

Contribution to concept paper for UN Ocean Conference Partnership Dialogues

Theme 6: Increasing scientific knowledge, and developing research capacity and transfer of marine technology (14.a)

Prepared by the Secretariat of the Pacific Regional Environment Programme (SPREP)

Preamble:

In our Pacific Islands Region, the ocean unites and divides, connects and separates, sustains and threatens our very survival. Our Ocean faces many present-day and longer-term challenges. In recognising this, Leaders have developed robust regional ocean policy including the Framework for a Pacific Oceanscape and the Framework for Pacific Regionalism. Leaders have also established effective coordination arrangements including a Pacific Ocean Commissioner. There is strong alignment and resonance between SDG14 and national and regional policies, including sector-based policies.

Decades of previous effort, investment and learning in integrated ocean management in the region must be combined with innovation to optimise the benefits to be gained from implementing and achieving SDG14.

Partnerships are vital for progress toward SDG14 targets, but they need to be functional and proactive. Prior experience shows that they need to be country-owned and -driven, must be durable, must be sustainable and must be held accountable. Partnerships should be an integral part of national and regional planning and implementation processes.

This input reflects our interpretation of the outcomes from the Pacific Regional Preparatory Meeting, which included a 2 day senior officials meeting and a 1 day leaders meeting, held 15–17 March 2017, and the contributions of the regional technical working groups to these meetings.

Status and trends

Increasing scientific knowledge and developing research capacity play a critical role in the sustainable development of the oceans, seas and their resources, and are also critical for ensuring the protection and preservation of the marine environment.

Pacific leaders have identified the need to strengthen national capacities in marine scientific research, recognising the benefits that could be derived from investing more in this field as a means to increase scientific knowledge of the marine environment and to support national and regional economic growth in marine sectors, such as shipping and offshore energy, as well as in security and defence.

Target 14.a is relevant to and underpins work on the other SDG14 targets and their components, including on ocean acidification, marine ecosystems, and fisheries, as well as serving the critical need of establishing baselines to understand resilience, guide adaptation, and measure change under anthropogenic pressures from local to global scales.

Management of coastal and oceanic areas in the Pacific islands region is constrained by enormous gaps in scientific understanding of our marine systems. Traditional knowledge is integral to Pacific management, but responses to the rapid changes in both ocean conditions and human populations require the combination of traditional and novel knowledge sources.

This gap in science and research information is particularly evident in ocean areas where global interests and pressures out-pace the capacity of Pacific island nations to adequately understand and manage the area. Furthermore, Pacific island countries and territories urgently need increased science capacity to measure and monitor progress toward the SDG14 targets and indicators. Where data and local/traditional knowledge are available, there are still gaps in transferring this data and knowledge to decision-makers.

Coordination is a strength of the region and serves to create efficiency while facilitating new work. Allaying to share capacity makes the most of limited resources.

Challenges and opportunities

- Increase application, quality, and availability of marine data and meta-data, knowledge and research programmes, to support decision making and country driven planning
- Combine local and traditional knowledge with novel science informed by local practices, recognising the strengths of local experts and creative solutions.
- Participate in the design of research programmes to capture outcomes and monitor progress toward the goals aligned with Pacific values and with suitable environmental and social safeguards
- Creation of a culture of marine knowledge advancement, supported by cross-boundary investment to build the capacity of local staff
- Increase tailored, in-country capacity building of ocean stakeholder engagement and promote effective partnerships using approaches such as cross-border, regional and global learning experiences
- Assess the value of ecosystem services provided by the ocean and coastal ecosystems aligned to the UN accounting systems to improve decision-making

The needs of environmental management planning, particularly the regional ocean priorities as defined by Pacific island countries during the SDG14 response process, should inform and guide research agendas. Good research starts from well-defined objectives, and CROP organisations are key partners given their understanding of the national and regional objectives as well as the questions needing attention.

Existing partnerships

- Pacific Islands Universities Research Network (PIURN)
- Pacific Islands Global Ocean Observing System (PI-GOOS)
- Global Ocean Observing System (GOOS) - UNESCO Intergovernmental Oceanographic Commission (IOC), World Meteorological Organization (WMO), International Council for Science (ICSU), UN Environment Programme
- New Zealand Pacific Partnership on Ocean Acidification (PPOA)
- The Ocean Acidification international Reference User Group (OAI-RUG)
- Secretariat of the Pacific Regional Environment Programme (SPREP) mandate for Environmental Impact Assessment training and support
- CROP agency training and capacity building projects and expertise

• Are many existing partnerships covering the theme of the dialogue? Are there identified gaps in coverage?

