“TNA consolidated final report”

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Content

1. Introduction

This report covers Deliverable D5.8 “TNA consolidated final report as part of Work Package NA5, Task 5.3 and as a contribution to the WP1. The EUROFLEETS Work Package NA5 was primarily dedicated to define common procedures and criteria for user access to the infrastructures provided through the EUROFLEETS Trans National Access (TNA) activities. It has been devoted to the practical management of the three calls organised under the TNA activities: “Ocean” (TNA1), “Regional 1” and “Regional 2” (TNA2). A detailed description of the EUROFLEETS call definition, submission and evaluation procedure is available in the Deliverables D5.3, D5.4, D5.7 and D1.7 and will therefore not repeated here. The whole process from the opening of the calls up to the final scheduling of the cruises took 6 to 7 month (see Table 1). This deliverable here focusses on the results of the TNA activities.

Table 1: Overview about the EUROFLEETS call and ship-time allocation process.

Call	Call opened	Call closed	Evaluation finalised	Cruises scheduled
Ocean	04.03.2010	31.05.2010	27.08.2010	13.09.2010
Regional 1	04.03.2010	31.05.2010	27.08.2010	13.09.2010
Regional 2	07.02.2011	02.05.2011	06.09.2011	20.09.2011

A central aim of EUROFLEETS was to provide access to research vessels for all European scientists and their partners, in particular for scientists from nations with limited, or no, access to research vessels and other marine infrastructure. Access has been be granted based on scientific excellence covering all fields of marine science from environmental and biodiversity protection to coastal zone management, geodynamics and climate change research. To pursue this aim, EUROFLEETS has offered fully funded transnational access to 5 Ocean/Global and 13 Regional vessels (Fig 1) and associated equipment (Fig. 2) in an open European integrated effort. The research vessels with the associated equipment have been

available from 2011 to 2013 in all oceans except the Pacific Ocean and the Polar Seas depending on the national schedule of the vessels. Nevertheless, a clear focus was set on the North Atlantic and the European Regional Seas, especially the Mediterranean Sea.

Fig. 1: Overview of all Research Vessels made available in EUROFLEETS.

Fig. 2: Overview of the equipment made available in EUROFLEETS.

Additionally, EUROFLEETS offered the possibility to get remote access to cruise data for onshore scientists on two global class vessels (RV L'Atalante and RV OGS-Explora). Unfortunately, scientists did not request this service.
Finally, EUROFLEETS asked the proponents to include a description on how they want to train young scientists and technicians on their cruises. EUROFLEETS strongly encouraged the PIs of the chosen cruises to include as many young scientists in their scientific party as possible also by providing additional financial support for the travel of these young scientists to the PI.

1.1. The Logistic Review Panel

Next to the Scientific Review Panel (SRP) that took care of the evaluation of the proposals for ship-time, the EUROFLEETS Logistic Review Panel (LRP) played an important role in placing the best proposals on research vessels and in scheduling the cruise. Therefore, the tasks of the LRP are described here in more detail:
The LRP consisted of fleet managers and research vessel operators nominated by EUROFLEETS beneficiaries and appointed by the EUROFLEETS Consortium. The LRP was composed of permanent members from EUROFLEETS beneficiaries and individual research vessel operators managing those ships, which were requested in proposals under evaluation. The EUROFLEETS Consortium appointed the chair of the LRP.
The mandate of the LRP was to make recommendations on the logistical feasibility of proposals - primarily regarding the area of operation and timing of cruises- during the evaluation process. Additionally, it provided recommendations on the choice of research

vessel and equipment. The decision on which cruises the successful proposals shall be placed was based on the following criteria:

- Feasibility based on geographic availability of vessel to work area (passage time to mobilisation port not covered under EUROFLEETS),
- Availability of vessel within required time period for survey,
- Suitability of vessel/vessel equipment for the proposed work program, e.g., Dynamic positioning, deep-water multibeam echosounder, number of berths etc.
- Other factors, e.g., diplomatic clearance issues.

2. Results of the TNA calls´

The following chapter describes the results of the call for ship-time on Global/Ocean Vessels (TNA 1) and of the two calls for Regional Vessels (TNA 2).

