

Pacific Ocean Pathways in Support of Sustainable Development: an Integrated Approach



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Stakeholders rely on sound science, targeted expertise, and reliable data-based information for risk-informed decision making. To be efficient and transformative, this needs to be targeted and co-constructed with local communities and knowledge-holders. In-line with major objectives of the United Nations Decade of Ocean Science for Sustainable Development, PACPATH developed a participative stakeholder network on two pilot sites, Fiji and New Caledonia, to face the impacts of climate change and other stressors on the ocean environment and ecosystem services, and their consequences for society, economy.

Major Accomplishments

- Engagement of relevant Oceania stakeholders with very different knowledges; establishment of working groups
- Agreement on values and priorities for coastal ocean sustainability
- Establishment of a socio-environmental card for each country
- Establishment of a research network focusing on sustainability of Fiji and New Caledonia (USA, France, Germany and Oceania)
- Establishment of a transdisciplinary process with voices to multiple viewpoints and types of knowledges through workshops and socio-environmental card design
- Establishment of links with upcoming local and regional projects on ocean and climate change
- Analysis of leverage points for sustainability transformation with key local actors on a pilot site (Ouvea atoll)
- Providing links between the global science and local issues with mechanisms for having a voice
- Engagement of motivated student; creation of student exchange groups for project developments

Unexpected Outcomes

- The very high level of awareness of all stakeholders about climate change and the impacts it has and will have on their communities, which contributed to their interests in fostering research and participating to the transdisciplinary process and expressing their needs for better planning
- Priorities re-focused from initial, ecosystem based propositions, mainly science-lead, to stakeholder-lead priorities as expressed during workshop: **Coastal erosion/habitability, Reef health/food security** and **Governance/good adaptation**.
- Priority on governance issues as expressed during the Fiji workshop
- The level of coordination that supported effective participating in the global Ocean conferences: the Our Ocean Conferences in Palau and Panama as well as the second UN Ocean Conference in Lisbon as well as serving on the advisory board on ZMT, collaboration with Mercator, IRD, SPREP and SPC and ensuring a stronger voice for the Pacific.
- A high interest from Fijian academics for the stakeholder analysis and the methodology for building a strategy for a well articulated approach to stakeholder engagement.

Key Findings

- Stakeholders acknowledgement of the inclusivity of the process and the respect for and often the uniqueness of ideas resulting from the broad stakeholder engagement. (The PACPATH process for identifying and engaging with stakeholders across the spectrum of key topics resulted in a space for open sharing and exchange).
- Integration of indigenous and local knowledge (IKLK) is paramount to design, implement and enforce sustainability research and action
- Decision makers need information and expertise to make decision at both short term and long term
- Local derivation of SDG could make sense when expressed as needs and resources for Fiji's current and future generations. Participants in the Fiji workshop collaborated on an unique and contextual definition of sustainability. This definition did not include all SDGs and there is opportunity to further explore the perception of sustainability and its relationship with the SDGs.

- While the degradation predicted by the IPCC of coral reefs and associated ecosystems (seagrass beds, mangroves) leads to uncertainty about the future of food sources for many communities, coastal erosion is a problem that has a lasting impact on the environment and society. Predictable population and infrastructure displacements will force a rethinking - anticipating and prioritizing - of coastal development policies and their evolution. The loss of customary lands and sacred sites is even more impactful in a culturally organized society with clans of the sea and clans of the land. PACPATH provided foundations for research and adaptation solutions as expressed by indicators in the socio- environmental report cards:

- 1. Assessment for coastal erosion**
- 2. Pollution**
- 3. Biodiversity**
- 4. Food security**
- 5. Indigenous knowledge**
- 6. Overfishing**
- 7. Coastal development**
- 8. Governance in the different parts of each island**

Benefits of stakeholder involvement

The different stakeholders were involved in the project through the two workshops we organized. In October 2022, we brought together Caledonian stakeholders for a participatory workshop in Noumea, and in February 2023, Fijian stakeholders for another participatory workshop in Suva. The stakeholders were identified from various organizations with agencies on various issues related to ocean and climate change. Their common work provided a comprehensive view and results. The transdisciplinary approach showed how stakeholders from different fields could provide an integrated representation. The stakeholders are now involved in the next stages of writing the research proposals linked to the topics identified during the two workshops.