There are great gaps in the scientific research capacity, technological capacity, and knowledge custodianship across the Pacific region. Support to train and retain staff in small Pacific countries is a critical need.

• Who are the main actors involved in existing partnerships?

• Do we know how well existing partnerships are performing? What have been success factors? What are the main challenges identified with existing partnerships?

The issue of 'brain drain' is real, with trained staff often leaving to take international positions. This challenge can be addressed by changes in the support, working culture, and quality of staff positions available in country to attract and maintain national staff.

Key success factors include time and in-person, in-country interactions. While this approach can be costly in the vast Pacific region, relationships are essential and focused time vital to progress actions and maintain priority for a given action.

• Have successful partnerships on the theme been narrowly focused in scope, or more holistic, encompassing several related areas?

Possible areas for new partnerships

• Given challenges, opportunities and gaps, how could new partnerships help with implementation?

Country experts can be created and supported by cross-boundary learning experiences, such as internships or training fellowships, to support implementation.

National ocean advisory councils, with national and regional mentoring support, could support national coastal and marine management and progress toward SDG14.

We propose the creation of a Pacific Ocean Research Alliance, supporting the policy and sectoral approaches of the Pacific Ocean Alliance and the Marine Sector Working Group, would assist implementation by connecting regional and international scientists as well as local and traditional experts to create and transfer knowledge to decision-makers.

A Research Alliance should consider ocean science and research broadly, to also include biological components and processes; social science and methods to increase ocean literacy; valuation of natural ecosystem goods and services also within local societies; mechanisms for regional knowledge and data custodianship and access, linking local and traditional knowledge with novel science; access to marine research infrastructure as a regional resource; and the breadth of technical expertise to take an integrated ecosystem approach to coastal and marine zone management.

Taking the example of the [Atlantic Ocean Research Alliance](#) as a model, we see an opportunity for a Pacific Ocean Research Alliance, useful to:

1. **Source and provide marine data**, required to measure ecosystem status and progress toward SDGs and MEA targets. Joint actions will create synergies and efficiencies, minimise competition for funding options, and enhance the overall capacity and speed of marine science growth in the region;
2. **Connect international, regional and national actors**, including marine scientists and ocean policy experts, coordinating the (presently limited) marine data collection projects and programmes;
3. **Build Pacific capacity** for marine research, informed marine management, and international ocean advocacy through field research experiences, mentoring networks, and scientific writing development and practice; and
4. **Support the Pacific Ocean Alliance** and the Office of the Pacific Ocean Commissioner, which is presently operating with limited resources to support regional ocean management/policy.

• [What actors would need to be involved for new partnerships to succeed?](#)

Country-driven planning is essential for the success of partnership actions in the Pacific region. Given the limitations of numbers of country staff and the demands for implementation and reporting, it is critical to focus on a strong national voice during project and partnership design.

Good research starts from well-defined objectives, and Council of Regional Organisations of the Pacific (CROP) organisations are key partners given their understanding of the national and regional objectives as well as the environmental management questions needing urgent attention.

Established CROP agencies offer:

- Connections to in-country experience and contacts

- Technical expertise
- Assistance with project concept development tailored to regional priorities
- Support for the framework linking research and governance
- Linkage of environmental research with upcoming efforts on natural capital accounting, ecosystem services valuation
- Connections of marine science research with other regional needs, as defined in each CROP agency mandate

Other potential partners include national and international research bodies directly engaged in ocean science in the Pacific islands region.

Given the cross-cutting need for and implications of capacity building and knowledge management, new partnerships should engage across sectors. Local NGOs (e.g. PIANGO and LMMA) and Pacific academic institutions, including regional as well as national universities (e.g. University of the South Pacific [a CROP agency], University of Hawai'i, University of PNG, University of Guam, University of New Cal, University of French Polynesia, etc.), are key actors.

- **What would be critical success factors?**

Successful knowledge and capacity building efforts will result in empowerment of Pacific people to develop, share, and use accurate information within their own cultural context.

Information about Pacific ecosystems, traditional management practices, and impacts resulting from innovative interactions with coastal and marine environments are of global value. Success in this context means transmission and translation of Pacific information to the global community.

Guiding questions for the dialogue

- How will partnerships combine the transfer of expertise with the need for incorporation, and in many cases locally owned preservation, of local and traditional knowledge?
- How will partnerships create mechanisms for effective knowledge management, taking into account the geographic, language, and technological connectivity limitations of developing regions such as the vast Pacific islands region?
- How can partnerships assist in nurturing national and regional situations that support the retention of trained coastal and marine experts?