



EU-funded Marine research from FP7 to Horizon 2020

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Overview of presentation

- Sea basin Strategies and marine research
- Marine research under FP7
- Examples of projects in the Mediterranean: SEAS-ERA and PERSEUS
- Marine research under Horizon 2020

Sea-basin Strategies and Marine research (1/2)

- **Sea basin strategies** received support by consecutive R&D Framework Programmes; support expected to continue through the new **Horizon 2020**
- **Baltic Strategy (2009)**
 - Bonus-185 (science pillar)
- **Integrated Maritime Policy for the Mediterranean (2009)**
 - Define a long-term strategic framework for basin-wide scientific co-operation in the Mediterranean => e.g. SEAS-era Mediterranean Strategic Research Agenda;
 - Develop a major cross-thematic research effort under the EU's FP7, targeted at integrating knowledge on the Mediterranean Sea => e.g. PERSEUS '*Policy-oriented marine Environmental Research in the Southern EUropean Seas*'.

Policy drivers for marine research (2/2)

- **Atlantic Strategy (2011)**

- Contribution of SEAS-era through the Atlantic Strategic Research Agenda in the definition of research priorities and in the Atlantic Strategy Action plan (to be adopted March 2013)
- International cooperation: The Atlantic Ocean Research Alliance with US and Canada
- Public call for suggestions for key investment and research priorities: stakeholders invited to comment – **deadline Feb. 15th**
http://ec.europa.eu/maritimeaffairs/policy/sea_basins/atlantic_ocean/index_en.htm

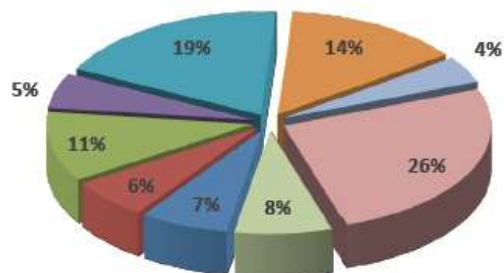
- **Strategy for the Adriatic and Ionian Seas (2012)**

Marine research under FP7

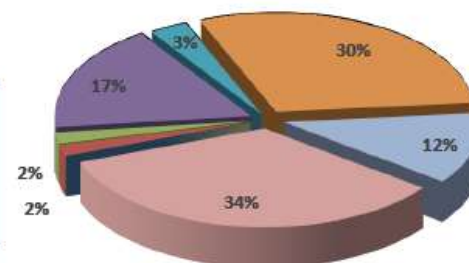
FP6 and FP7 Marine Projects

Source: Marine Knowledge Gate 1.0

FP6 (471 Projects, €863 M)

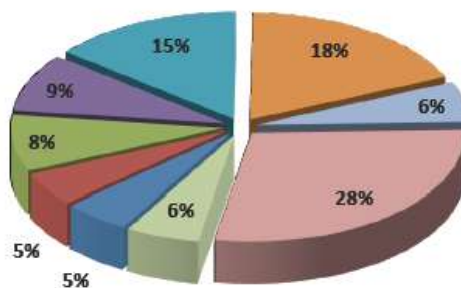


FP7 (514 Projects, €1,123 M)*



**> 1,000 Projects
> €2 Billion**

Combined FP6 & FP7



- < 300k
- 300k - 600k
- 600k - 900k
- 900k - 1.2m
- 1.2m - 2.2m
- 2.2m - 3.2m
- 3.2m - 4.2m
- 4.2m - 14m
- > 14m

* FP7 Data up to June 2011

FP7 Environment Programme

Marine & Coastal Research

1. Climate change, pollution, and risks - Integrated research on the functioning of climate and the earth and marine system, including the polar regions.

2. Sustainable Management of Resources

Research activities will be targeted to improve the knowledge basis and develop advanced models and tools needed for the **sustainable management of resources** and the creation of sustainable consumption patterns, **including marine resources**.