Aftermaths

PACPATH started with preparation of communication items to contact stakeholders: concept note, brochure and website. The lockdown in New Caledonia and Fiji and delay in funding provided more time to prepare those communication materials and engagement afterwards. Attempts to contact too high level stakeholders (eg. government directors or international bodies) failed, and our focus on contacting managers and practitioners was more appropriate and successful. We noticed that some political stakeholders are more sensitive to medias (press releases) than direct solicitation. The workshops continued attendance showed the interest of the stakeholders, and we anticipate that local involvement will be easier in follow-up actions.

PACPATH Students

5

Undergraduate
students

6

Graduate
students

3

Postdoctoral
fellows



Factors influencing student and postdoctoral involvement

- Students prove to be very concerned by climate change and specifically the physical, ecologic and social aspects of Marine Heat Waves, Sea Level Rise and Coastal Erosion
- The importance of involving local universities for the outreach and decision sustainability of the project and the project outcomes
- The diversity of knowledge held by students
- To foster and share knowledge on student on sustainability pathways for the South Pacific to be applied at other areas by the students in their later career
- To strengthen ocean inclusion: research through capacity building for coastal sustainability issues, AND for transdisciplinary science and community involvement in co-production.

Interdisciplinarity

Elaboration on Transdisciplinary Benefits

Transdisciplinarity is a mode of research that builds on collaboration, knowledge co-creation, especially on system and transformative knowledge through a shared creation of the problem framing, research questions and ways to address those. It also focuses on co-generating ways to change the system to foster a more sustainable development.

PACPATH choses to invite political, customary, administrative and civil society representatives from both Fiji and New Caledonia for participatory platforms. Their input was valuable in the design of report cards identifying contexts, issues and solutions regarding climate change in the two countries. The involvement of non-academic actors helped enrich the forms of knowledge (traditional/local, administrative/legal, scientific) taken into account as well as their actual and potential interaction and cross-fertilization.

More generally, all of the outcomes of the workshops, including potential coastal sustainability indicators, reflections on SDG relevance and applicability at scale, and the coastal sustainability report cards benefited from the transdisciplinary approach. Involving non-science stakeholders, including local community representatives, provided needed context and direct input that fundamentally changed the nature of the issues being discussed.

The core PACPATH themes:



were addressed in ways that made them more relevant to stakeholders at different scales. The COVID crisis in the Pacific delayed the the co-creation process but in the end, the transdisciplinarity created a strong base and connection around the themes that future projects will build upon.

Our long term objectives – to be renewed in the next phase

Objective 1

Create a network to co-design robust Ocean research strategy, projects and services to develop ocean stewardship and innovative sustainability pathways. Identify from the SDG framework how data and science can best support sustainable development and connect science and policy at the ocean climate nexus.

Objective 2

Perform an institutional analysis to identify relevant stakeholders and map institutions and networks at the regional, national and local scales. Identify the gaps and overlap between networks using the bottom-up understanding of sustainability and the top-down conception of SDGs

Objective 3

Engage stakeholders to agree on priority values for ocean sustainability and perceived threats to those; Identify locally derived indicators of coastal sustainability to synthesize current sustainability conditions with relevance to local contexts, and reflection on possible futures.

Objective 4

Understand policy-making processes and more specifically on how SDGs are dealt with at the regional and national levels. Understand how IKLK is integrated in policies.

Objective 5

Identify sustainability problems, framing, methods used and interventions suggested/implemented based on the concept of leverage points for sustainability transformation. Analyze the agency for implementing interventions across the local to regional (sub-national, i.e. broader South Pacific scale).