

Proposal for a new *ad-hoc* ERVO Working Group: *European RVs economics, management processes and spare capacity*

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European RVs economics

Ocean science has become 'big science', involving Research Vessels (RVs) in addition to sophisticated and costly instruments and equipment. Scientific research generally requires **large budgets**, usually resourced from the **public**. And this often leads to the question 'Why is it important to go to sea and spend all this money?'

The financial information about RVs' economics is scattered through the various stakeholders, thus hampering the understanding of how much and how public money is used for this purpose, and the comparisons with the **benefits**, which are essential to justify these expenditures and rationalize them.

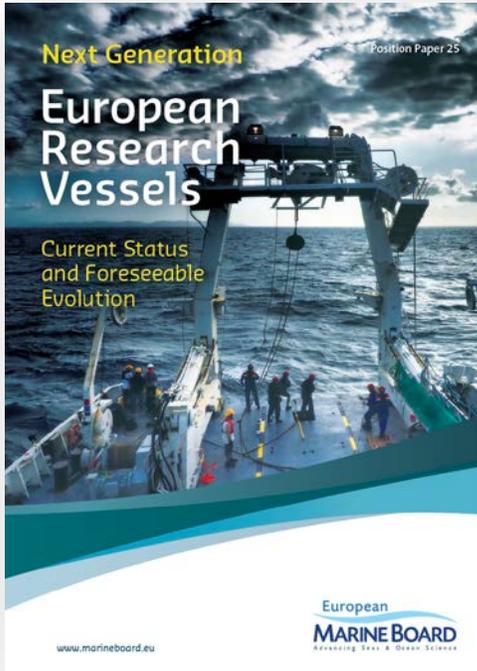
The **European Marine Board's Position Paper #25** "Next Generation European Research Vessels – Current Status and Foreseeable Evolution" (Nieuwejaar *et al.*, 2019) **does not discuss the costs and economics associated with research vessels**, which is a very complicated and nuanced topic.

Following a **meeting S. Bryton** at EurOcean had with **DG MARE** at the European Commission (EC), it was expressed the **importance, but also the difficulties** from policy makers at the highest level in the European Union **to obtain this sort of financial information**.

Apparently, **DG MARE** has been trying to do this for many years without success!

- ❑ **Well over a decade ago, a subset of IRSO (International Research Ship Operators) formed a group to exchange operating costs information in order to benchmark their operations**
 - ❑ **Crew per vessel (light and heavy deck operations):** Deck Officers, Marine Engineering, Catering Staff, Deck Ratings, Deck Engineers, Comms/radio
 - ❑ **Scientific support:** Instrumentation/Electronics Technicians, ROV Pilots and Engineers, Submarine Support, Engineering, Seismic, IT support, Data Acquisition & QC
 - ❑ **Shore support:** General Management, Operations, Instrumentation Management, Safety, HR, Procurement, Finance, Technical Superintendent, Engineering other, Administration, Travel, Transport/Logistics, Engineering Workshop Fitters/welders
 - ❑ **Marine costs:** Crew Wages, Fuel, Food, Insurance, Engineering, Instrumentation, Transport/Logistics, Travel/Subsistence, Comms, Agency, Safety and Security, Vessel Refits (average over 5 years)
 - ❑ **Shore support costs:** Staff Costs (inc Mangement Fee), Insurance, Leases/rents, Other costs (Rates/Service Charges/Utilities, Workshop, Warehouse Running Costs), Mangement Fee, Engineering, Instrumentation, Transport/Logistics, Travel/Subsistence, Office Costs, Agency, Port Charges
 - ❑ **Science support costs:** Instrumentation/Electronics Technicans, Surveyors for Hydrographic and Geophysical Ops, ROV Pilots and Engineers, Submarine Support, Engineering, Seismic, IT support, Data Acquisition & QC
- ❑ **Similar piece of work should be carried out across the European RVs (or at least a subset of them). This exercise would be a good contribution to the EC, as well as to the RVs operators/owners community in Europe, e.g., benchmark analysis of the operations, initiatives for rationalization of funding, discussion on central purchase bodies.**

European RVs management processes



- ❑ Drafting the **EMB Position Paper #25**, in order to gain **insight into the management processes** that are currently in place for the European research fleet, **a survey was sent to a list of European RV operators.**
- ❑ **45 RV operators responded to the survey covering 104 European RVs from 22 countries.**
- ❑ **A fundamental work has been done** with this survey and the associated outputs would deserve to be kept updated in the future, and maybe even enlarging the scope of the survey to include, for example, the challenges the European RV operators face and possible options they envision.
- ❑ **Having a document, which expresses the practices and thoughts of the European RV operators, seems like an important thing to have by itself in this landscape.**

No. of RV operators and RVs approached

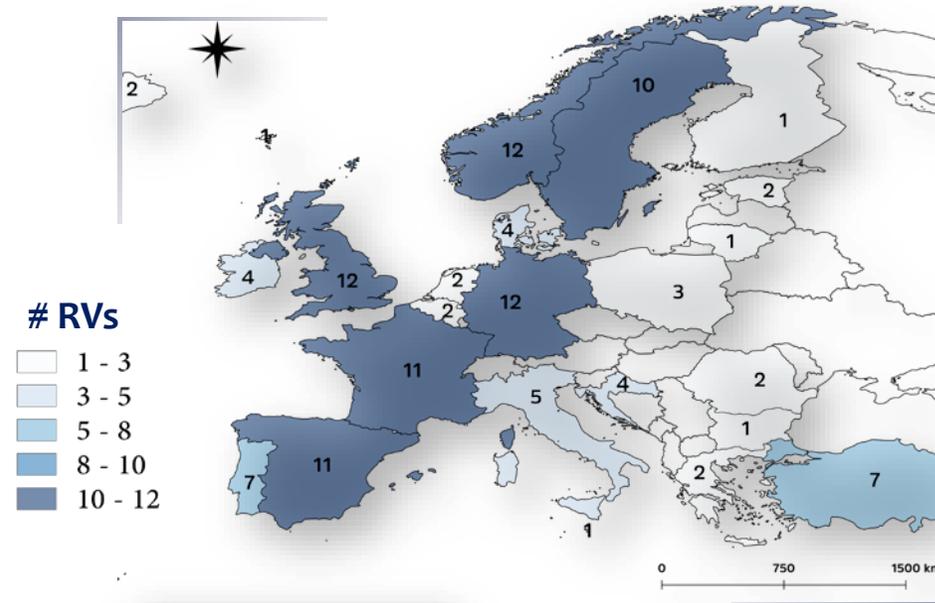
- ✓ # 73 RVs operators
- ✓ # 119 RVs
- ✓ # 24 countries

Questionnaire on the description of present national management processes of European Research Vessels and marine support personnel training

As part of the activities of the European Marine Board (EMB) Working Group "Next Generation European Research Vessels" <http://marineboard.eu/european-research-vessels> which aims to review the current status of European Research Vessels and related equipment, evaluate the progress made since the previous EMB Position Paper 10 in 2007 and produce an updated foresight report, this questionnaire aims to collect up-to-date information on the national management of the European research fleets, including funding mechanisms, investment plans, collaborations and partnerships, training options and opportunities for marine science support personnel, as well as marine technicians, marine crew and shore-based staff.

The questionnaire is divided in 9 short sections:

1. General questions on national research vessel management
2. Application process for granting ship-time
3. Vessel and equipment replacements or new builds
4. Cruise support process and equipment
5. Training of support staff: marine technicians
6. Training of support staff: marine crew
7. Training of support staff: shore-based staff
8. Future opportunities
9. Contact information and consent



European RVs spare capacity

On average around 19% of the year is considered as “spare” available days, although this figure varies with vessel class (EMB PP#25, 2019).

Available days in this context are defined as days on which the vessel is not being used for any other activity and could in theory be used for research. However, in practice there are generally other circumstances at play that means this cannot be done.

Local and Coastal Class research vessels have the higher number of available days (34%). This may be because the activities of these vessels, due to their smaller size, are often preferably scheduled out of the winter season, for better working conditions at sea.

A lot of the Regional Class and certainly the Local & Coastal Class research vessels are also operated by only one crew, which allows them to sail for a maximum of around 180 days per year. In many cases, making use of this available ship-time would only be possible through investing in a second crew, but uncertainty about ongoing funding to cover this significant additional cost means it is not a viable option.

Initiatives such as Transnational Access (TA) funded through projects is one way to efficiently make greater use of available days.

European RVs spare capacity



In the framework of the on-going **H2020 Eurofleets+ project**, one of the objective of **WP8 “Foresight: Legacy and Roadmap”** is to propose a **business plan for a long-term sustainable coordination system** for the European RVs (**EUROFLETS RI**).



This objective will be implemented through three following steps:

- Step #1** – the identification of the most suitable legal model for EUROFLEETS RI
- Step #2** – the development of management and funding mechanisms and identification of long-term sustainable streams to establish and operate EUROFLEETS RI beyond the project life-time
- Step #3** – the identification of pilot groups, at both pan-European and regional dimensions or for thematic area, **based on the spare vessel capacity**, to be the test-bed of the developed operational and funding model



It is essential to have a clear picture of how much time is available and could be used for a long-term sustainable Transnational Access (TA) system of RVs in Europe with the ultimate goal to maximize the European RVs usage.

Proposal for a new *ad-hoc* ERVO WG

ERVO Terms of Reference - Paragraph 4.3 “Workshops, ad hoc working groups and study groups”: *If the ERVO plenary meeting so desire, or if the ERVO chair by correspondence proposes it, a work shop, ad-hoc working group or study group to work on a particular issue or problem could be established, and the group then reports back to the next annual ERVO.* *If the European Science Foundation, the European Commission or other groups requests via the ERVO chair specific inputs from ERVO, this will also be done through an Ad hoc working group or study group.*

In the light of the foregoing and in accordance with article 4.3 of the Terms of Reference of the ERVO Group, we propose to establish a **new *ad-hoc* ERVO Working Group**, which should work on the following issues:

- Costs and economics associated with the European RVs**
- RV management processes in Europe**
- European RVs spare capacity**

Proposal for a new *ad-hoc* ERVO WG

Work for one year and report
at the 2022 ERVO meeting on its work with a **detailed
scheme of the survey**, to be approved by the ERVO
community

Work to draft a survey with
three different sections: **1.
costs and economics**
associated with the European
RVs, **2. management
processes** that are in place
for the European research
fleet and **3. European RVs
spare capacity**

Be divided in to three
sub-groups, one for each
topic, to make it clearer
who is responsible for
which part in a first phase
and then «merge it» with
all members involved in a
second phase

Be coordinated by a
**chair supported by a
vice-chair** and each **sub-
group should have a
leader responsible**

Work **in close link with EurOcean**, who could play an important role in the preparation (survey set up) and dissemination of the initiative (i.e. social media) and its findings (e.g. report, infographics and so on)

If approved by the ERVO Group, the survey would be launched for a pilot test. Then, on a regular basis, each year/every two years, three/four months prior to the next annual ERVO meeting, the ERVO community should be asked to check the data and update them as necessary.