Specific research is required to improve our understanding of the impacts of **human activities on the ocean and seas and on the resources of the marine environment**, including the pollution and eutrophication of regional seas and coastal areas.

Research activities in **aquatic environments including coastal, regional and deep sea ecosystems and seabed**, will be carried out in order to observe, monitor and predict the behaviour of this environment and enhance understanding of the sea and the sustainable use of ocean resources.

3. Environmental Technologies Research will target in particular technologies for managing natural resources or treating pollution more efficiently, in relation to **marine**

4. Earth observation and assessment tools for sustainable development -

Development of **ocean observation systems and monitoring methods** (GEO initiative).

MARINE Research for the Mediterranean in FP7

- **FP7 Fisheries & Aquaculture projects with a strong Mediterranean component:**
 - **15 projects, ~ 40 Million Euro**
- **FP7 Environment projects focusing in the Mediterranean or having WP or tasks targeting the region:**
 - **12 projects, 65 Million Euro**
- **FP7 "The Ocean of Tomorrow" projects targeting Mediterranean and Black Sea**
 - **3 projects, 35 million Euro**
- **Total: 30 projects, ~ 140 million Euro**

Examples of projects in the Mediterranean: SEAS-ERA and PERSEUS

SEAS-ERA – ERA-NET: Objectives (1/2)

- Improve co-operation and co-ordination and promote harmonisation of national/regional research programmes by **setting up of a European Marine and Maritime Research Agenda**.
- **Foster synergies at regional and pan-European level**, mobilising competitive and non-competitive funds for research in a more coordinated way, through common programs and joint calls.
- Propose a plan for **a better and sustainable use of the existing Marine Research Infrastructures** (MRIs), in line with the actions undertaken within the Capacity Programme (ESFRI).
- **Reduce imbalances among regions through human capacity building** by setting up a pan-European training and mobility strategy for human resources, in cooperation with other capacity building programmes.
- Enhance **public awareness towards marine and maritime scientific and policy issues in Europe**.. Outreach activities should become a means to engage stakeholders beyond the R&D community. SEAS-ERA will emphasise public awareness and understanding the role of science in marine and maritime policy.

SEAS-ERA – ERA-NET

Main results for the Mediterranean (2/2)

- Strategic Research agenda for the Mediterranean
- Launch of joint calls for the Atlantic and the Mediterranean
- Two projects on indicators and science support and management tools for Good Environmental Status in the Mediterranean: MERMAID and CIGESMED

- 21 countries, including associated countries and Third countries (Black Sea)
- Coordinator: Ministerio de Economía y Competitividad, ES

<http://www.seas-era.eu>

PERSEUS - Policy-oriented marine environmental research in the Southern European Seas (1/2)

- Identify the interacting patterns of natural and human-derived pressures, assess their impact on marine ecosystems and design an effective and innovative research framework and strategy based on sound scientific knowledge
- Develop tools for the evaluation of environmental status using existing and upgraded monitoring and modelling capacities, including an innovative, small research vessel
- **Develop a framework of adaptive policies and design** and rank management schemes to help in reaching Good Environmental Status
- **Promote the principles and objectives of Marine Strategy Framework Directive** in the Mediterranean and Black Sea

PERSEUS - Policy-oriented marine environmental research in the Southern European Seas (2/2)

- 53 Partners in 21 countries
- Approx. 13 Million Euro
- Duration: 2012-2015
- Coordinator: dr. Evangelos Papathanassiou, Hellenic Centre for Marine Research

www.perseus-net.eu

Marine research under Horizon 2020

Three priorities



Excellent Science Proposed funding (€ million, 2014-2020)*

<i>European Research Council (ERC)</i> Frontier research by the best individual teams	13 095
<i>Future and Emerging Technologies</i> Collaborative research to open new fields of innovation	2 696
<i>Marie Skłodowska-Curie actions (MSCA)</i> Opportunities for training and career development	6 162
<i>Research infrastructures (including e-infrastructure)</i> Ensuring access to world-class facilities	2 488

