policies and Research Funding Programmes (2008)

http://www.marinera.net/dissemination/tec\_reports.html

http://www.marinera.net/dissemination/brochures.html

### MarinERA in figures

Consortium: 16 partners from 13 countries; engaging with 13 other European coastal countries

Duration: 54 months (November 2004 to April

2009)

**Joint Call for Proposals: ca. € 5M** direct funding granted to collaborative research projects with an actual contribution from funders estimated at € 8M)

Interactive Platform: for 11 other Marine and Environmental ERA-NETs

Publications and dissemination: 10 Publications,
3 Brochures, 1 Leaflet, 1 Poster, 69 Web announcements

3 online consultation tools: (i) Projects' Database of over 900 competitively funded marine research projects; (ii) Portal of marine infrastructure facilities; (iii) Map of Atlantic Marine Research Centres

**60 meetings, workshops and fora:** gathering **860** participants.

#### MarinERA Structure

#### Work package 1: Information Exchange

- 1.1: A Database of European Marine Research Funding Programmes
- 1.2: Marine RTD Programme Management and Implementation Procedures
- 1.3: Mapping Marine RTD Infrastructure Facilities

#### Work package 2: Strategic Activities

- 2.1: Future Looks: Strategic Analysis
- 2.2: Barriers to Cooperation
- 2.3: Common Evaluation Procedures and Performance Indicators
- 2.4: A Marine RTD Infrastructures Strategy

#### Work package 3: Joint Activities

- 3.1: A posteriori Clustering Workshops
- 3.2: A Memorandum of Understanding for Joint Projects
- 3.3: Facilitating improved access to existing Marine RTD Infrastructures

#### Work package 4: Trans-National Activities

- 4.1: A Marine RTD Strategy for Europe
- 4.2: Identification of Potential Joint Projects
- 4.3: Implementation of a Joint Call for Proposals

#### Work package 5: Management Activities

- 5.1: A Marine RTD Managers Forum
- 5.2: Project and Financial Management
- 5.3: Outreach & Dissemination of Information



### MarinERA Partners



































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