



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**Thirty-second Session of the Assembly**  
UNESCO, 21–30 June 2023

Item 4.8.2 of the Provisional Agenda

**SUMMARY REPORT ON THE CONSULTATION  
ON OCEAN OBSERVATIONS IN AREAS UNDER NATIONAL JURISDICTION**

Summary

The global ocean observing networks under GOOS have reported to the Observations Coordination Group and the Steering Committee that they experience issues in undertaking sustained ocean observations in areas under national jurisdiction. An expert workshop on “Ocean Observations in Areas under National Jurisdiction” was held in 2020, and the results and recommendations presented to the IOC Executive Council at its Fifty-fifth session (OONJ, GOOS Report, 246). The Executive Council requested the Executive Secretary to invite Member States and GOOS Networks to provide more information on their experiences, including on the issues identified in the OONJ Expert Workshop (Decision IOC/EC-55/3.4).

This document provides detail on the experiences of global ocean observing networks and IOC Member States regarding the taking of sustained ocean observations in areas under national jurisdiction, including an assessment of the ‘solution spaces’ within UNCLOS, as identified in the OONJ Workshop.

Financial and administrative implications are covered in paragraph 35, but are deemed to fall within the parameters of the IOC regular budget.

The proposed decision suggests an *ad hoc* working group is set up to consider the feedback from the global ocean observing networks and the IOC Member States, to identify a limited number of concrete case studies, and discuss in depth the application of ‘solution spaces’ within UNCLOS, to the case studies. The decision is referenced A-32/4.8.2 in the Action Paper (document IOC-32/AP Prov.)



## Introduction

1. Over several years, the scientific community behind the Global Ocean Observing System (GOOS) has been highlighting the importance of sustained observations in maritime areas under national jurisdiction and has also highlighted challenges related to carrying out sustained observations in areas under national jurisdiction, including in disputed areas and relating to the granting of consent for marine scientific research (MSR).
2. The 1982 United Nations Convention on the Law of the Sea (UNCLOS) provides the legal basis for maritime areas such as territorial seas and exclusive economic zones (EEZs), which are areas under national jurisdiction with different rights and obligations for States and international organizations. Areas under national jurisdiction cover over one-third of the ocean and therefore observing in Exclusive Economic Zones is essential for an effective global ocean observing system.
3. The Advisory Body of Experts on the Law of the Sea of the Intergovernmental Oceanographic Commission (IOC/ABE-LOS) worked on these issues between 2003 and 2009 and laid the foundation for the Argo notification scheme. This provides a practical solution, through the notifying of States when Argo floats drift into waters under their national jurisdiction, of enabling rapid clearance for the collection and sharing of such observations. However, many other ocean observing implementers, and the Argo Programme itself in terms of float deployment, still report important challenges when seeking consent to undertake ocean observations in waters under national jurisdiction.
4. An expert workshop on “Ocean Observations in Areas under National Jurisdiction” ([OONJ GOOS Report, 246](#)) was held in 2020, and the results and recommendations were presented to the IOC Executive Council at its Fifty-fifth session in 2022.
5. Following up on the Executive Council [Decision IOC/EC-55/3.4](#), Member States and GOOS Networks were invited by Circular Letter [2938](#) (November 2022) to provide information on their experiences regarding sustained ocean observations in areas under their national jurisdiction including on the issues identified by GOOS through the Expert Workshop on “Ocean Observations in Areas under National Jurisdiction”. The results of both surveys are summarized below.

### Survey results from global ocean observing networks

6. Sixty-four (64) anonymous responses from relevant networks were received<sup>1</sup>, 35 (55%) of which indicated that their operations had been impacted by issues associated with taking observations in States EEZs in the last five years. From the respondents the networks that are experiencing higher levels of issues include Argo (80% respondents reporting issues), GO-SHIP (71% reporting issues), AniBOS and OceanGliders (66% reporting issues), and OceanSITES (60% with issues). See the survey results in IOC/INF-1431 for more details.
7. The survey called for detailed information across the four broad areas that were identified in the OONJ Workshop Report, and the following summarizes these results: 27 out of the 35 respondents indicated that they have experienced the issues in line with the statement that ‘*marine scientific research (MSR) process is incompatible with the operational reality of sustained ocean observing*’, accounting for 76%. Among the example problems identified by the [GOOS-246](#) Report, “Opportunities to deploy instruments arise at short notice” were identified with the most frequency. The main concerns raised by the respondents include slow, opaque, and/or complicated MSR processes. The lack of flexibility, delayed approval, and requirement for detailed information were also cited as challenges; 24 operators indicated that they had experienced the issue of ‘*advance*

---

<sup>1</sup> Relevant networks include Argo, AniBOS, DBCP drifter, moored buoy and tsunami, GO-SHIP, SOOP, OceanGliders, and OceanSITES networks. Other global networks are not included for the following reasons: VOS already has an international consensus on taking of measurements in national waters through a WMO Decision, ASAP undertakes the collection of upper air profile data, which is outside of UNCLOS, and GLOSS and HF Radar are implemented on land, and the focus of this survey is on issues in Coastal States EEZs.