2.1. Global/Ocean call

Altogether 24 full proposals were submitted for ship-time on Global/Ocean Vessels by the deadline mentioned in table 1. One application had to be rejected, since it did not met the eligibility criteria in terms of requested proposal structure. Fig. 3 shows the requested research vessels of the 23 eligible proposals The RV Marion Dufresne received most proposals and this high demand was certainly related to the fact that it is the only RV capable of deploying the “Calypso” giant piston corer. This corer is able to retrieve very long cores of up to 70m and is therefore of high interest, especially for paleo-oceanographers. Other large equipment on offer was less in demand, e.g. the use of Nautile, or the ROV Holland 1. RV Polarstern was only requested once, which might be related to the fact that the area of operation and availability was more restricted than it was the case for other Global/Ocean class RVs. In general, most of the proponents (70 %) requested ship-time for a geology-related project (Fig. 3).

18 projects out of the 23 proposals requesting ship-time on a Global/Ocean class research vessel, were evaluated as A – recommended for scheduling - and 5 were not recommended (“success rate” 78%).

Research Vessel	No. of Proposals
L´Atalante	6
Celtic Explorer	4
Marion Dufresne	8
OGS - Explorer	4
Polarstern	1

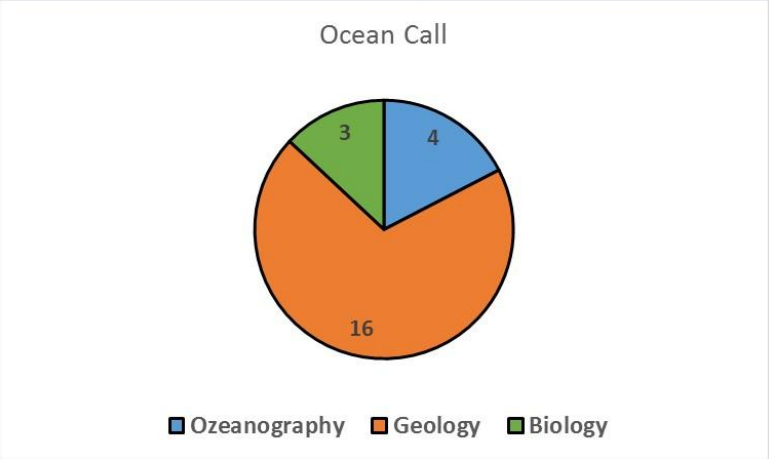

Fig. 3: Overview of the Global/Ocean call: Requested Research Vessels and scientific disciplines of the proposals.

The placement of proposals on RV Celtic Explorer, RV OGS-Explora and RV Polarstern by the LRP was straightforward. In all cases, the highest ranked proposal could be accommodated on the vessel of first choice. Available ship-time on RV Celtic Explorer was even extended since the user group provided its own ROV, thus releasing funds originally foreseen for the use of the ROV Holland 1. For RV Marion Dufresne and RV L'Atalante the accommodation of the highest ranked proposals was more difficult, since the investigation area envisaged in the well ranked proposals did not match up with the ships scheduled area of operation. This was especially true for RV L'Atalante where none of the proposals originally requiring this RV could be accommodated. However, it turned out, that a project requesting ship-time on a Regional class vessel was much more suitable to fit on RV L'Atalante. In case of RV Marion Dufresne, although the highest ranked proposal could not be placed due to mismatch between timing and area of operation, the second ranked proposal was chosen. Moreover, one further well ranked project could be placed on Marion Dufresne taking advantage of minimising passage time between stations for the two amalgamated projects.

After placing all well-ranked proposals on the Global/Ocean Vessels 10 free berths were still available on-board of RV L'Atalante. These berths were offered in conjunction with the Regional 2 call. In order to check whether the intended project fits with the logistical constraints

given through the already defined cruise, applicants were requested to contact the EUROFLEETS Evaluation Office prior to submission of a proposal for the remaining spare berths. This was done in order to avoid unnecessary work both for the applicants and the members of the SRP.

This step will lead to a collaborative cruise with two different scientific teams involved from the field of geology and biology. A multi-team and multi-disciplinary cruise in this form had not been carried out on RV L'Atalante before and thus has a very innovative character providing a number of challenges to the ship-operator at Ifremer but at the same time opening up new avenues for the future.

