Towards a Pacific ST&I Agenda

a PACE-Net Plus recommendation to foster science, technology and innovation (ST&I) pathways in the Pacific region

Introduction

The peoples of the Pacific have committed to take action towards the Sustainable Development Goals (SGDs)[1], most significantly through their own national development agendas as well as a number of regional frameworks. For example, in December 2015 the island nations of the Pacific worked together on a matter of regional and international importance — climate change — to play a key role in the development and consensus of the *Paris Agreement*[2] of the COP21 meeting[3]. This demonstrated the significance of a united Pacific voice in tackling global challenges.

Moving forward, solving many national and regional (as well as international) challenges requires national and regional approaches to *science, technology and innovation* (ST&I)[4] in order to leverage limited resources, build new capacities to assist well-informed and autonomous decision making, and to identify new economic opportunities and jobs and enhance social stability in the region in an equitable manner.

This document addresses regional leadership (including parliaments, communities, elders and CROP agencies[5]) to develop a regional vision for ST&I in the Pacific to enable them to define their joint future. This is a powerful tool for regional leadership to inform decision-making — that will impact on future generations — on national and regionally derived findings of scientific research. We invite the leadership to consider this document and adapt the ideas to their own circumstances, taking into account specific strengths and architectures of each community and nation.

Background

PACE-Net Plus[6] is a project funded by the European Commission that is aimed at strengthening Europe-Pacific bi-regional cooperation in ST&I. To work towards this objective PACE-Net Plus has, amongst other activities, established a working group to identify pathways to raise the profile of Pacific research in order to enable such a dialogue. The dialogue seeks to enhance the relative strengths of the parties and to utilise these for developing their respective societies.

There are many challenges in the culturally independent societies in the Pacific that can benefit from relevant community and national, as well as regionally coordinated, ST&I initiatives, for

[1] http://www.un.org/sustainabledevelopment/sustainable-development-goals

[2] http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf

[3] 2015 United Nations Climate Change Conference, http://www.cop21.gouv.fr/

[4] In this context, reference to "science" is inclusive of all scientific endeavours, including traditional science, social sciences and humanities. Similarly, "innovation" is used inclusively of industrial innovation as well as other forms of innovation (e.g. as it relates to the subsistence economy).

[5] Council of Regional Organisations in the Pacific.

[6] Pacific-Europe Network for Science, Technology and Innovation, http://plus.pacenet.eu/

example in the fields of health, food security, environment, observation systems, etc. There are also many opportunities to enhance sustainable responses to climate change given the unique position the Pacific has at the forefront of environmental change. Its isolation also serves to shield it from global impacts and serves as a way of testing and developing strategies for communities in Europe.

Therefore, the project encourages the inclusion of ST&I in national development strategies and the coordination of regional research towards common research strategies and related policies and programmes in the Pacific region by promoting the implementation of joint actions, based on a proposed agenda.

Rationale

This document proposes concrete actions to boost the efficiency and impact of national and regional research activities in order to:

- assist regional leaders to achieve the objectives of their national development strategies, through national and regional research findings;
- ensure Pacific research activities are connected to local and global networks in order to enhance their local impact as well as contribute to global solutions; and
- foster bi-regional dialogues on the basis of excellent and equitable outcomes.

Recommendations

The involvement of many in communities, local research centres, universities, and public administration, in a Pacific ST&I agenda, will contribute to progress towards the Sustainable Development Goals (SDGs).

The ST&I working group and other activities of the PACE-Net Plus project have identified the following items that may warrant inclusion in aspects of national and regional policies and roadmaps. They have been grouped into loose headings, though there is much overlap between these items, and many items may already be part of existing national and regional initiatives.

Develop strategies in relation to ST&I (national & regional)

These strategies should leverage the SDGs and build on existing agreements and collaborations.

- National & regional ST&I priorities and ST&I frameworks
- Regional ST&I policy dialogue
    - Senior officials' meetings
    - Linkages between chief scientific advisors
- ST&I as a tool for strengthening regionalism and advancing regional objectives
    - Alignment with regional ST&I priorities, including with CROP agencies, based on the *Framework for Pacific Regionalism*[7] and other relevant frameworks and initiatives
- Participate in national, regional and global ST&I initiatives

[7] http://www.forumsec.org/pages.cfm/strategic-partnerships-coordination/framework-for-pacific-regionalism

    - International ST&I efforts towards solving national, regional and global challenges, such as climate change, security, etc.
- Capacity building
    - Leaders for the future, in particular senior scientific advisors and science advocacy
    - Resources for scientific research to assist in developing capacity in situ to assist with research and application of findings.
- Science diplomacy (including innovation)
- Creation of a regional research council (a regional funding body for excellent ST&I, and a central body to attract donor support towards regional ST&I funding, to action regional ST&I priorities)

Capacity building & education

Education gives people the power and knowledge they need to make sounds decisions and to have a good life. It is the key to gender equality, economic growth, and the advancement of societies. Education is the most basic insurance against poverty, to give people the knowledge and skills to shape their future for themselves.