*notice is incompatible with operation of sustained ocean observing for some platforms'*, accounting for the 68% of the 35 responses. With "Opportunistic vessel use, e.g., commercial vessels that can support deployments at short notice, and often the timing of the deployment/transect is not under the direct control of the scientific mission" is the most identified issue. SOOP and OceanSITES both highlighted challenges in obtaining research clearance in foreign EEZs due to the time-consuming and uncertain nature of the application process. SOOP also mentioned the impact of the COVID-19 pandemic on international cruises and scientific operations. OceanGliders and Argo both discuss difficulties in deploying instruments and floats from uncertain or changing platforms and vessels, as well as challenges in coordinating clearance processes; 12 respondents indicated that the issue '*MSR clearance is often impossible to obtain in zones where EEZs are disputed*'. GO-SHIP, Argo and OceanSITES all report this issue, and the results suggest that networks avoid undertaking sustained ocean observing in disputed areas, leading to gaps and sub-optimal observing design; 5 out of 35 responses noted the issue of '*no national procedure for MSR clearance - new technology*', with Argo and OceanGliders reporting issues.

8. The survey asked networks to identify the number of the missions undertaken in the last five years and the percentage of missions impacted by issues related to OONJ. Argo, GO-SHIP, SOOP and OceanSITES reported the highest impact levels, ranging from 5 to 100% of missions impacted. AniBOS and OceanGliders reported lower rates of missions impacted.

9. Finally, 34 responses were collected regarding the overall impact on the ocean observing network activities due to EEZ issues (see the Table 7 in IOC/INF-1431 for details). The common issues related to incomplete coverage, with several important ocean areas that are essentially avoided, leaving ongoing gaps in global coverage. For Argo, floats are generally only deployed in the open ocean which leaves important gaps; DBCP report similar issues for drifters again leading to incomplete coverage. GO-SHIP lines are sometimes sub-optimal for purpose as they have to be adapted to fit MSR clearance access or likelihood of access, and SOOP is unable to fully cover key systems, providing a partial picture.

10. Overall, the detailed feedback received from the global ocean observing networks suggests that there are challenges associated with taking observations in waters under national jurisdiction at a network level, and that these challenges have a not insignificant impact on operations and coverage when considered at a global level for several of the networks, specifically Argo, GO-SHIP, OceanSITES, AniBOS and OceanGliders. There is an indication that increased communication to networks and Member States would aid knowledge of the issues networks face and the value of ocean observations, however that this would not solve all the problems identified in the survey.

### **IOC Member States survey results**

11. The results of the Member States feedback were interesting and varied. Fifteen (15) Member States responded<sup>2</sup>, from different parts of the world, providing an indication of the scale of the operations undertaken in areas under national jurisdiction, and issues with the taking of sustained observations.

12. The survey asked Member States about the number and the experience of taking or seeking to take sustained observations in areas under national jurisdiction. Additional questions asked about whether consent had been given/withheld, and on average how long it took to provide/receive a response. Finally, Member States were asked which, if any, of the 7 potential 'solution spaces' as identified in the OONJ Report ([GOOS-246](#)), that are consistent with UNCLOS and have the potential to facilitate the taking of systematic and sustained ocean observations in waters under national jurisdiction, are worth exploring. It is worth noting that Member States provided a range of responses to the questions seeking numbers, possibly reflecting different ways of tracking such activity. If more comparable numbers are sought in the future the survey would need to be more precise and provide

---

<sup>2</sup> Responses received from the Argentina, Australia, Belgium, Chile, China, Ecuador, Estonia, Germany, Ireland, Japan, Kuwait, Norway, Saudi Arabia, UK, US.

guidance as to the type of information required and definition for sustained ocean observing. In addition, for a more robust examination IOC would need more responses, however, as a first-of-its-kind survey, the results are adequate to provide a snapshot of Member States experience and views on the seven potential 'solution spaces' identified in the OONJ Report.

