



Training through Marine Research and Floating Universities



WP7 Objectives

- 1) Build on offshore training activities developed in Eurofleets1 by pooling infrastructure, facilities and expertise to achieve collaborative European approach to marine education and training.
- 2) Prepare the next generation of European marine scientists by providing the skills, experience, confidence and networks to work at sea.
- 3) Broaden access to world-class marine infrastructures particularly for Early Stage Researchers (ESRs) from less equipped countries.
- 4) Build capacity in offshore research by developing a range of innovative, accredited offshore training opportunities to meet identified skills needs.





WP7 Training through Marine Research & Floating Universities

Pillars



1. TNA
Preparatory
Workshops



2. On-board
Training
Courses



3. Floating
University



4. Access
Programme



1. Preparatory Workshop on Regional TNA Calls

- Objective to familiarise early stage researchers in writing competitive TNA proposals for Eurofleets 2 ship-time.
- Hosted by TUT in Tallinn, Estonia 17–21 Feb 2014.
- Trainers from TUT (Estonia), CNR (Italy), OGS (Italy), Marine Institute (Ireland).
- Total of 8 participants from 7 countries.

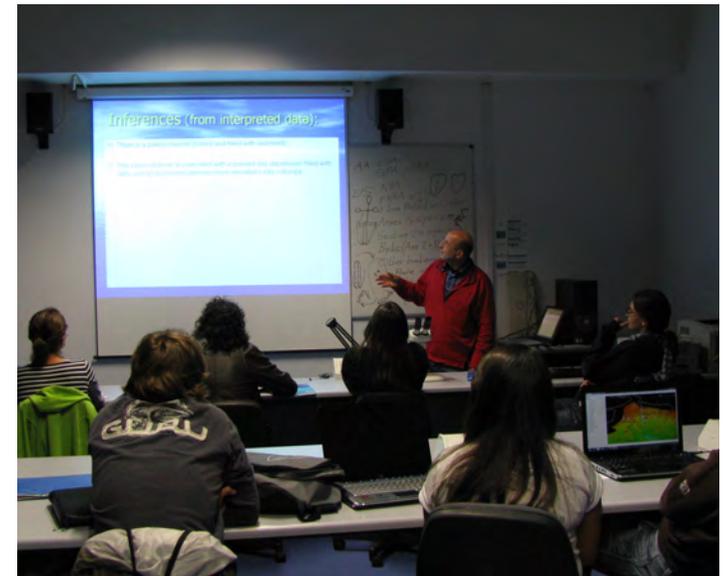
*Marga Gracià, PhD, Spain – **PI of GRACO**, successful RC2*

*Marga Gracià, PhD, Spain – **partner of PANTHER**, RC3*

*Violeta Slabakova, PhD, Bulgaria – **participant BIO-OPT**, RC3*

*Concetta De Santi, PhD, Italy – **participant PharmaDeep**, RC2*

*Jadranka Sepic, PhD, Croatia – **remote participant ESAW**, RC3*





WP7/NA6 Training through Marine Research & Floating

Universities



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Eurofleets On-board Training Courses

3 On board Training courses delivered



RV Urania: 4th – 9th July, Messina (Italy)
Multidisciplinary Ship-based training for European Postgraduates and Graduate Students of Marine Sciences

11 students from 9 countries



RV Salme: 17th – 22nd August, Tallinn (Estonia)
Using New Technologies for Multidisciplinary Oceanographic Research

10 students from 7 countries



RV Bios II: 16th to 27th June 2015, Split (HR)
Oceanographic Ship-based Training Course for Postgraduate and Graduate Students of Marine Sciences

12 students from 11 countries



RV Urania, 4–9 July 2014, Messina, Sicily (CNR)

- 6 day course on RV Urania led by Anna Vetrano CNR (Italy) in association with MI and OGS off Sicily.
- Focussed on Multidisciplinary Ship-based training for Postgraduate Students of Marine Sciences.
- > 60 online applications received.
- 11 students from 9 countries: Spain (2), Greece (2), Turkey, Ghana, Tunisia, Germany, UK, Portugal, Italy.
- Included 5 days at sea plus pre and post-survey lectures, labs, data processing workshops and survey reporting for assessment.



