



Annex 1

G7 FUTURE OF THE SEAS AND OCEANS WORKING GROUP: PROGRESS SINCE MAY 2016

Executive Summary

28th September 2017

A full report on the G7 Future of the Seas and Oceans Working Group can be found on the 2017 G7 Presidency website.

At the G7 Science Ministers' meeting in Tsukuba (Japan) in May 2016, Ministers recognised that the seas and oceans are changing rapidly, with overuse and destruction of marine habitats, warming, increased ocean acidity and depleted oxygen. Ministers supported further action to develop the far stronger scientific knowledge necessary to assess ongoing ocean changes and their impact on economies. Working together to enhance our understanding of the changes taking place will enable the development of more appropriate and coordinated policies that ensure increased understanding and the sustainable use of the oceans and seas both now and in the future.



Following the mandate given by the G7 Science Ministers in May 2016, technical experts¹ (marine scientists and specialists from across the G7), with considerable support for the initiative from G7 policy experts (Government Ministries and Funding Agencies), developed proposals for each of the five action areas that were outlined in the [Tsukuba communiqué](#) and its second attachment.

The technical experts recommend the G7 nations use the ‘Future of the Seas and Oceans’ Working Group to strengthen international collaboration. To this end, the goal of the recommendations outlined in this document (and the full length Working Group document on the G7 Presidency website) is to realize a more efficient and effective network of scientific ocean observing to assess and forecast the state of the ocean and changes, and that supports the improved monitoring, conservation and sustainable use of seas and oceans and their resources. G7 members do a considerable amount of work in ocean observation, both at a national and international level. The G7 is therefore in a strong position to add value by galvanising momentum in ocean monitoring and observations, as well as working with and supporting existing initiatives to increase cohesion, advance technologies and reduce the duplication of activities.

Since the G7 ‘Future of the Seas and Oceans’ Working Group workshop in November 2016, technical experts have completed a range of activities, including: workshops (Action 1 and 4); raising the profile of the World Ocean Assessment (WOA) and identifying UN Regular Process national focal points (Action 2); identifying several initial end-to-end demonstrators (Action 3); and, completing a study of the economic aspects of delivering the four Actions (Action 5); amongst many others (complete list can be found in the full report).

The following recommendations from the technical experts address the five action areas agreed by the G7 Science Ministers in 2016:

Action 1: Support the development of a global initiative for an enhanced, global, sustained sea and ocean observing system

A deeper understanding of our oceans and seas is needed for a better understanding and prediction of natural phenomena and the impact of human activities on ocean ecosystems, their resilience and effect on climate, including how and why the oceans are changing. This requires the continuation of existing observations that are augmented by new technologies in an integrated, coordinated and consistent way that also helps to close existing gaps.

¹ Technical experts act in their own capacity and do not represent the political views of their nation.



Therefore, G7 technical experts recommend:

- The G7 work collectively to establish sustained funding mechanisms that are essential to maintain and extend the existing global ocean monitoring and observing systems in accordance with national research priorities and budgets.
- The G7 members establish a Global Ocean Observing System (GOOS) Implementation group to liaise with and support GOOS whilst coordinating enhancements to G7 observing.
- The G7 develop a strategy for extending observations focussed on high-priority areas and develop associated road maps for the next 5 years.

Action 2: Support an enhanced system of ocean assessment through the UN Regular Process for global reporting and assessment of the state of the marine environment

Further scientifically robust assessments are needed to encourage more efficient and better coordinated international policy, governance and funding decisions to support the fulfilment of the United Nations' SDGs 13 and 14 and the maintenance of healthy and productive oceans, building on the important work done through the first UN World Ocean Assessment.

Therefore, G7 technical experts recommend:

- The G7 underline the importance of and proactively support the UN Regular Process and the second World Ocean Assessment (WOA-II).
- The G7 agree to raise the profile of the WOA-II in G7 countries and elsewhere as appropriate.
- The G7 identify their respective UN Regular Process national focal points if they have not already done so.
- The G7 consider whether there is a need to take any particular action in terms of budget for ensuring the Regular Process has the resources it needs to be effective in the long term.

Action 3: Promote the improvement of global data sharing infrastructure to address the challenges of physical, chemical and biological data.

The ability to seamlessly link data collected from new observations with existing but under-exploited marine data such that it can be quickly and widely located, shared, compared and interoperated is needed (including blue cloud approaches). It is critical to train and enable researchers and others in developing countries to exploit the rich suite



of ocean observations. This will help us to address the key policy drivers set out above, enable the WOA and support the achievement of SDGs 13 and 14.

Therefore, G7 technical experts recommend:

- The G7 member states increase data interoperability through the development of a set of common data sharing standards and data integration translators.
- The G7 National Ocean institutes collaborate to identify needs and key drivers.
- The G7 members coordinate to provide access to the data and resulting data products produced to address the key policy questions identified under Actions 1 and 2 as open data.
- The G7 support and reinforce international collaboration on ocean reanalysis, analysis and forecasting.

Action 4: Strengthen collaborative approaches to encourage the development of regional observing capabilities and knowledge networks

Scientific capacity for ocean science issues across the world needs to be developed to ensure a relevant and authoritative assessment that supports coordinated policy and governance decisions. This needs to be done by building networks of talent and technical skills, such as the use of new autonomous observing systems, as well as ensuring the provision of necessary infrastructure and modelling capacity in developing countries and the currently under-monitored regions.

Therefore, G7 technical experts recommend:

- The development of a G7 Programme to promote sustainable coastal ocean observing systems for marine management in support of sustainable Blue Economies in cooperation with the Intergovernmental Oceanographic Commission (IOC) and World Meteorological Organisation (WMO). This should have three linked activities:
 1. Stakeholder engagement and identification of user needs;
 2. Identify pilot project locations which co-design, implement and deliver site-specific coastal ocean observing systems; and,
 3. Capacity development and system sustainability, including technical, practical and transferrable skills training, and region-specific training.



Action 5: Promote increased G7 political cooperation by identifying additional actions needed to enhance future routine ocean observations

To facilitate the international collaboration necessary to implement an enhanced system of ocean observation, experts advocate overcoming political, legal and economic barriers to realizing effective and coordinated observations as outlined through Actions 1-4.

Therefore, G7 technical experts recommend:

- The G7 continue considering ways to provide further support in the areas of policy, funding and regulation to address the identified issues arising from the work of the technical experts Working Group (Action Areas 1-4) and the implementation of the agreed roadmaps.
- The G7 collaborate with Blue Growth initiatives to assess the economic potential of public investments in ocean observing and data collection.

Conclusion

The impact of this G7 initiative on ocean monitoring and observations can be maximised by ensuring the most significant challenges are met by the major marine science nations collaborating in a coordinated way. This has the potential to lead to a step-change in realising more rapidly and cost-effectively the potential of international ocean science to support achievement of SDG 13, 14 and others.

The G7 political and technical work-streams agree to meet before the end of 2017 to progress on the action plans for the five action areas to ensure sustainable and substantial impacts and monitor progress in 2018.