13. With regard to the number of sustained ocean observing activities undertaken or sought in areas under national jurisdiction the results indicate that activities in waters under national jurisdiction can range from 1 and 'a few', to 30, 60+, 70+ and 100 instances. As noted above, there were differences in the units used and in the interpretation of the question, however most Member States undertake more missions in their own waters than foreign States' waters. One State noted that Voluntary Observing Ship (VOS) surface CO<sub>2</sub> sampling ceased in 2020 due to permitting concerns.

14. A number of States noted zero or low numbers of ocean observing activities sought in waters under other countries' national jurisdiction, others sought consent for 9, 16, and 30+, one State sought consent for 89 ocean observation activities in waters under other countries' national jurisdiction, with 6% refused, another with 9 requested had 11% refused.

15. For requests, several Member States handled under 10 requests, however there were also States that handled many requests, 34, 55 and 70 requests from other States. The United States does not categorise routine ocean observations as requiring marine scientific research (MSR) consent, and therefore, does not track routine ocean observations undertaken by foreign scientists in waters under U.S. jurisdiction. Notwithstanding, foreign States that do apply for MSR clearance are processed to determine if any domestic regulations are indicated, such as the need for a special permit if the observations are in National Marine Sanctuary or Monument area, or if drilling will occur as part of an ocean observation buoy deployment. Australia also noted different permitting requirements for various National Parks, as now raising additional issues for consent.

16. Of the 15 responses, 10 Member States had sought to undertake such activities, two had no such activities and two did not respond to the question. Of this 10, seven had the requests granted and three had only some requests granted. Regarding how long it took to receive a response from the coastal State, the general time was 4–6 months, with one States noting three years, and some noting that responses were never received, and one noting a time of one month. Sustained marine monitoring in the Baltic area is usually in the frame of Joint Monitoring Programmes (e.g., HELCOM), these agreements set a response timescale of six weeks.

17. Of the 15 responses, eight Member States responded that they had received requests to undertake such activities, two had not received requests, and four did not respond to this question. Of this eight, seven had granted the request and one was still pending. Regarding the time it took to provide a response to a request, they were all under six months, some noting a matter of weeks, with the average across the respondents being approximately 11 weeks (2.7 months).

18. In relation to the proposed 'solution' spaces identified in the OONJ Report (see IOC Circular Letter [2938](#) Annex 2 for a summary, or the OONJ Report for full discussion of these seven solution spaces), the summary chart below indicates which, if any, of the solution spaces the respondent Member States considered worth exploring.