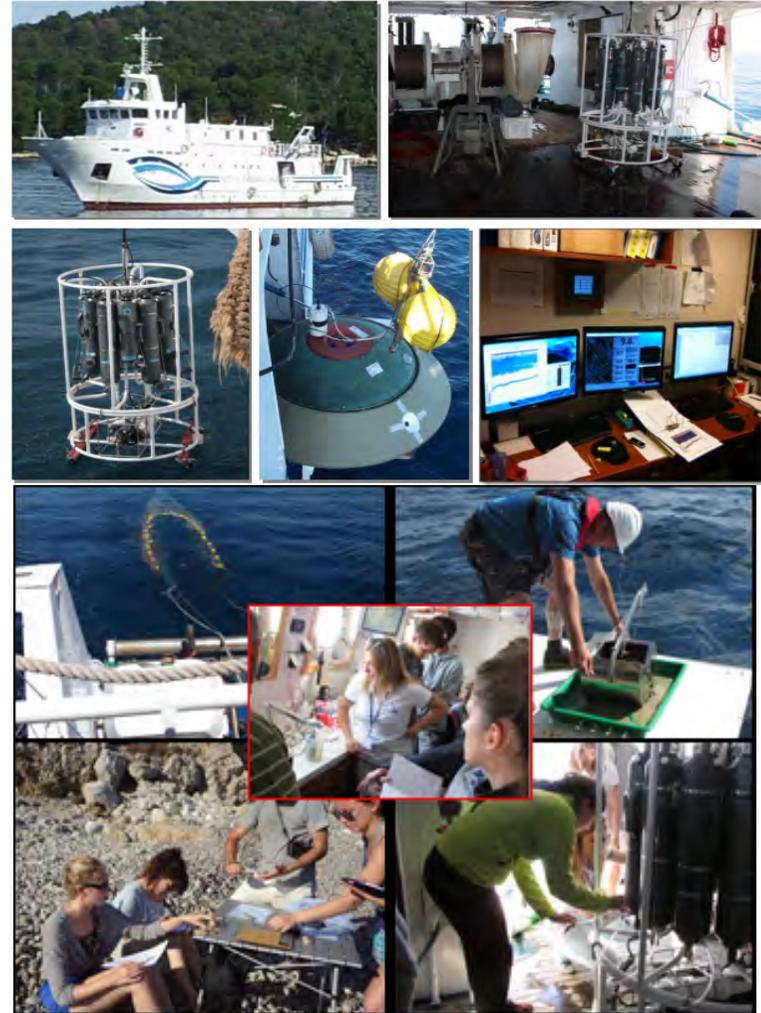
RV Salme, 17–22 August 2014, Tallinn, Estonia (TUT)

- 6 day course on RV Salme led by Urmas Lips TUT (Estonia), CNR and GEOMAR in Baltic.
- Using New Technologies for Multidisciplinary Oceanographic Research (including gliders, autonomous profilers, ferryboxes and towed instruments).
- 23 applications received.
- 10 students from 7 countries: Spain (3), Portugal (2), Argentina (1), Croatia (1), Serbia (1), Germany (1), Turkey (1).
- Included 2 days at sea plus lectures, data processing, analysis and visualisation workshops.



RV Bios DVA: 16–27 June 2015, Split, Croatia (IOF)

- 12 day course on RV Bios DVA led by Vlado Dadic of Institute of Oceanography and Fisheries (IOF), Croatia in central Adriatic.
- Oceanographic Ship-based Training for MSc and PhD Students of Marine Sciences.
- More than 110 on-line applications received.
- 12 students from 11 countries selected: Croatia (2), Denmark, UK, Ireland, Italy, Malta, Portugal, Netherland, Spain, Turkey and India.
- Included on-board lectures, sample processing labs, data processing workshops and seminars.





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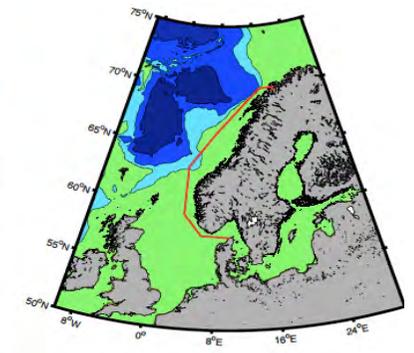


4. Access
Programme



Floating University

- 2 week course on RV Dana transit from Tromso, Norway to Hirtshals, Denmark.
- Led by Colin Stedman of DTU Aqua with OGS and MI.
- Focused on Practical Aspects of Physical, Chemical and Biological Oceanography at Sea.
- 198 applications received.
- 18 students from 8 countries (8 MSc and 10 PhD students).
- Included lectures, PST cert and post-survey data work-up in Copenhagen.





