



Upscaling Autonomy Community Consultation

In response to the recommendations of the Net Zero Oceanographic Capability (NZOC) scoping study, the NOC Association and the Challenger Society established the Upscaling Autonomy Working Group (UAWG) to facilitate a community consultation on the future shape of marine autonomy for UK science. This short questionnaire addresses the key points that will be explored further in a roundtable discussion on 24th April 2023.

The questionnaire is constructed as four closed questions (Y/N), with each directly followed by an open invitation to expand on the topic of the initial provocation. This is done deliberately to focus attention on the key areas of concern as identified by the Working Group. The final 'question' openly invites comment on one vision for an increased role of autonomy within marine research - the topic of this exercise - you may choose to propose alternatives.

Please answer as many questions and provide as little or as much information as you wish.

Note: the phrase "marine autonomous systems" (MAS) is taken here to mean Autonomous Underwater Vehicles (AUVs), Underwater Gliders and Unscrewed Autonomous Surface Vehicles (USVs or ASVs). Please feel free refer explicitly to any of these or any other

Begin Survey

Respondent Details

To help our analysis, we would appreciate you providing some details about yourself.

1. Name (optional)

2. Institution / Department *

3. Position / Role *

Closed Question (1/4)

4. Do you agree with this statement: **MAS already play a role in marine research, but current MAS capability (*not provision*) poorly serves all the disciplines of marine research.**

Yes

No

5. If you agree with this statement, which areas are well served and which are poorly served, and what steps should be taken to alleviate this?

6. If you disagree with this statement, please explain why?

Closed Questions (2/4)

7. Do you agree with this statement: **Demand for and uptake of MAS has been lower than anticipated by the scientific community.**

Yes

No

8. If so, what are the specific barriers or bottlenecks to uptake?

9. If not, what could be done, if anything, to increase uptake?

Closed Questions (3/4)

10. Do you agree with this statement: **Large upscaling of MAS is an essential element to decarbonising marine research.**

Yes

No

11. If you do agree, will this impact the quality of UK marine research? If so, in what ways?

12. If not, how can NERC reduce the carbon footprint of marine research over the necessary timescale (NetZero by 2040)?

Closed Questions (4/4)

13. Do you agree with this statement: **A centrally funded hub-and-spoke model for providing access to MAS for oceanographic observing is an appropriate way to serve the UK.** (Note: hub-and-spoke is taken to mean one main centre with multiple satellites)

Yes

No

14. If so, are there any improvements that might be made?

15. If not, what other model should be implemented?

Essay Question

This is a short essay question. Please feel free to use continuous prose or bullet points.

16. The NERC NZOC programme is proposing a transition from the current **Ship+** Model to a **+Ship** Model (further detail in the NERC pre-recorded webinar available on NOCA web pages). Is the model of few ~60m hydrogen-powered ships, hundreds of MAS and data/model integration a good aspiration for UK marine research?

Please consider the pros, cons and alternatives.

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