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MARTEC

ERA-Net Maritime Technologies

Co-ordination Action

ERA-Net

D 2.4

Recommendations of areas of future co-operation in Maritime Research

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PU	Public	X
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)	

Content

- EXECUTIVE SUMMARY 3**
- 1 DEFINITION OF MARTEC PRIORITY AREAS 4**
 - 1.1 MARTEC BASIC PRIORITY AREAS 4
 - 1.2 MARTEC HORIZONTAL PRIORITY AREAS 6
- 2 COLLECTION OF INPUT FROM STAKEHOLDERS 7**
- 3 RECOMMENDATION..... 10**

Executive summary

The ERA-NET MARTEC (2006 – 2010) is an EU funded project in the 6th Framework Programme. The MARTEC partnership consists of 12 partners and 4 observers from 12 European countries.

As a contribution to the development of the European Research Area, the objective of MARTEC is to form a sustainable network and partnership of key funding agencies and ministries aiming at deepening the understanding of conditions for management of maritime technologies research between the key European countries actively funding RTD in this sector. In co-operation with the European industrial maritime cluster and other stakeholders this network intends to work out a strategy for future maritime technological research funding through trans-national programs and calls which are coherent with the European research policy and the strengthening of the European Research Area.

Due to the nature of maritime industry RTD, MARTEC will put particular emphasis on the co-ordination of national R&D programs which are strategically planned to provide funding for projects which contribute to improving the international competitiveness of the European shipping and marine technology industry. The typical projects funded are technologically oriented with industrial partners involved.

In order to achieve these objectives, it is of importance for MARTEC to interact with representatives from the industry and the research communities. It is of particular interest to keep a close cooperation with the Technology Platform WATERBORNE.

This report presents the results of Task 2.4 and identifies areas of future co-operation. The outcome of the previously performed Task 2.2 has formed the basis for the work performed in this task. The main objective has been to get the stakeholders view on the conclusions made in Task 2.2

Based on the work done in Task 2.2 and previous tasks, MARTEC priority areas have been identified. These are described in Chapter 1 below.

Input from stakeholders was collected at a workshop held 23 and 24 of October 2007 in Oslo. This is further described in Chapter 2 below.

Recommendations based on the main conclusions from the workshop are presented in Chapter 3.

1 Definition of MARTEC priority areas

Basic priority areas were defined in work package 1. It was decided to distinguish between thematic priority areas and horizontal priority areas during the workshop at London on 20 June 2007.

Eight thematic and three horizontal priority areas are structured in MARTEC at the moment:

Thematic priority areas	Horizontal priority areas
shipbuilding	safety and security
maritime equipment and services	environmental impact
ship and port operations	human elements
inland water and intermodal transport	
offshore industry/offshore technology	
offshore structures for renewable energy	
polar technology	
fishing/aquaculture	

1.1 MARTEC basic priority areas

1. 1.1 Shipbuilding

1.1.1.1 New ship types, structures, ship design and construction

new ships, hull concepts, structures and components, next generation ships, new floating structures, risk based design, simulation and planning tools, computational fluid dynamics, design methods and tools

1.1.1.2. Production processes and technology

standardisation, modularisation, optimisation, mechanisation, robotisation, production control, forming, cutting and joining techniques, laser welding, surface treatment technologies, production methods, networking, simulation, software tools, productivity, use of new materials, supply chain management, recycling, life-cycle approach

1.1.2 Maritime equipment and services

bridge systems, information and communication technologies, telematic applications, engine and propulsion systems, automation systems, cargo handling, maintenance

1.1.3 Ship and port operation, services

vessel traffic services, manoeuvring, cargo handling, waste & ballast water facilities

1.1.4 Inland water and intermodal transport

1.1.4.1 Shipbuilding

1.1.4.2 Maritime equipment and services

1.1.4.3 Ship and port operation

1.1.4.4 Transport chains, hinterland connections, short sea shipping,
Traffic management

1.1.4.5 Transport logistics, intermodality, interoperability

1.1.5 Offshore industry/offshore technology

new structures, design and construction, production processes and technology, equipment and services, maintenance and decommissioning of offshore structures, offshore operations, underwater process technology, underwater technology, underwater robotics (AUV, ROV)

1.1.6 Offshore structures for renewable energy

1.1.6.1 Water power, wave, tidal and current energy technology

1.1.6.2 Wind power, wind energy technology, installation technology

1.1.7 Polar technology

arctic sea transport, shipbuilding, equipment and services for polar regions, operation of ships, offshore structures

1.1.8 Fishing/aquaculture

platforms and devices, fish farms in open sea, new generation of fish-farms, teledetection, information and communication technologies, automation and monitoring