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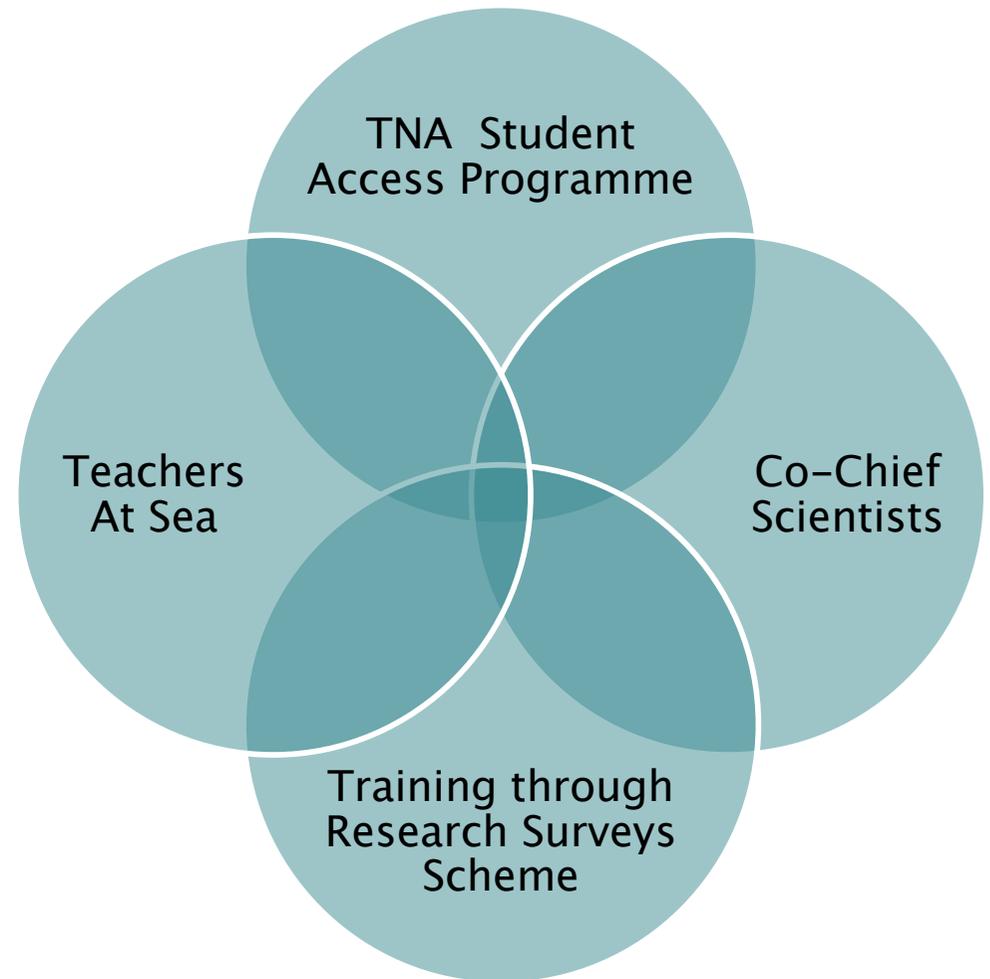


4. Access
Programme



4. Access Programme

- Series of initiatives designed to broaden access to Research Vessels.
- Aimed at users from less equipped countries.
- Includes students, ESRs, teachers and young Co-Chief Scientists.
- TNA proposals included training as an evaluation category.
- PIs committed to facilitate students as part of the on-board team.