In this way a total of 7 projects could be allocated on Global/Ocean class research vessels representing 77 days of funded ship-time (Appendix I).

2.2. Regional 1 call

Altogether, 16 full proposals were submitted for the Regional 1 call. One applications had to be rejected since it did not met the eligibility criteria in terms of requested proposal structure. Fig. 4 shows the requested research vessels of the 15 eligible proposals. In comparison to the Global/Ocean Call the amount of proposals received for the offered vessels was distributed much more homogenously with 1 to 3 proposals for each vessel. Some Regional class RVs have not been requested at all as a first choice vessels, namely RV Aegaeo, RV Belgica, RV Heincke and RV Mare Nigrum. The proposal requesting ship-time on RV Oceania had to be rejected since it did not meet the eligibility criteria. In comparison to the proposals for the Global/Ocean call the scientific disciplines are much more equally distributed with 6 geological and 6 biological proposals and 3 for oceanography (Fig. 4).

Research Vessel	No. of Proposals
Akademik	2
Bilim 2	1
Celtic Voyager	2
Dom Carlos I	3
Garcia del Cid	2
Ramon Margalef	1
Salme	1
Urania	3

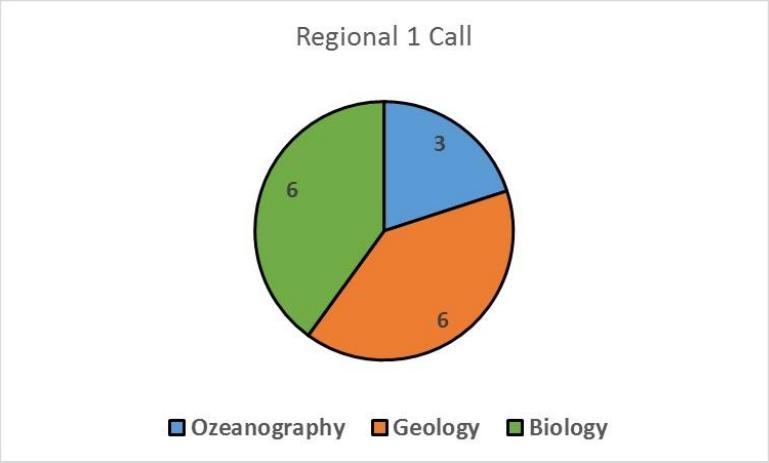

Fig. 4: Overview of the Regional 1 call: Requested Research Vessels and scientific disciplines of the proposals.

Within the Regional class proposals only 7 out of 15 projects passed the scientific evaluation ("success rate" 47%). These numbers reflect the impression perceived by the SRP members that proposals asking for ship-time on Global/Ocean class research vessels were of higher scientific quality and prepared in a more professional manner. In the case of the Regional class vessels, the detailed feedback provided to applicants via the Consensus Evaluation Report allowed proponents to submit an improved proposal to the "Regional 2" call, this leads to better results for the second call.

The placement of successful proposals on Regional class vessels by the LRP was equally effective in matching successful high ranked proposals with a suitable research vessel. For RV Urania, RV Garcia del Cid and RV Akademik, the highest evaluated proposals could in all cases be accommodated without any problem. One further proposal originally requesting ship-time on RV Akademik was strongly recommended to get funded even on a different ship and since the envisaged investigation area was located in the EEZs of Romania and Bulgaria, it was decided to split the cruise into two legs one scheduled on RV Akademik and the second on RV Mare Nigrum. Both legs were be accomplished back-to-back, to avoid additional travel costs. A project initially requesting ship-time on RV L'Atalante was placed on RV Dom Carlos I, since investigation area and required equipment to conduct the work programme were more suitable on a Regional class vessel. Conversely, as described above, a project requesting RV Dom Carlos I was placed on RV L'Atalante. In total 6 projects on Regional class vessels have been be realised through funding provided by the EUROFLEETS project amounting to 41.5 days of funded ship-time (Appendix I).