1.2 MARTEC horizontal priority areas

1.2.1 Safety and Security

1.2.1.1 Ship safety

stability, collision, grounding, evacuation, fire safety, search and rescue, manoeuvring, cargo handling and lashing, tracking and tracing, first aid

1.2.1.2 Ship and port security

preventive measures against terrorism, piracy

1.2.2 Environmental impact

reduction and improvement of the efficiency of fuel and energy consumption, anti fouling, ballast water handling, wash waves, waste management, recycling, monitoring, reduction of emission, prevention of contamination, noise and vibration

1.2.3 Human elements

training aspects, education, improvement of working conditions, intellectual property rights (IPR)

Overview table: partner countries – priority areas

	DE	SP	PL	F	FI	DK	UK	NL	NO	S	RO
shipbuilding- new ship types, structures, ship design and construction	■	■	■	■	■	■	■	■	■	■	■
shipbuilding- production process and technology	■	■	■	■	■	■	■	■	■	■	■
maritime equipment and services	■	■	■	■	■	■	■	■	■	■	■
ship and port operation services	■	■	■	■	■	■	■	■	■	■	■
inland water and intermodal transport	■	■	■	■	■	■	■	■	■	■	■
offshore industry/ offshore technology	■	■	■	■	■	■	■	■	■	■	■
offshore structures for renewable energy	■	■	■	■	■	■	■	■	■	■	■
polar technology	■	■	■	■	■	■	■	■	■	■	■
fishing/ aquaculture	■	■	■	■	■	■	■	■	■	■	■
safety	■	■	■	■	■	■	■	■	■	■	■
security	■	■	■	■	■	■	■	■	■	■	■
environmental impact	■	■	■	■	■	■	■	■	■	■	■
human elements	■	■	■	■	■	■	■	■	■	■	■

2 Collection of input from stakeholders

The outcome of Task 2.2, presented in the report D 2.2 has been used as the basis for the work. The objective has been to get the view from stakeholders on the content and the conclusions made in the report.

In order to achieve its overall objectives, it is of importance for MARTEC to interact with representatives from the industry and the research communities. A particular important stakeholder is the Technology Platform WATERBORNE. TP WATERBORNE consists of all major stakeholders in the maritime sector in Europe. As a preparation for the European Commissions 7th Framework Programme, TP WATERBORNE has developed a Strategic Research Agenda.

Input from stakeholders was collected at a workshop held 23 and 24 of October 2007 in Oslo. Each of the partner Countries of MARTEC had been asked to invite up to two participants representing the stakeholders in their country. The representatives were given the report D 2.2 beforehand.

Persons from MARTEC as well as stakeholders participated in the workshop.

Participants:	Dr. Ralf Fiedler	PtJ	Germany
	Dr. Andreas Nitz	PtJ	Germany
	Steffi Schmelich	PtJ	Germany
	Dr. Sigurd Falch	RCN	Norway
	Merja Salmi-Lindgren	AFMI	Finland
	Dr. Bruno Lemaire	CETMEF	France
	Dr. Frank Roland	CMT	Germany
	Dr. Walter Kühnlein	HSVA	Germany
	Knut Helge Osmundsvåg	RCN	Norway
	Egil Rensvik	Marintek	Norway
	Øyvind Endresen	Det Norske Veritas	Norway
	Carlos Sánchez Lafuente	INNOVAMAR	Spain
	Per Ekberg	SMA	Sweden
	Aage Damsgard	DMA	Denmark
	Dr. Leszek Wilczynski	CTO	Poland
	Dr. Werner Kolbe	BMWI	Germany
	Prof. Ionel Chirica	SDG	Romania
	Rik Zweers	MinEZ	Netherlands
	Mario Dogliani	RINA SPA	Italy
	Prof. Peter Kolev	TU-Varna	Bulgaria
	Paris Sansoglou	CESA/ Waterborne	Belgium

The agenda for the workshop was:

23. October:

1. Address of welcome (Mr Eirik Normann, RCN)
2. Introduction (Mr Sigurd Falch, RCN)
3. MARTEC (Mr Ralf Fiedler, PtJ)
4. D2.2 (Mr Ralf Fiedler, PtJ)
5. D2.3 (Mr Leszek Wilczynski, CTO)
6. SURSHIP (Mr. Per Ekberg, SMA)

7. Group Work, Input from stakeholders and discussions
8. Plenum, Presentation of group work, discussions

24. October:

Summary of Workshop; conclusions/ remaining work on task 2.4.