* All funding figures in this presentation are subject to the pending Multiannual Financial Framework Regulation by the EP and the Council

Industrial Leadership Proposed funding (€ million, 2014-2020)

<i>Leadership in enabling and industrial technologies (LEITs)</i> (ICT, nanotechnologies, materials, biotechnology, manufacturing, space)	13 557
<i>Access to risk finance</i> Leveraging private finance and venture capital for research and innovation	2 842
<i>Innovation in SMEs</i> Fostering all forms of innovation in all types of SMEs	616 + complemented by expected 20% of budget of societal challenges + LEITs and 'Access to risk finance' with strong SME focus

Societal challenges Proposed funding (€ million, 2014-2020)

Health, demographic change and wellbeing	7 472
Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the Bioeconomy	3 851
Secure, clean and efficient energy *	5 931
Smart, green and integrated transport	6 339
Climate action, environment, resource efficiency and raw materials	3 081
Inclusive, innovative and reflective societies	1 310
Secure societies	1 695
<i>Science with and for society</i>	462
<i>Spreading excellence and widening participation</i>	816

* Additional funding for nuclear safety and security from the Euratom Treaty activities (2014-2018)

Role of the EIT and JRC in Horizon 2020

	<i>Proposed funding (€ million, 2014-2020)</i>
<i>European Institute of Innovation & Technology (EIT)</i> Combining research, innovation & training in knowledge and Innovation Communities	2 711
<i>Joint Research Centre (JRC)*</i> Providing a robust, evidence base for EU policies	1 903

* Additional funding for the JRC for Euratom Treaty activities

Horizon 2020 Marine research cross-cutting aspects

- The objective is to address **wide and complex ocean challenges which are cross-cutting in nature**
- **Links across several Societal Challenges** Food security (SC2), Environment (SC5), Transport (SC4), Energy(SC3) and other **pillars** of H2020 (Leading and Enabling Industrial leadership, Excellence in Science)
- Addressed in the Focus area "**Blue Growth**"

Marine research under H2020

Challenge 5

Climate action, environment, resource efficiency and raw materials

- **Fighting and adapting to climate change** e.g. further understanding the **role of the oceans**
- **Protection of the environment, sustainable management of natural resources, biodiversity** by further our understanding of the biodiversity and functioning of ecosystems, **including research on marine ecosystems, from coastal zones to the deep sea.**
- **Ensuring the sustainable supply of non-energy and non-agricultural raw materials** e.g. coastal sea and deep-sea resources
- **Enabling the transition towards a green economy through eco-innovation**
- **Developing comprehensive and sustained global environmental observation & information systems (including ocean observation)**

Focus Area Blue Growth: Unlocking the potential of the oceans

- AREA 1: Sustainably exploiting the diversity of marine life
- AREA 2: The new offshore challenge
- AREA 3: Exploitation of deep sea resources – deep sea mining
- AREA 4: Ocean observations systems and technologies
- AREA 5 : Horizontal aspects (e.g. dissemination of research outputs, international cooperation)

Next steps

- Formal political decisions on Horizon 2020
- Formal political decision on Multi-annual financial framework (2014-2020)
- Adoption of work programme and publication of first calls for proposals
- Horizon 2020 national launch events

Autumn 2013

Autumn 2013

11 December 2013

October to January 2014

IMPORTANT

These presentations reflect the current state of play. Neither the H2020 legislative package, nor any of the implementation guidelines have been fully adopted.



HORIZON 2020

**Thank you
for your attention!**

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HORIZON 2020 http://ec.europa.eu/research/horizon2020/index_en.cfm

Marine Research http://ec.europa.eu/research/environment/index_en.cfm?pg=marine

CORDIS Projects Service (project reports available) <http://cordis.europa.eu/projects>