Research Vessel	No. of Proposals
Aegaeo	4
Belgica	2
Bilim 2	1
Celtic Voyager	2
Garcia del Cid	2
Oceania	1
Ramon Margalef	2
Salme	1
Urania	1

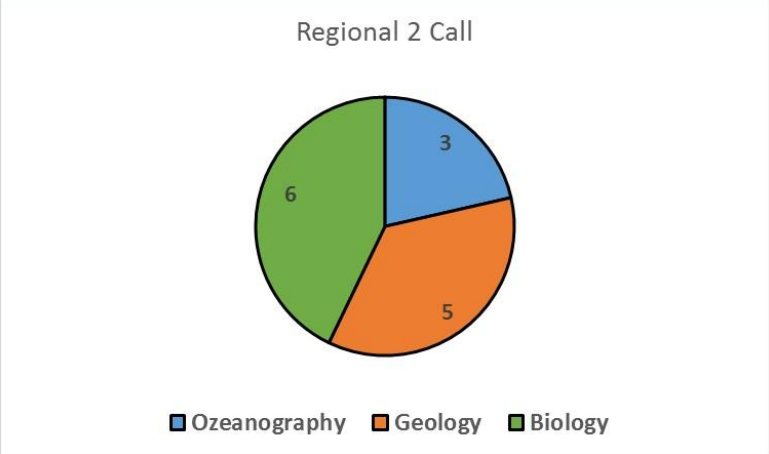

Fig. 5: Overview of the Regional 2 call: Requested Research Vessels and scientific disciplines of the proposals.

2.3. Regional 2 Call

Altogether, 17 full proposals were submitted on the “Regional 2” call by the deadline of 2nd of May 2011. All applications were eligible but one PI withdraw his proposal at a later stage. Additionally, the EUROFLEETS Evaluation Office had to cancel the cruise scheduled for Bilim 1 because the PI did not provide the necessary research permission in time. Except RV Heincke, all regional research vessels opened in the frame of this call were requested (Fig. 5).

In comparison to the tendency of the previous calls, that most of the proposals requested ship-time for a geology-related project, the distribution between bio- (6) and geoscientific (5) proposals has been nearly equal for the “Regional 2” call (Fig. 5).

To summarise, of the 16 proposals requesting ship-time on a regional class RV, 15 projects were evaluated as A – recommended for scheduling – and only 1 proposal was not recommended (“scientific success rate” 94%). In comparison to that, the Regional 1 call has had a “scientific success rate” of 47% only. These figures reflect that the alteration in the application system that have been introduced for the Regional 2 call (see Deliverable 5.7) have proven to be successful.

In the Regional 2 Call, all PIs of the highest ranked proposals received ship-time on vessels of their first choice. As Oceania was requested only one time and the proposal was evaluated with C- not recommended for funding, no Regional 2 cruise with Oceania has been carried out.

In total **8 projects** could be allocated on Regional class vessels (Appendix I) representing **72 days of funded ship-time.** Unfortunately only 7 cruises finally took place, which was due to the above mentioned cancellation of the cruise on Bilim 1.

3. Summary of the TNA carried out in EUROFLEETS

The EUROFLEETS idea to provide ship-time on a big suite of European Research Vessels has proven to be very successful. Altogether, 54 proposals for ship-time on Global / Ocean and Regional Research Vessels were submitted in two separate calls, indicating the demand for marine research cruises in Europe.17 cruises have been successfully carried out and all cruise reports have been delivered in time. Only marginal troubles or delays in the cruises have taken place. The areas of operation for the Global/Ocean Vessels span from one of the longest oceanographic transect ever made through the whole Atlantic Ocean on-board of RV Polarstern (Atlantic CDOM cruise) to distinct areas and very detailed mapping and sampling in the western Mediterranean Sea by the SALTFLU project on-board of RV OGS Explorer (Fig.

Fig. 6: Operational areas of the Global/Ocean Vessels in EUROFLEETS.

Fig. 7: Operational areas of the Regional Vessels in EUROFLEETS.

6). The operational areas of the Regional Vessels showed a clear focus on the Mediterranean and its marginal seas (e.g Black Sea) (Fig. 7). Usually, these cruises took place as one single expedition but EUROFLEETS also provided the Estonian RV Salme to a Latvian group of scientists for 4 cruises in the Baltic Sea to study the seasonal variability of the pelagic – benthic system.

