



SEVENTH MEETING OF THE PACIFIC METEOROLOGICAL COUNCIL (PMC-7)

PMC-7 Agenda Item 19.1

**Traditional Knowledge progress and development
in weather, climate, oceans, and multi-hazards.**

Siosinamele Lui. SPREP



Purpose of the Paper

1. Provide an update and progress on the implementation of activities on Traditional Knowledge
2. Seek guidance and endorsement of the recommendations on the Traditional Knowledge work implemented by National Meteorological and Hydrological Services and their national and regional partners



Background

1. Traditional knowledge has been an integral part of many Pacific communities for generations and developed traditional communications and knowledge systems, adaptive solutions, coping strategies and methodologies to cope and respond to a changing environment and climate variability.
2. For the work of the NMHSs, traditional knowledge underpins and bridges the information gap between science and community understanding.
3. Traditional knowledge funding support from **COSPPac, CREWS UNEP CIS5, VanKirap, RESPAC, Climate Change projects** and other donors and partners has progressed the work on TK



Updates

- Five NMHS have basic to advanced TK programs
 - Vanuatu, Solomon Islands, Samoa, Niue & Tonga
- Four NMHS are in early stages of establishing TK Projects
 - Marshall Islands, Palau, Tuvalu, Kiribati
- Regional and global recognition of the NMHSs and the TK work and request for collaboration
- Fundraising opportunities (NZ MFAT)
 - Climate and Biodiversity Smart Marine Spatial Planning and Marine Protection (2 Countries)
 - KIWA initiative

Traditional Knowledge Process

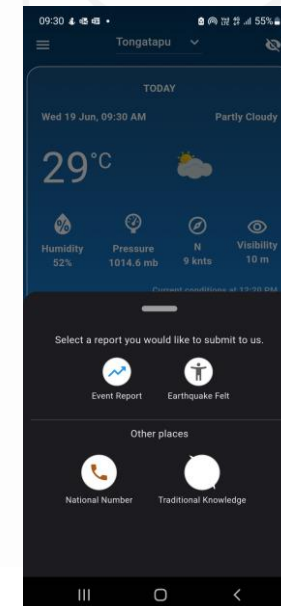


LCIPP Pacific Regional Gathering



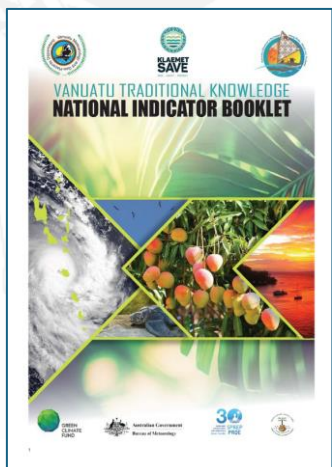
Updates : TK Tools and Methodologies


- TK Mobile applications (Collection and Monitoring)
- Revised the TK tools and methodologies
- Planned software and hardware upgrade and installation for the 9 TK Countries
- Accredited Courses on Traditional Knowledge (Pacific Theological College)
- In progress (COSPPac)
 - Revised methodologies to allow integration and wider application
 - Installation and Upgrade of the TK Database



Updates: Integration and application of TK

- Integration and verification of TK indicators in Vanuatu
- peer reviewed publication
- Translation and development of Glossaries