Discussions of areas of future co-operations were made in three groups, divided as follows:

MARTEC Thematic priority areas

<p>Group 1 - shipbuilding - maritime equipment and services</p>	<p>Andreas Nitz, PtJ Frank Roland, CMT Bruno Lemaire, CETMEF Leszek Wilczynski, SDRC Ionel Chirica, SDG Paris Sansoglou, CESA (TP WATERBORNE) Øyvind Endresen, DnV</p>
<p>Group 2 - ship and port operations - inland water and intermodal transport</p>	<p>Steffi Schmelich, PtJ Werner Kolbe, BMWi Aage Damsgaard, DMA Rik Zweers, DG E&I Mario Dogliani, RINA Egil Rensvik, Marintek Sigurd Falch, RCN</p>
<p>Group 3 - offshore industry/offshore technology - offshore structures for renewable energy - polar technology - fishing/aquaculture</p>	<p>Ralf Fiedler, PtJ Walter Kühnlein, HSVA Merja Salmi-Lindgren, AFMI Carlos S. Lafuente, INNOVAMAR Peter Kolev, TU – Varna Per Ekberg, SMA Knut Helge Osmundsvåg, RCN</p>

MARTEC Horizontal priority areas; Considered by all groups

- safety and security
- environmental impact
- human factors

Outcome of the discussions:

Group 1:

(Topics; shipbuilding, maritime equipment and services, safety and security, environmental impact, human factors)

Added Value:

The group emphasised that compared to the EU Framework Programme it is an advantage that project supported by MARTEC has a limited number of partners. At the same time, MARTEC provides a combination of national funding, which improves cooperation and coordination. The bottom up approach and open priorities in calls are different from calls within the framework programme and are considered as an considerable advantage of MARTEC

The group made the following recommendations for the future:

In the short term Martec should:

- keep priorities open in all calls,
- follow the industry focus
- emphasise some priorities without excluding any
- keep response times shorter than other programmes
- open calls to non-industrial partners under the lead of industry
- complement/bridge the gaps in EU programmes
- fund implementation of the research results

In the medium term:

- strive for involving more countries as members and observers to Martec
- focus on SMEs for additional support

In the long term:

- investigate and develop guidelines if necessary on certain areas such as consortium, reporting, property rights
- be able to give a clear picture of the State of the Art on research programmes
- be able to give an overview over national projects
- description of industry benefit for MARTEC
- work towards a close cooperation with TP WATERBORNE

Group 2:

(Topics; ship and port operations, inland water and intermodal transport, safety and security, environmental impact, human factors)

It was commented on that document 2.2 was incomplete and inconsistent at the moment and the group recommended that Martec should map projects in each country and make it accessible and easy for applicants to read. The group further recommended that:

- Martec should shorten evaluation time for project in comparison with the evaluations time in the framework programme
- each country has to have allocated funds for financing projects within Martec.

The group identified the following future priority areas for MARTEC:

- emission from ship – both ocean going and inland waterways, CO₂, NO_x, etc Fuel consumption,
- optimization of the logistic chain,
- pollution in ports,
- model shift from roads to sea/rivers
- inland waterways

Group 3:

(Topics; offshore industry/offshore technology, offshore structures for renewable energy, polar technology, fishing/aquaculture, safety and security, environmental impact, human factors)

With respect to complementarities and gaps, the group recommended that landscape of polar research is not completed. This is also the case for marine operations and fishing/aquaculture. In this respect, there is a need of a clear picture of other ERANETs.

The group also noted that with respect to Technology Transfer, funding is different in Europe in case of sponsoring from industry.

The group identified the following items as added value of MARTEC:

- A limited number of partners would be required for submitting proposals, i.e. smaller, stronger groups (2 to 5 partners)
- international interest in selected topics
- more easier relationship of national authorities

The following recommendations were given:

- time from deadline for submitting proposals to project start should be short (6 months)
- common pot for projects should be a discussion

The group further identified that there is risk – in case of more than two partner countries

As common areas, Environmental impact (technological areas), was identified.

3 Recommendations

Based on the work done in this task, the following recommendations for future co-operation in maritime research have been made:

Application and execution of projects based on MARTEC calls should be as simple as possible. In particular they should be simpler than projects in FP7. This includes:

- Number of participant should not be very large. Typically can the minimum requirement be at least two industrial partners from two countries.

- The time from application to project start should be as short as possible. The representatives from the stakeholders want 6 months, but this may be somewhat difficult for MARTEC to achieve.

Common calls from MARTEC should be as open as possible with respect to thematic priorities. Since Calls in FP7 are specified to a certain degree, the stakeholders want MARTEC calls to be as open as possible. This will make MARTEC complimentary as a funding opportunity for international co-operation. MARTEC can accommodate this by including all its priority areas as defined in Chapter 1 in their calls. However participants from each country are limited by the priorities made in the funding programmes of their own country.

In addition to co-operation on common calls, it is recommended that MARTEC establish an overview of maritime research in Europe. This can be done by creating a database for projects funded by the partners and by the EU Commission.