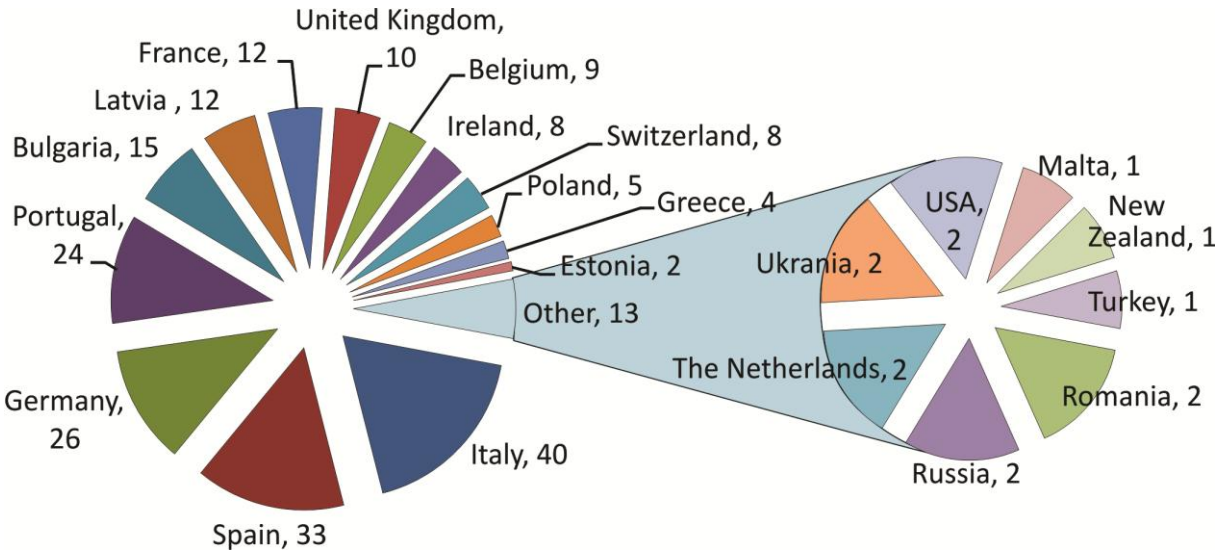

Fig. 7: Overview on the nationalities of the participants of the EUROFLEETs cruises.

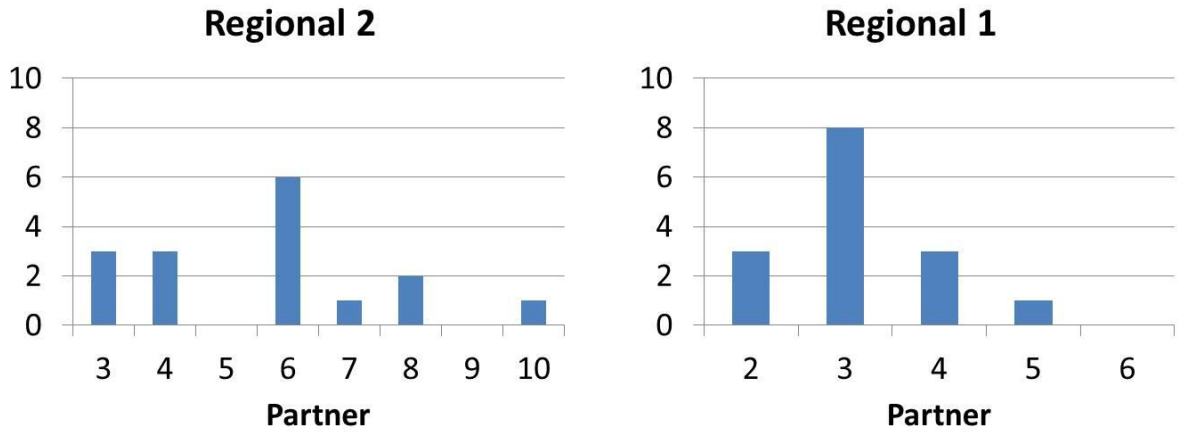

Fig. 8: Comparison of the proposal partnership of the Regional 1 and Regional 2 calls.