Grin Totel	
	<p>English name Green sea turtle</p> <p>Scientific name <i>Chelonia mydas</i></p> <p>Local name(s) Grin Totel</p> <p>Description Grin Totel are found in tropical, subtropical and temperate regions of the world, including Vanuatu. They are the largest of the hard-shelled sea turtles often over 1m in length and weighing up to 230 kg. Their smooth shells are dark brown, grey or olive with lighter yellow to white undersides. Hatchlings are dark in colour with white edges on their bodies and flippers. Once mature, they forage in shallow coastal waters, mainly eating seagrass and algae. Every 2-5 years they return to the beach where they hatched to nest.</p>
<p>OBJECT Grin Totel</p> <p>ACTION Nesting inland</p> <p>OUTCOME Cyclone season is approaching</p>	<p>Traditional knowledge</p> <ol style="list-style-type: none"> 1. When the turtle nesting area is very inland it is a sign that cyclone season is approaching. 2. If the turtle moves inland, it is indicating that a tropical cyclone is approaching (Tugna). 3. When the turtles come shore to tabu areas inside the forest that means a big cyclone will strike the island in the next 2-3 weeks (Tanna). 4. Turtle shows a lot of signs of a coming cyclone, and one of them is when the turtle comes ashore to lay its eggs in the sand, that shows that the indicator knows very well that the cyclone will be disturbing her eggs and for this reason she has to put her eggs in the sand. But if she does her nesting up in the bush that shows there will be a very strong cyclone and the sea will be rougher, for that reason she has to go up higher (Tanna).
	<p>Climate link Nest site selection in sea turtles is influenced temperature, moisture, and salinity. Turtles can influence the duration of incubation and sex of hatchlings by selecting sites based on temperature. Nesting under trees results in cooler nests and reduces temperature fluctuations and reduces the risk of nest inundation and egg loss due to erosion.</p>
	<p>Expected climate change response Climate change is likely to alter beach morphology and increase sand temperatures. The ratio of male to female hatchlings is influenced by sand temperature. High sand temperatures can be lethal to turtle eggs. Rising sea levels and storm events may erode beaches and flood or wash away nests. Sea surface temperature changes may impact on the frequency and timing of sea turtle breeding.</p>



Chapter 11 Adapting to Change? Traditional Knowledge and Water

Melissa Nursley-Bray, Sally Jerome Kororura, Monifa Fu, Siosinamele Lui, Philip Malsale, Azarel Mariner, Filomena Nelson, Salea Nihmet, Meg Parsons, and Espen Romeberg

Future water adaptation approaches in the Pacific must be informed by traditional knowledge to enable the incorporation of localized, detailed, and historical knowledge and experience into contemporary management regimes.

Abstract Pacific Islander communities need to maintain traditional knowledge and practice about their water systems, despite the ongoing legacy of colonial impact, in order to adapt to climate change where its impacts will significantly impact water quality and reliability. Without healthy water systems, Pacific communities will become increasingly vulnerable. Traditional knowledge has a role to play in building the adaptive capacity of islanders to water shortages and in adapting to climate impacts over time. While colonization, belief in God, and loss of traditional knowledge are barriers to effective adaptation, Pacific Islanders across the region are using existing traditional knowledge in combination with other knowledge systems to build resilience to climate change and innovative adaptation solutions. Approaches informed by traditional knowledge enable the incorporation of localized, detailed, and historical knowledge, and experience into contemporary management regimes, which then enable the development of tailored and appropriate place-based adaptation. Importantly, the use of traditional knowledge also strengthens community receptivity to adaptation initiatives.

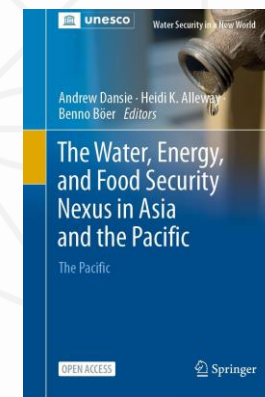
Keywords Pacific • Gender • Climate adaptation • Resilience • Water

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A. Danis et al. (eds.), *The Water, Energy, and Food Security Nexus in Asia and the Pacific*, Water Security in a New World,
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Updates: Early Warning



TVNIUE.COM

Niuean Scouts use yam for traditional prediction of cyclones

The growth of ufi or yam has proven to be an effective way of predicting tropical cyclones. As ...





Moon Phase for August to October 2022

New Moon ●	First Quarter ◐	Full Moon ○	Last Quarter ◑
29 July	5 August	12 August	19 August
27 August	4 September	10 September	18 September
26 September	3 October	10 October	18 October

Traditional Knowledge Indicators

Vanuatu is currently in its Dry and Cool season and conditions influence the weather and climate. Plants and animals tend to show certain characteristics to indicate potential climate risks. Some local indicators of dry season: (1) Drop in stream and river level. (2) Drop in day and night time temperature. (3) Flowering of *Erythrina variegata* (Narara) and *saccharum* plants (Naviso).