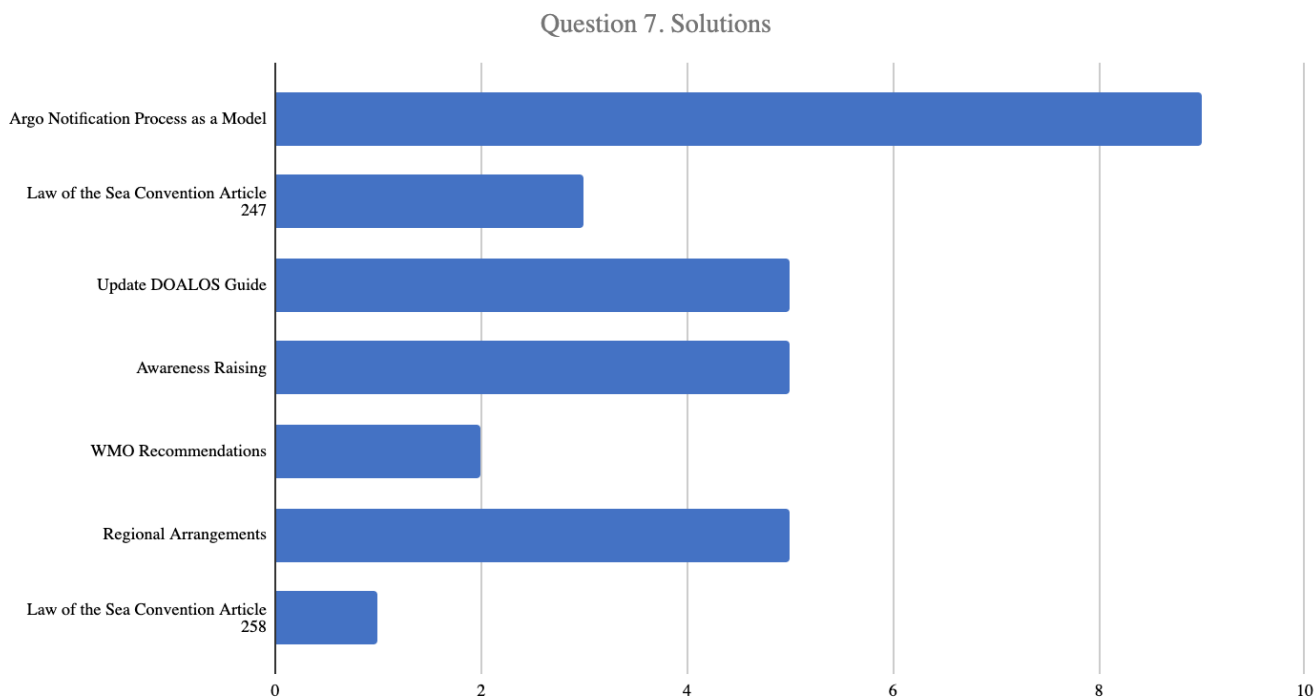


Figure 1: Chart of responses to the question ‘In relation to the issues identified in the Ocean Observations in Areas under National Jurisdiction Experts Workshop Report (summary in Annex 2) and the seven solution spaces proposed, which, if any, of the solution spaces are worth exploring?’. Respondents could select multiple options.

19. The results indicate that this sample of respondents would be most willing to explore the following approaches: (i) creating a process, using the Argo process as a model, to consider additional issues; (ii) updating the DOALOS Guide; (iii) awareness raising in networks and Member States of the issues, impacts, and value of ocean observations; and (iv) regional arrangements.

**Member States experiences in gaining consent/giving consent**

20. The Member States indicated positive/negative experiences in **gaining** consent—generally positive, however some negative aspects were reported, and positive/negative experiences in **giving** consent—the responses were mainly positive, some issues or comments also reported (see a sample of comments paraphrased in Table 1)

Experiences in gaining consent	Experiences in giving consent
<p>It can be difficult to manage the consent process given how different and unique the process can be depending on the State;</p> <p>in some cases, a response is not relayed in a timely manner, and it can take 6+ months of constant communication through diplomatic channels to obtain the consent, which is labour intensive and when consent is not received can lead to inability to obtain vital observations or service ocean observation equipment;</p> <p>a station had to be rapidly recovered as consent was not provided to continue observations; a</p>	<p>consent was exceptionally withheld to give the researching State the opportunity to correct unfulfilled obligations from previous research cruises [relating to reporting];</p> <p>consent is usually granted if the project contributes to relevant scientific data and there is no information indicating that the main purpose of the survey is exploitation of resources; consent is granted on the condition that the coastal State shall receive results and conclusions from the research, however at</p>

<b>Experiences in gaining consent</b>	<b>Experiences in giving consent</b>
<p>global sailing vessel expedition that took observations encountered restrictions imposed by military authorities, repeated requests for information about the sampling, problems with defining an exact data and route (sail ship), taking onboard observers (and covering their costs), and also noted that in some cases it had applied too late;</p> <p>for the countries bordering the North Atlantic the process works fine;</p> <p>communication via diplomatic channels sometimes is slow, so that additional questions or remarks cost valuable time;</p> <p>on the positive side partnership in research, data sharing and services, on the negative side as funding is not sustained the partners can change;</p> <p>there needs to be distinction between surface underway measurements that do not impact marine life and are made through normal commercial ship operations that are separate to more detailed marine research ship or sub-surface research such core measurements of surface waters used to resolve the regional and global carbon budgets and other changes in the surface ocean (e.g., pH, temperature, salinity, oxygen) do not have commercial value and are relevant to all States;</p> <p>the current UNCLOS definition for Marine Research is an impediment for using commercial shipping as a platform for sustained ocean observing and complicates the potential for international cooperation.</p>	<p>times there need to be repeated requests for the reports;</p> <p>issues arise when the request is received substantially less than 6 months prior to planned start date, this more of an issue with fisheries surveys rather than ocean observation surveys;</p> <p>observation activities in some coastal states were only possible to a limited extent due to restrictive requirements that exceed the provisions of the DOALOS Guidelines (e.g., for environmental protection reasons);</p> <p>in some cases, the application for the ocean observation activities was received very shortly before the scheduled start research of the cruise, which led to uncertainties and additional planning, the timeframe provided (6 months) would benefit from more flexibility;</p> <p>in the Baltic Sea the experience has been quite positive as most of the MSR permit applications are justified by legal or regional cooperation commitments, and collected data are made available through joint databases; a positive experience in which national observers had participated in several foreign-flagged research vessels oceanographic surveys;</p> <p>requesting diplomatic clearance for ocean observations is a highly bureaucratic and frustrating activity, there is no transparency on the applied (internal) rules and requirements, and the work of research vessels and associated activities are clearly much more controlled in comparison with other activities in EU waters such as fishing or other industrial activities;</p> <p>there is an increasing tendency for States to ask for EIA (Environmental Impact Assessments) to allow scientific ocean observing in areas under national jurisdiction;</p> <p>for foreign flagged VOS approval is also required from Department of Foreign Affairs and there is some uncertainty over the definition of</p>