Altogether, 221 scientists and students participated in the EUROFLEETS cruises. The Principal Investigators of the cruises came from all over Europe and international collaborators from US, Australia, New Zealand etc. have been involved in the cruises as well (Fig. 7). Most of the cruise participants came from Italy, followed by Spain and Germany (Fig. 7). Additionally, the applications for the Regional 2 call contained more proposals from new European Member States or other countries than the proposals for the Regional 1 call, showing that the call for proposals reached a bigger audience and the guidance given for the applications helped also scientists from new member states to successfully apply for ship-time (Fig. 8).

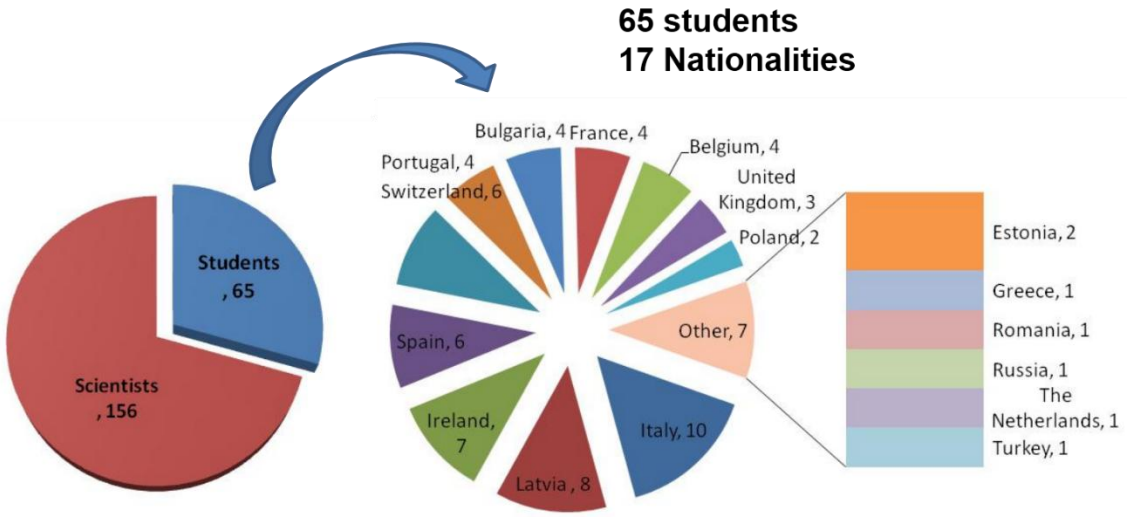

Fig. 9: Amount of students trained in EUROFLEETS cruises and their nationality.

A program for training of young scientists has been carried out on all EUROFLEETS cruises. 65 students participated in the cruises representing 30 % of the on-board scientific party. The students had 17 different nationalities (Fig.9). The majority (10) came from Italy, followed by Latvia (8) and Ireland (7).

Appendix 1: Principal Investigators, Areas of Operation and Scientific Disciplines of the EUROFLEETS cruises

OCEAN Call

Global vessels	Principal Investigator	Lead Organisation	Cruise Name	Timing	Scientific Berths	Geographical Area	Main scientific disciplines
Polarstern	Piotr Kowalszuk	Institute of Oceanology, Polish Academy of Science, Poland	**Atlantic CDOM**	11.04 - 16.05.2012	4	Atlantic Ocean	Physical Oceanography, Biogeochemistry
Celtic Explorer	Peter Linke	Helmholtz-Zentrum für Ozeanforschung, Kiel (GEOMAR), Germany	**ECO2@NORTH SEA**	20.07. - 06.08.2012	19	North Sea	Physical & Biological Oceanography, Geology, Geochemistry, Sedimentology, Biogeochemistry, New Technologies
Marion Dufresne	Silvia Nave	Laboratório Nacional de Energia e Geologia, Portugal	**TORE**	10.06. - 21.06.2013	8	Tore Seamount Region, off Iberia	Physical Oceanography, Geology, Geophysics, Sedimentology, Biogeochemistry
Marion Dufresne	David van Rooij	Ghent University, Belgium	**Gateway**	10.06. - 21.06.2013	30	Gulf of Cadiz and Alboran Sea	Geology, Geochemistry, Sedimentology, Biogeochemistry
L'Atalante	Francesco Latino Chiocci	University of Rome, Italy	**FIAVI**	05.- 17.09.2011	5	Azores	Biology, Biological Oceanography
L'Atalante	Kirsty Kemp	Institute of Zoology, Zoological Society of London, UK	**IOZOC**	05.- 17.09.2011	15	Azores	Geology
OGS Explora	Angelo Camerlenghi / Roger Urgeles	ICREA, University of Barcelona, Spain	**SALTFLU**	25.06. - 04.07.2012	6	Western Mediterranean, Algero-Balearic abyssal plain	Geology, Geophysics, Geochemistry, Sedimentology