Vanuatu istap go tru long Drae mo Kolkol sisen, mo weta mo klaemet I stap jenis folem sisen. Yumi save talem weta mo klaemet tru long fasin blong ol plan mo ol anamol. Hemia hemi sam lokol save we istap talem se yumi stap long drae sisen: (1) Taem we yumi luk level blong ol strims mo riva I stap go taon. (2) Ples I stap kolkol plante long dei mo long nait. (3) Taem we Narara mo Naviso I karem flaoa.

SUPPORTED BY:



Australian Government
Bureau of Meteorology



VANUATU CLIMATE OUTLOOK FOR TOURISM

A monthly bulletin issued by the Vanuatu Meteorology & Geo-hazards Department that provides concise one-month outlook on climatic conditions over Vanuatu that local tourism operators and tourists can use for better decision-making.



Regional and Global engagement

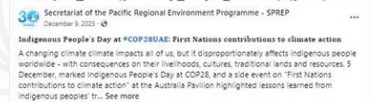
- UNFCCC engagement and participation
 - Local Communities and Indigenous Peoples Platform (LCIPP)
 - Loss and Damage
- First Nations and Maori engagement (COSPPac)
- Oceans
 - Maritime Delimitation boundaries



In the Pacific, community resilience took a centre stage, blending the wisdom of elders with the proactive engagement of youth to confront societal hurdles head-on. Led by Moderator Siosinamele Lui, a panel discussed the transformative impact of traditional knowledge in climate resilience. Esteemed speakers including Tagaloa Cooper, Salea Nihmei, John Ruben, and Ofa vunu underscored the crucial role of Pacific youth in merging technology 'traditional practices. Their insights showcased how this fusion not only 'decision-making but also advances scientific research.



Katie Berryman and 26 others 1 comment 2 shares



Ivy Keslake and others

Regional Strategic Framework

Importance of Culture for our Region's future prosperity and wellbeing

Pacific Culture Strategy 2022-2032

“This strategy recognizes the increasing role of culture in development and provides policy direction for Pacific Island countries and territories in the strengthening of the culture sector and in the protection and utilization of traditional knowledge in various development contexts.”

2050 Strategy for the Blue Pacific Continent

*“As large oceanic countries and territories, we are the custodians of nearly 20 percent of the earth’s surface, and **we place great cultural and spiritual value** on our ocean and land, as our common heritage.”*

*“To embed our Blue Pacific Identity, **we will embrace or cultural diversities**, respect our national sovereignties, and protect our collective interests.”*

Other regional Sectoral Frameworks, decisions – Culture & Traditional knowledge

Policy Area 1: Quality and Relevance

Policy Objective:
High quality, relevant programmes are provided for learners at all levels of education.

Goal:
All learners are provided with a safe and supportive environment, within which they are offered high quality learning opportunities that are meaningful, valuable, inclusive and future-focused.

Outcomes:
(i) Curriculum and programmes are embedded in the Pacific context that reflect Pacific values, cultures, **traditional** knowledge and skills that draw on the land that we live and exist upon and the ocean that surrounds and bind us all.

The key issues identified and agreed are:

- Indigenous Knowledge, Culture and Language.** Ministers agreed that indigenous knowledge, culture and language should be embedded in curriculum development, teacher training programs and delivery.

Other regional Sectoral Frameworks, decisions – Culture & Traditional knowledge

GOAL 3

Visible and Valued Cultures

Our Pacific cultures are vibrant, visible and valued as core elements of our tourism offering and the benefits of tourism support the prosperity of our people.

OUTCOMES:

- National legislations, strategies and policies relating to tourism explicitly include the value of culture and creative industries and their importance to local livelihoods.
- Cultural heritage, sites and languages are protected and benefiting from sustainable tourism and heritage management.
- Cultural and creative industries are valued and promoted as key pillars of the Pacific's tourism offering.
- Women and young people are engaged in the cultural and creative industries to promote traditional and cultural knowledge.
- Tourism supports and promotes cultural, fair and ethical trade.
- Quality of our culture and our people is a cornerstone of tourism.
- The Pacific's diversity and quality of tourism products and experiences are preserved and enhanced through tourism.

PERFORMANCE INDICATORS FOR GOAL 3:

Indicators included in cultural activities:

- Cultural representation and awareness
- