

Towards a coordinated access to vessels for observatory maintenance cruises

Session 4B- Mutualisation of heavy means for servicing observatories

Workshop on Sea Operations for Ocean Observatories

Toulon / 25-26 september 2019

EMSO – Link Task 3.3 WP3 : INFRASTRUCTURE ACCESS

Definition of ordinary/extraordinary optimal maintenance procedures

Extract of task description

- schemes of **optimization of maintenance** will be studied at regional team and at global EMSO level in order to minimize the ordinary and extraordinary maintenance costs through a set of procedures for **periodical interventions** and for **extraordinary interventions** for a prompt problem solving. [...] Scenarios of **spare parts stock sharing** (including EGIM as developed in EMSODEV) will be studied.
- [...] EMSO ERIC will also coordinate logistic activities at EMSO nodes and develop procedures in each of the different operational phases : **coordinated management of access time to oceanographic vessels or other ships with ROV capabilities** is expected to allow consistent operating cost reduction. A strong link will be established with oceanographic vessels and ROV owners and operators ERVO (European Research Vessels Operators) to benefit from synergies including EUROFLEETS infrastructure initiative.

Task 3.3 report : Proposed outline

1- state of the art

1.1 EMSO current scenario

- Infrastructure maintenance (heavy means used)

inputs from:

- OPEX analysis (ref. EMSO-Link D5.2)
- Maintenance procedures analysis (ordinary and extraordinary interventions)

→ Reasons for maintenance periods as of today for each RF

- Sensor maintenance (Best practices) –

inputs from:

- EMSO-Link WP2 best practices workshops
- OPEX analysis (ref. EMSO-Link D5.2)

→ Maximum time between 2 calibrations for each sensor identified in the mapping.

1.2 Current European and international landscape

- Heavy means

→ Needs

- Other observatory network organisation for access to fleet: ONC, OOI, DONET, DOOS,
- Other organisms/RIs/projects... using heavy means and how they organize access to them: EMBRC, EPOS, EuroARGO, ICOS Marine, KM3Net, LifeWatch, Danubius-RI, JERICO-NEXT **etc.**

→ Offers

- Existing RV/ heavy means - **Cataloguing and coordination initiatives**
 - EUROFLEETS+ (*EVIOR*), ERVO + IRSO Group,
 - European Marine Board - WG on RVs
 - JCOMMOPS, EOOS, OFEG, UNOLS

- **Sensors**

Examples of mutualized calibration services in other infrastructures. Example of Euro-Argo ERIC.

JCOMMOPS (IOC-UNESCO/WMO):

A coordination and support center for all sustained elements of the GOOS
(floats, drifters, ship of opportunity, ship lines, moorings, etc.)

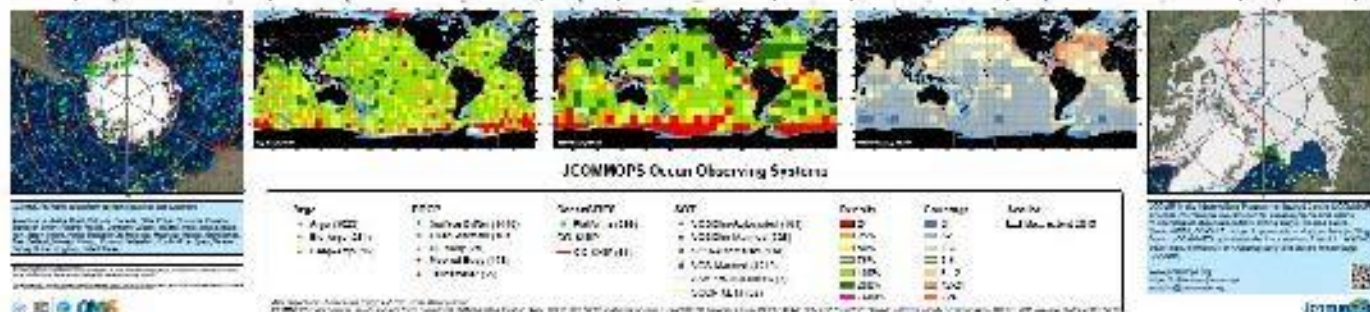
- 10 000 ocean observing platforms monitored in real-time
- (floats, drifters, moorings, ships, tsunameters, etc.)



Monitors and analyzes networks performance

Website:

- Central gate way for platforms registration, planning, cruise plans
- Allows reporting on Member States and all partners contributions
- E.g. Ships used (through unique identifiers)