Regional 1 Call							
Regional vessels	**Principal Investigator**	**Lead Organisation**	**Cruise Name**	**Timing**	**Scientific Berths**	**Geographical Area**	**Main scientific disciplines**
Akademik	Jens Greinert	Royal Netherlands Institute for Sea Research (NIOZ), The Netherlands	**SPUX**	18. - 25.09.2012	22	Black Sea	Physical Oceanography, Geology, Geophysics, Geochemistry, Sedimentology
Akademik and Mare Nigrum	Temel Oguz	Institute of Marine Sciences (IMS), Turkey	**BIO-OPT**	31.06. - 15.07.2011	12	Western Black Sea	Biology, Biological Oceanography, Biogeochemistry
Dom Carlos 1	Virgine Riou	Vrije Universiteit Brussel, Belgium	**DIAPICNA**	25.07. - 09.08.2011	6	Azores	Biological Oceanography, Biogeochemistry
Garcia del Cid	Antje Voelker	Laboratorio Nacional de Energia e Geologia, Portugal	**Iberia Forams**	07. - 14.09.2012	15	western Iberia margin	Physical Oceanography, Geochemistry, Biology, Biogeochemistry
Urania	Daniel McGinnis	Helmholtz-Zentrum für Ozeanforschung, Kiel (GEOMAR), Germany	**PaCo2**	27.07. - 01.08.2011	6	Mediterranean Sea: Off the coast of Panarea Island (Aeolian Islands, Italy)	Physical & Biological Oceanography, Geophysics, Geochemistry, Biology, Biogeochemistry

Regional 2 Call

Regional vessels	Principal Investigator	Lead Organisation	Cruise Name	Timing	Scientific Berths	Geographical Area	Main scientific disciplines
Aegaeo with Thetis & Max Rover	Javier Ecartin	Centre national de la recherche scientifique (CNRS), France	**Caldera 2012**	13. - 23. 07.2012	16	Caldera area of Santorini island, Greece	Physical Oceanography, Geophysics, Geochemistry, New Technologies
Belgica	Silvia Spezzaferri	University of Fribourg, Switzerland	**CWC-Moira**	01. - 08.06.2012	13	Eastern slope of the Porcupine Seabight	Geology
Celtic Voyager	Katrien van Landeghem	University of Liverpool	**AmSedis**	09. - 16.04.2012	8	Irish Sea	Geology, Geophysics, Geochemistry, Sedimentology, Biogeochemistry
Garcia del Cid	Margarida Castro	Universidade do Algarve, Portugal	**IMPACT**	16. - 23.09.2012	12	South coast of Portugal	Physical Oceanography, Sedimentology, Fisheries Research, Biological Oceanography, New Technologies
Ramon Margalef	Elia d´Acremont	University of Pierre et Marie Curie (UPMC-Paris 6); France	**SARAS**	10. - 18.08.2012	11	Alboran Sea	Geology, Geophysics, Sedimentology
Salme	Sylvia Strake	Latvian Institute of Aquatic Ecology, Latvia	**CIPEC**	2012 (4 legs 5 days each in January April, August and October)	9	Gulf of Riga (Baltic Sea)	Physical Oceanography, Biology, Biogeochemistry
Urania	Aaron Micaleff	University of Barcelona, Spain; University of Malta, Malta	**CUMECS**	28.06.-02.07.2012	8	Malta Escarpment	Geology, Sedimentology, New Technologies