Experiences in gaining consent	Experiences in giving consent
	<p>a research vessel and how this applies to commercial ships<sup>3</sup>;</p> <p>it is essential that the application for consent provides complete and precise information regarding the planned MSR activities, in order to speed up the process and allow the coastal state to properly evaluate the request; as the MSR authorization process involves several government agencies, it is fundamental for the applicants to comply with the time frame established in Article 248 of UNCLOS;</p> <p>it important to comply with Article 249 of UNCLOS that states that the data and samples obtained from MSR activities should be made available to the coastal State, as well as the preliminary and final reports in an accessible format, (paragraph 2) Article 249 of UNCLOS also notes that prior agreement from the coastal State should be required for making research results of a project that has direct significance for the exploration and exploitation of natural resources internationally available;</p> <p>it is fundamental to guarantee the right of the coastal State to be represented in the MSR campaign through the designation of an on-board National Observer.</p>

Table 1: Sample of Member States feedback regarding experiences of requesting/giving consent for sustained ocean observing activities in areas under national jurisdiction (comments have been condensed/paraphrased).

**Member States comments regarding the seven ‘solution spaces’ (paraphrased)**

21. Several States support consideration of a process equivalent to the Argo notification scheme for other platforms/variables, but not changes to the existing notification scheme. Depending on the assessment of the real-life cases, a notification scheme for other autonomous devices (e.g., wind driven surface autonomous vehicles) could be explored. States would still require oversight of any potential deployment, including those attempting to use “opportunistic” possibilities, however autonomous capability is planned and as such can be notified in good time. In that case, Part XIII [UNCLOS] has been demonstrated to enable this adequately. A major advance would be an agreement, through UNCLOS [or within UNCLOS], to permit a set of surface only underway measurements from commercial ships/VOS. The reconstitution of the Advisory Body of Experts on the Law of the Sea (IOC/ABE-LOS), as it was done when establishing the ARGO notification scheme, could provide an adequate space for further reflexion and well-founded discussions on this topic.

<sup>3</sup> The WMO Resolution 45 (Cg-18) "Ensuring adequate marine meteorological and oceanographic observations and data coverage for the safety of navigation and the protection of life and property in coastal and offshore areas" was designed to support the taking of surface observations that are vital to WMOs mandate in this area, including observations from VOS.



22. Concerning Article 247, the question is what should or should not be considered “ocean observations” and what should or should not be considered “marine scientific research”. It would likely take a long time to determine internationally agreed definitions. In addition, this approach could potentially lead to a complicated patchwork of differing practices based on differing International Organization requirements. It could be of interest for future marine scientific research projects with multiple partners. This potentially does not change the current situation, the State may approve the project, but the regulatory requirements can still make it untenable.

23. Several States are open to discussing revision of the 2010 DOALOS Guide on Marine Scientific Research. Other comments include the recommendation that any possible revision be limited to updating any out-of-date information and adding new topics that are not already addressed. One State noted making efforts to deliver best practice in absence of guidelines e.g., in the use of autonomy and any revision to guidelines by DOALOS could be reflective of such practices. The [MSR] process could benefit from universal rules, the ability to seek and obtain consent in English, and the development of a machine-readable form. In addition, the application in its current form is ship-orientated, so the possibility of allowing operators of autonomous devices (e.g., Argo Float) to obtain consent independently of a vessel could be explored [Note: this is likely covered with Article 258]. One State commented that a standardisation of the process of applying for consent would be useful, e.g., general application form that works for most countries, and could support effort in this direction with suggestions. Another State mentioned that a standardized approach across states in how they define and interpret requirements for MSR would be useful.