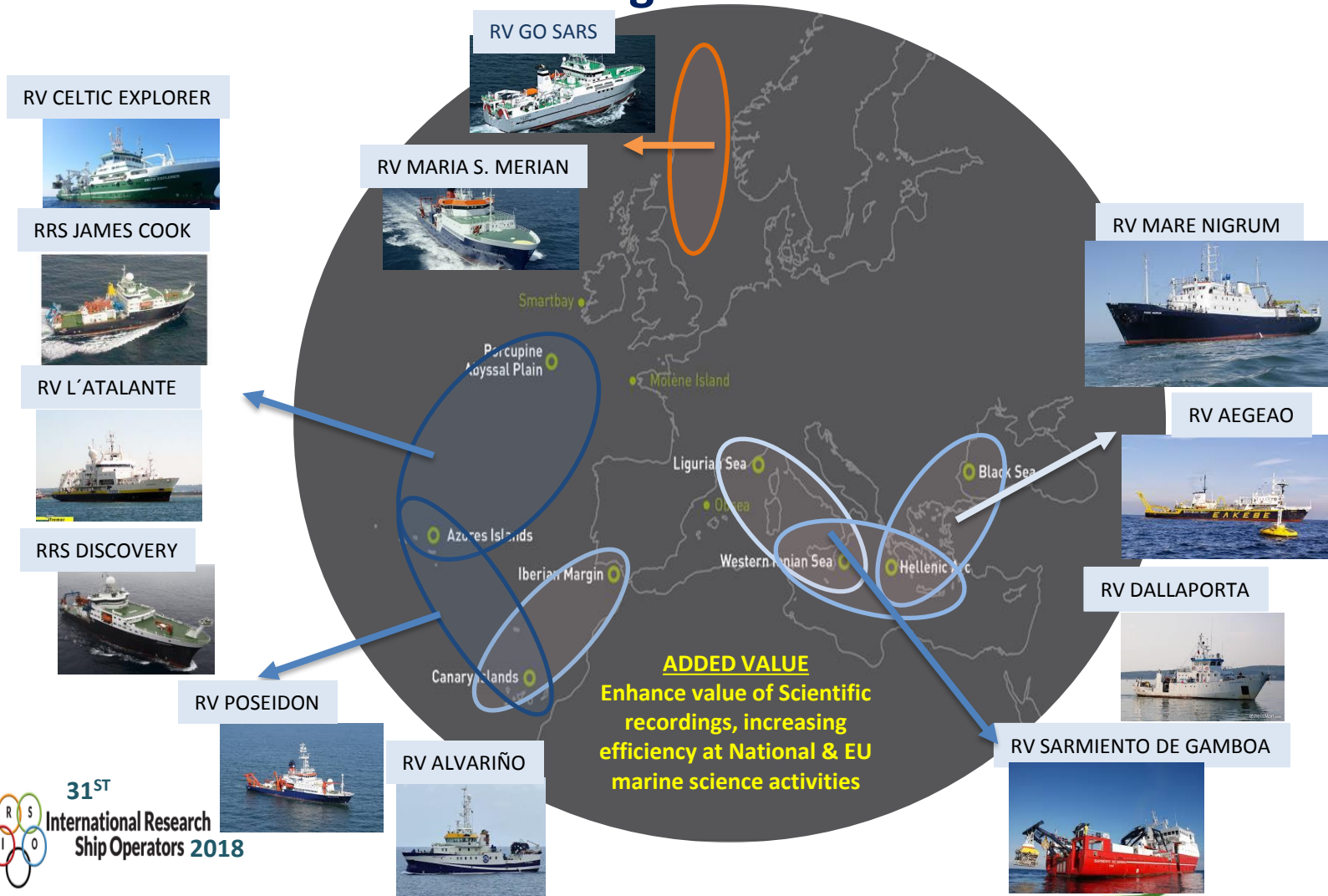


Task 3.3 report : Proposed outline

2- SHORT-TERM ACTIONS FOR coordination of logistic ACTIVITIES

- Proposition of actions
 - Centralisation of information at EMSO ERIC level (E&L SG)
 - Maintenance plans and schedule of each regional facility
 - Operation procedure for each regional facility
 - Cruise schedules: date, vessel, ROV, team, extra berth availability
 - Link with other RI / fleet coordination schemes
 - Ordinary maintenance – within EMSO
 - Mutualise cruise: one cruise for maintenance of 2 regional facilities (see next slide)
 - a notional fleet is used only every other year
 - Mutualisation of skills ??
 - Extraordinary maintenance – within EMSO
 - Check with the « central information desk » for availability of
 - » Vessel
 - » Equipment
 - » personnel

Potential supply of RV for regional logistics and maintenance of regional facilities



Task 3.3 report : Proposed outline

2- SHORT-TERM ACTIONS FOR coordination of logistic ACTIVITIES - continued

- extraordinary maintenance – OUTSIDE of EMSO
 - The « central information desk » of EMSO to liaise with fleet coordination programs for access to fleet and/or ROV of non EMSO partners, on an emergency basis

Task 3.3 report : Proposed outline

3- FUTURE OPTIMIZATION PLANS FOR ORDINARY AND EXTRAORDINARY MAINTENANCE PROCEDURES

- Medium-term optimization plans (2024)
 - Periodical calibration → extend the max calibration time to all regional facilities
 - Renewal of sensors and sub-systems for obsolescence → common procurement
 - Spare parts stock sharing (including EGIM, sensors, batteries, connectors, cables, etc.)
 - Procurement of new items → by ERIC
 - Shipment and time duration
 - Rapid response for extraordinary events
 - Other actions?
- Medium-term recommendations (*by December 2024*)

Task 3.3 report : Proposed outline

3- FUTURE OPTIMIZATION PLANS FOR ORDINARY AND EXTRAORDINARY MAINTENANCE PROCEDURES

- Long-term optimization plans (2030) UN science decade, ELSG
 - Clean” maintenance procedures
 - Common calibration facilities: what sensor to start with
 - Common management for sharing of spare parts stock
 - Common procurement management
 - Other actions?
- Long-term recommendations (by December 2030)

To be discussed in this workshop

- More suggestions for optimization
- Prioritisation of the suggested action