



## ANNEX 1 – New Endorsed Projects

(as of August 2014)

IMBER has endorsed 35 research projects to date that contribute to the delivery of its objectives.

During the last year, 5 new projects were endorsed:

### **The Study of Kuroshio Ecosystem Dynamics for Sustainable Fisheries (SKED)**

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Kuroshio is a warm western boundary current of the North Pacific Ocean flowing along Ryukyu Islands and Japan. In spite of low-nutrient concentration of Kuroshio water, various fish species use the Kuroshio region as spawning and/or nursery grounds, and good fisheries grounds are formed in the region. In order to understand the mechanisms of high fisheries productivity from oligotrophic condition, i.e., Kuroshio Paradox, and to find a way for sustainable use of the ecosystem services, we started an interdisciplinary research project SKED (Study of Kuroshio Ecosystem Dynamics for Sustainable Fisheries) in October 2011, funded by the MEXT (Ministry of Education, Culture, Sports, Science and Technology, Japan). SKED is a 10-years project to 2021.

The themes of this project are:

- Theme 1: Physical mechanisms controlling the variability in nutrient supply
- Theme 2: Phytoplankton species composition and productivity
- Theme 3: Ecosystem structure and biogenic elemental cycling
- Theme 4: Fisheries and ecosystem interactions
- Theme 5: Mathematical model analyses for understanding the ecosystem dynamics and sustainable use of ecosystem services

To reach the goal of SKED, we use both mathematical modelling and field observation including satellite remote sensing.

**Area of study:** Kuroshio region (from Taiwan to Japan), western North Pacific

**Time Table for activities:** October 2011 - March 2021

**SKED Website:** <http://tnfri.fra.affrc.go.jp/kaiyo/sked/english/index.html>

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## **Policy-oriented marine Environmental Research in the Southern European Seas (PERSEUS)**

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The overall scientific objectives of PERSEUS are to identify the interacting patterns of natural and human-derived pressures on the Mediterranean and Black Seas (Southern European Seas - SES), assess their impact on marine ecosystems and, using the objectives and principles of the Marine Strategy Framework Directive (MSFD) as a vehicle, to design an effective and innovative research governance framework based on sound scientific knowledge. Well-coordinated scientific research and socio-economic analysis will be applied at a wide-ranging scale, from basin to coastal. The new knowledge will advance our understanding on the selection and application of the appropriate descriptors and indicators of the MSFD. New tools will be developed in order to evaluate the current environmental status, by way of combining monitoring and modelling capabilities and existing observational systems will be upgraded and extended. Moreover, PERSEUS will develop a concept of an innovative, small research vessel, aiming to serve as a scientific survey tool, in very shallow areas, where the currently available research vessels are inadequate. In view of reaching Good Environmental Status (GES), a scenario-based framework of adaptive policies and management schemes will be developed. Scenarios of a suitable time frame and spatial scope will be used to explore interactions between projected anthropogenic and natural pressures. A feasible and realistic adaptation policy framework will be defined and ranked in relation to vulnerable marine sectors/groups/regions in order to design management schemes for marine governance. Finally, the project will promote the principles and objectives outlined in the MSFD across the SES. Leading research Institutes and SMEs from EU Member States, Associated States, Associated Candidate countries, non-EU Mediterranean and Black Sea countries, will join forces in a coordinated manner, in order to address common environmental pressures, and ultimately, take action in the challenge of achieving GES.

PERSEUS has been set up to target the development of the necessary scientific understanding essential for assessing good environmental status of the Mediterranean and Black Seas (SES) in a coherent and integrated (holistic) manner, to support the ecosystem-based approach to management.

PERSEUS aims to design and create an effective and innovative research governance framework able to engage scientists, policy-makers and the public, thereby reaching a shared understanding and informed decision-making based on sound scientific knowledge, with particular reference not only to the Marine Strategy Framework Directive (MSFD), but also to the relevant features of the Integrated Maritime Policy, the Common Fisheries Policy, the Global Monitoring for Environment and Security and the SES regional sea conventions, the UNEP/Mediterranean Action Plan and the Black Sea Commission.

PERSEUS will pursue these targets through four well-structured scientific objectives.

- The first objective is to identify the interacting patterns of both natural and human-derived pressures on the SES and proceed with the assessment of their impact on the marine ecosystems.
- PERSEUS will address its second objective, to develop tools for the evaluation of the environmental status using existing and upgraded monitoring and modelling capabilities and propose options to ensure that these capabilities remain well-coordinated on a constant basis in the long-term.
- The developed tools will be used to implement the principles and objectives put forward in the Marine Strategy Framework Directive (MSFD) and promote them across the SES, which is PERSEUS' third objective.
- To promote better governance and GES achievement across the SES, the PERSEUS project will work towards its final objective, a framework for future implementation of adaptive policies and management schemes.

**Area of study:** Mediterranean and Black Seas

**Time Table for activities:** 1 January 2012 - 31 December 2015

**PERSEUS Website:** <http://www.perseus-net.eu/site/content.php>

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