4.1 TNA Student Access Programme



ORCA



PolarPlastics



PREPARED



MULLET



BenthHabIceland



DeepMap



BURSTER



PHARMADEEP



GRACO



MED-SUV.ISES



IRIS



ESAW



BIO-OPT



Panther

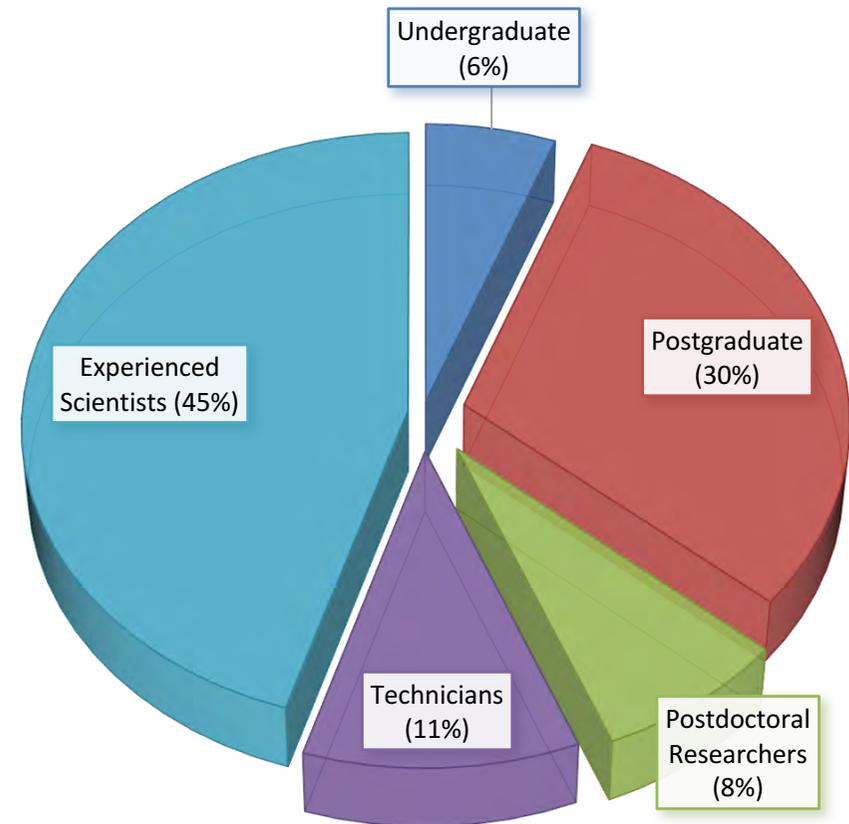


Floating University



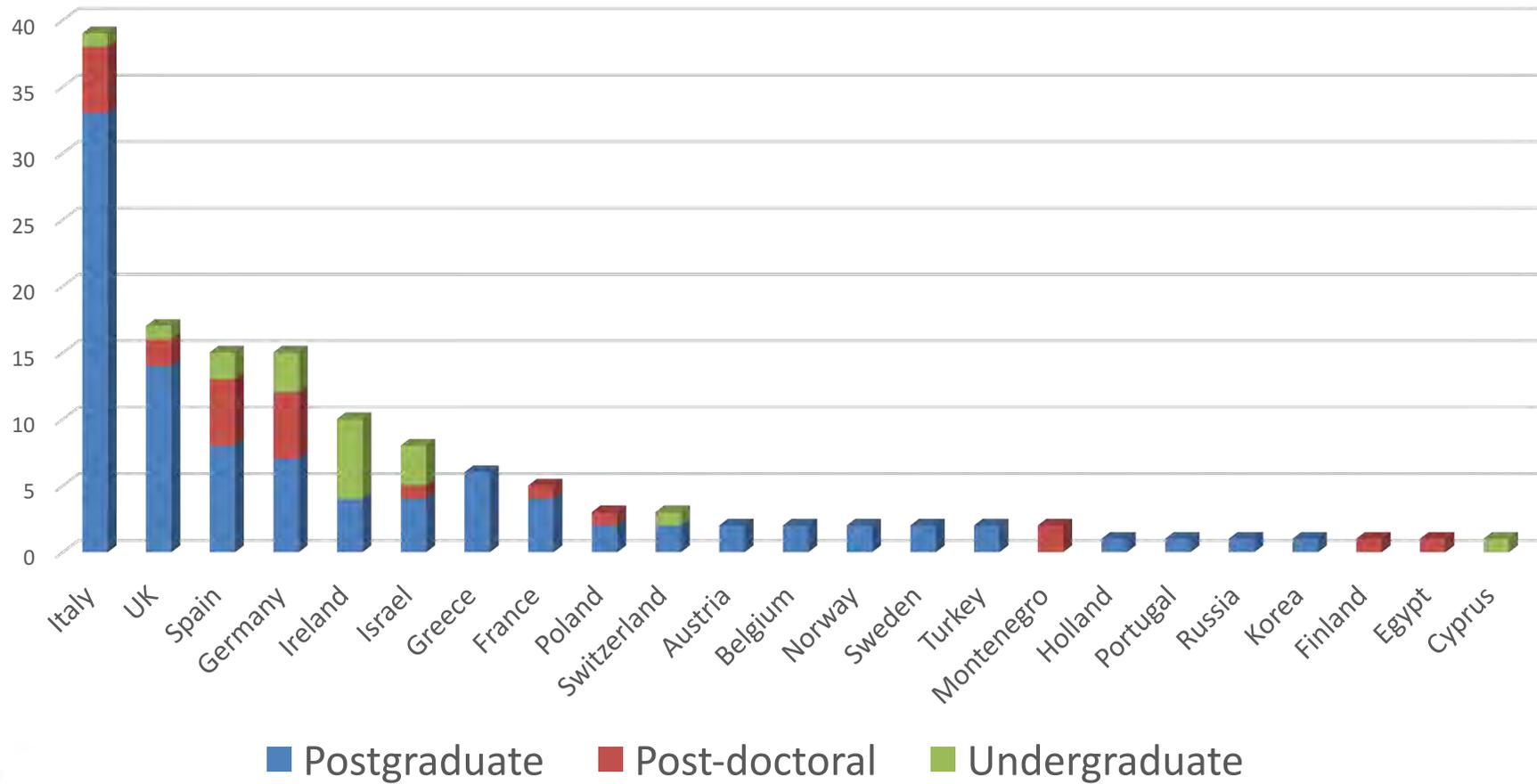
4.1 TNA Student Access Programme

- Total TNA calls from Eurofleets 2 resulted in a total of 312 embarked personnel.
- Of these 44% (or 137 participants) were comprised of:
 - 6% Undergraduate students (18)
 - 30% Postgraduate students (96)
 - 8% Postdoctoral researchers (24)
- ESR participation equated to over 1400 capacity building days at sea.



4.1 TNA Student Access Programme

Nationality of On-board Students and Early Stage Researchers



4.2 Training through Research Surveys Scheme

- PIs on Eurofleets 2 surveys approached to host TTRS internships for researchers (with WP5).
- Call released in early 2016.
- Received 76 applications for just 4 berths on two Regional Call 2 surveys:
 1. Two PhD students (Poland and Spain) participated on the BURSTER research survey from Bremerhaven, Germany to Svalbard on-board RV Polarstern (June 2016).
 2. One PhD and One Post-doc (UK & Spain) participated in the GRACO survey from Cadiz to Cadiz on-board the RV L'Atalante (Oct 2016).



4.3 Teacher at Sea Access Programme

- ‘Teacher at sea’ programme, organised by Eurofleets in association with the European Geosciences Union (EGU) GIFT Programme.
- Provides teachers with real-world, hands-on ocean research experience.
- 2 Teachers at Sea berths offered through Eurofleets:

Italian Natural Science teacher Giulia Realdon participated in the oceanographic PREPARED survey in the Barents Sea, onboard RV G.O Sars (5–15 June 2014)

tasprepared.blogspot.com.

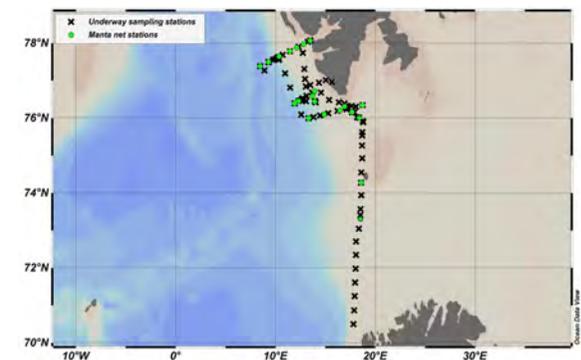
French biology teacher Christophe Le Gall took part in the BURSTER survey in the Barents Sea, onboard the German RV Polarstern (13–23 June 2016)

<http://eurofleets2burster.blogspot.it>.