It is widely acknowledged that the Pacific region suffers from a lack of internal opportunities for scientific activities to address many of the questions and challenges it faces. At the same time, it is recognised that there are many science graduates working in fields unrelated to science. Also, indigenous science embodies centuries of knowledge about the region, and there is a significant "national endowment" in each country (local knowledge and capabilities as well as natural resources) that is often underutilised in the teaching of science and in addressing broader scientific questions. Hence, it is critical to initiate endeavours to boost the region's capacities in key areas of science.

- Internal capacity supporting autonomous analysis and decision-making in evidence-based policies
- Maximise ST&I investment through the identification of areas of excellence and critical mass
- Research management training and administrative research support
- Support for sustainable regional thematic and institutional networks, for example via:
    - Mobility schemes to further develop networks and international linkages
    - Twinning, active MoUs, and COST-inspired networking[8]
- Support young scientists towards excellent research, providing:
    - Mentoring
    - Mobility
    - Fellowships / scholarships
- Support science curricula & science literacy for:
    - Early introduction to science and scientific literacy
    - Enhancing teacher training
    - Citizen science
    - Resources for teaching

[8] http://www.cost.eu/

Innovation

- Establish sectoral strategic platforms for innovation, that are industry & community driven, and identify sectoral needs
- Facilitate public sector and academic research linkages with private sector, for example via collaborative projects (e.g. PPP's, scholarships)
- Economic and legal incentives for industrial research, including support for the IP landscape

Infrastructure

- Facilitate open access to local/regional ST&I publications, data and collections
- Better utilisation of regional research infrastructure
    - Facilitate regional access to existing national assets
    - Utilisation of ICT to optimise access
- Improvement and coordination of infrastructures and human resources (e.g. coordinating networks of Pacific observatory systems).

Research funding (national & regional)

In additional to national financing efforts, and perhaps as part of a regional ST&I investment framework:

- Seed funding schemes, using think-tanks to develop priorities and identify areas with critical mass, and operated in collaboration with sectoral platforms
- Regional competitive funding
- Access to long-term funding, including sustainability for the operation/function of infrastructure assets

Equity and Inclusion

In keeping with international norms and standards of science governance, Pacific ST&I policies should take into consideration and incorporate elements to ensure that all sectors of society participate in and benefit from science, technology and innovation.

This includes, but is not limited to:

- Ensuring gender equality in research, researchers, science education, governance and beneficiaries
- Ensuring that ST&I is inclusive of people with disabilities
- Ensuring that ST&I research and implementation is based on the principles of free, prior and informed consent (FPIC) (see, for instance, FPIC guidelines developed by the Convention on Biological Diversity, IFAD, and the Intergovernmental Platform on Biodiversity and Ecosystem Services)
- Recognising that much innovation and development in the Pacific is grounded in traditional knowledge, which develops through empirical testing in complex context for generations. In other words, indigenous science. To ensure that ST&I development is appropriate to and serves Pacific communities, traditional knowledge should be considered on equal footing with scientists and traditional knowledge holders should be included as equal stakeholders

in ST&I policy-making and implementation. This includes capacity building for all partners in the Nagoya Protocol on Access and Benefit-Sharing and FPIC.

- ST&I development in the Pacific should be based on human rights and Pacific principles of social responsibility and contributing to the common good.

Key actions

We trust that this document will lead to discussions amongst the regional leadership. They will determine the value of the individual aspects and ways towards their implementation.

In our view, the pathway to the future hinges on the commitment to develop a regional vision for the Pacific embracing ST&I. Such a vision will then be supported by respective policies in schooling, higher education and research, facilitating innovative approaches in the societies. The implementation will build on joint infrastructures which can be developed together with donor countries and organisations. These pilot installations (e.g. global change observatories) will be pilot projects for discourses in communities regarding development paths they would prefer towards the future.

Nadi, Fiji
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