24. Several States support awareness raising activities, and view this as a useful or even critical component to ensuring sustained routine ocean observation data collection overall. There is a suggestion that the Global Ocean Observing System (GOOS) Steering Committee take this topic up and provide an update on progress to the IOC Executive Council in 2024, in addition, the IOC should bolster efforts to assist coastal States in realising the value of such observations. Another comment noted this as helpful but not a solution.

25. One State was open to appropriate WMO recommendations related to variables/platforms that are important for WMO service delivery, however that any such effort should be done in close coordination with the IOC and GOOS. Another highlighted that the IOC has competence in MSR that the application of UNCLOS should be maintained.

26. Several States support regional coordination to facilitate routine ocean observations, and view this as a promising approach. In particular, regional coordination in the Pacific and in the Caribbean would be welcome. Noting that coordination could take many forms and should not be limited to formal “agreements”. A recommendation is made that the IOC regional bodies, in coordination with IOC-led GOOS, further consider this topic. Another State notes that regional and bi-lateral agreements are a recognised method by which specific activities can be grated without repeat requests for consent. A State notes that this is an opportunity for long time-series observations and could provide general agreement on certain long-term, predefined, and mutually agreed activities, also noting that in most cases increased and improved bilateral communication would be beneficial and could already lead to solutions. Bilateral communication and arrangements appear a more efficient and direct way to tackle difficulties, perhaps only where systematic and structural problems are observed in the responses other ways should be explored.

27. States agree that national MSR consent procedures should incorporate the use of new technologies, however not all view the use of Article 258 as a “solution space” to the challenges faced when conducting routine ocean observations in areas under national jurisdiction. Article 258 is broad enough to capture new technologies, however if issues exist, then the issue lies with the State(s) that are withholding consent, not with the application of the UNCLOS. This can be interpreted as anything related to an ocean measurement is MSR and therefore there is no change to the current situation.

28. In addition, the following reflection was provided: it should be stressed that any solutions to be explored or to be developed in the future, should be fully consistent with the United Nations Convention on the Law of the Sea (UNCLOS). In this sense, statements that the MSR consent process is “incompatible with the operational reality of sustained ocean observing” or that advance notice would be “incompatible with operation of sustained ocean observing for some platforms”, are not in accordance with the provisions of Part XIII of UNCLOS. However, when exercising their rights according to Part XIII of UNCLOS, coastal States could consider the characteristics of the so-called “operational oceanography”. For example, by allowing the application for consent to be sent within a shorter time frame than the one established in UNCLOS, or by allowing more flexibility for communications regarding the projected activities, but this does not imply that those activities could be considered as exempt from UNCLOS provisions. The equipment used in the so-called “operational oceanography” could be equated to the scientific research installations or equipment in the marine environment included in Section 4 of Part XIII of UNCLOS (articles 258 to 262).

### **In summary**

29. The responses to the two surveys indicate that issues regarding the taking of sustained observations in areas under national jurisdiction are more problematic to some of the ocean observing networks than others and provide insight into the main issues.

30. Overall, the experience of Member States is positive regarding requesting or providing consent to undertake sustained ocean observing in areas under national jurisdiction. Notwithstanding, several Member States also experienced issues, which with regard to requesting are similar to those reported by the ocean observing networks, and for in terms of giving are in general positive, but point to some issues that should be considered by the ocean observing community. Of the 15 Member States that responded to the survey it is clear from the responses that many Member States have specific protocols in place to process requests for MSR, and often achieve this in under six months.

31. Of the 15 Member States that responded to the survey, most expressed a willingness to engage in consideration of one or more of the seven potential ‘solution spaces’ identified in the OONJ Report. The following solutions were the most referenced: an Argo like process (highest selection), updating the DOALOS guide, regional arrangements, and awareness raising. There were many pertinent observations and recommendations made regarding these ‘solution spaces’, which are noted in this report.

32. The details given by the global networks survey and the Member States survey could be used to identify some real-life test cases that then could be discussed by the proposed ad hoc ‘IOC OONJ’ committee. Through discussions around such concrete test cases the proposed ‘IOC OONJ’ committee of volunteer IOC Member States could consider more deeply the potential of the most referenced ‘solution spaces’, as highlighted in this report, to resolve the issues faced by the global ocean observing networks. And further advise IOC on what could be the best course of action.

33. The results from these discussions could be presented to the IOC at its Assembly in 2025, with a progress report provided to the Executive Council in 2024.

### **Financial and administrative implications**

34. The Executive Secretary would need to consider the resource implications of the proposed decision and the support to such a proposed *ad hoc* committee.