4.4 Co-Chief Scientist Access Programme

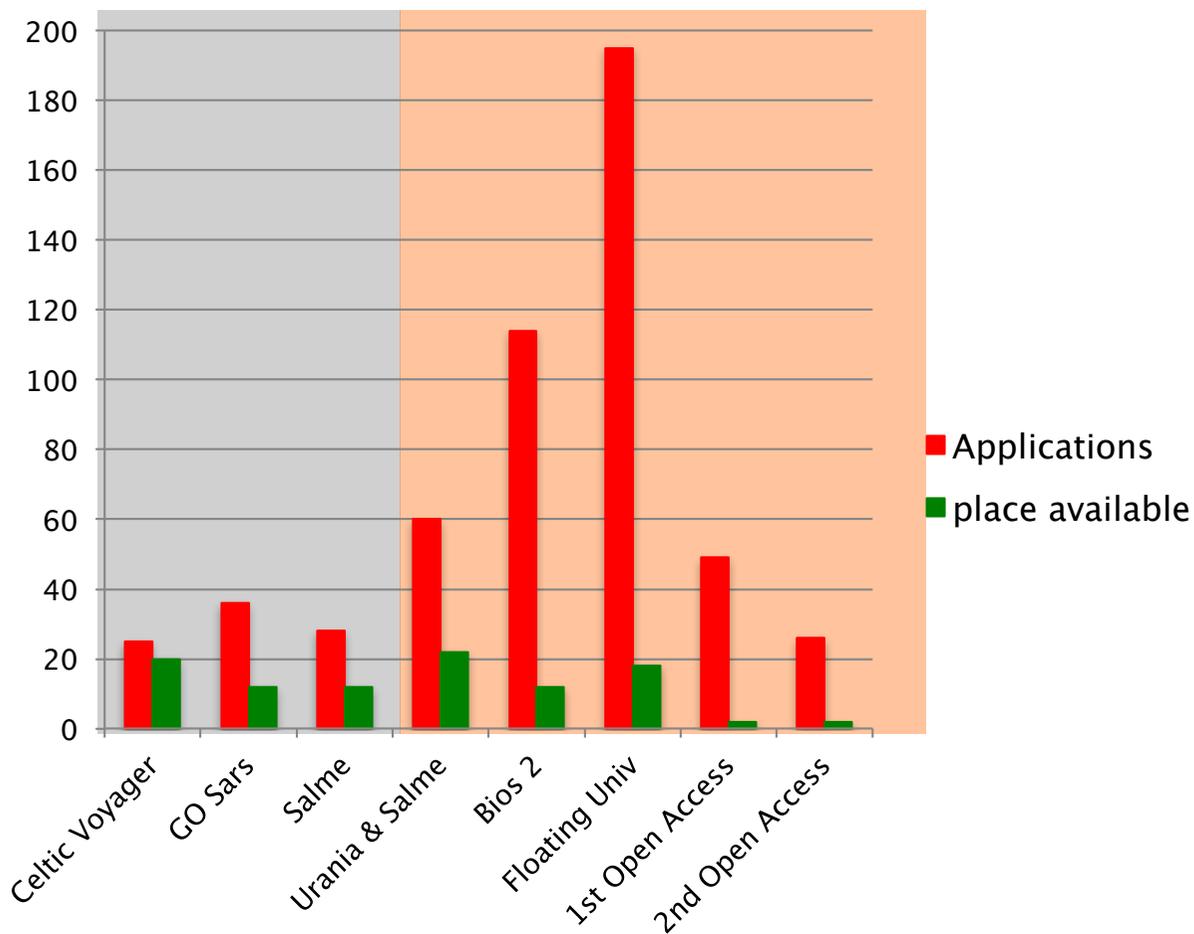
- PhD Student Amy Lusher (GMIT, Ireland) applied under **Eurofleets 2 Polar and Subpolar** TNA Call to study microplastics in Arctic waters.
- ‘Polar Plastics’ proposal evaluated along with all TNA proposals.
- Due to the excellence of the project, 2 days added to the OGS-led PREPARED survey in NW Barents Sea.
- Valuable opportunity for a young PhD student to run their own research as Co-chief scientist on international survey.
- Good model to encourage young researchers to ‘piggyback’ on international, multidisciplinary TNA surveys.



Eurofleets On-board Training and Access Programme



Eurofleets1 legacy to Eurofleets2

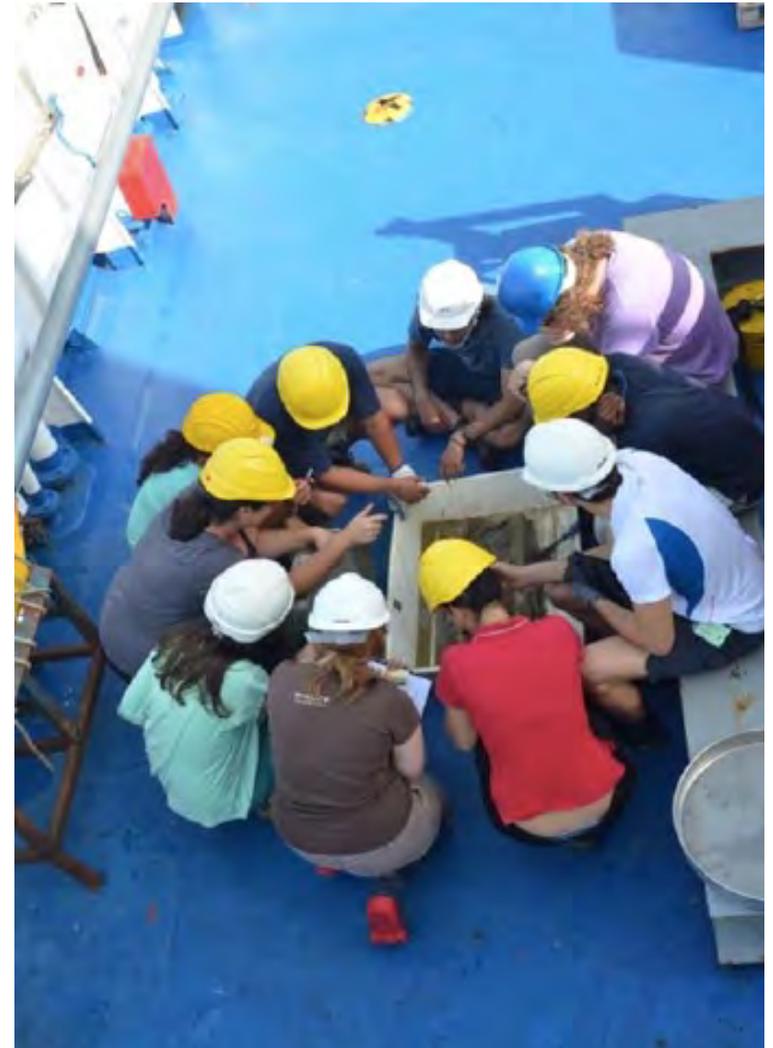


Eurofleets 2 on-board training courses and Floating University programme builds on activities developed in Eurofleets 1.

Eurofleets On-board Training Courses – Feedback

Evaluations show that highlights of offshore training includes:

- Experience of working with international scientists and crews;
- Skills gained in operation and deployment of instrumentation;
- The integrated multidisciplinary approach to research;
- Experience of data processing, analysis and visualisation software;
- Atmosphere and time on-board;
- On-board seminars and lectures;
- Confidence gained in working at sea;
- Networking with world-class scientists and peers.



Conclusion

- Experience gained in development and organisation of on-board training allows Eurofleets to become reference programme internationally.
- This alliance of research vessels, universities and research institutions strengthens individual and collective capability and creates critical mass.
- Future training should be integrated, embedded and across all research and shiptime TNA activities.
- This should be reflected in terms of increased support in logistics and shiptime budget for dedicated training activities.

The challenge is now to continue to build capacity by training the next generation of ocean scientists, to ensure scientific excellence in European research institutes and to inspire the brightest and best for a career in marine science.





Thank You for listening.

Acknowledgements

The Captains and crew of all Eurofleets 2 vessels, PIs and scientific crews who facilitated training opportunities and all organisations and institutions that supported WP7 ship-based training.

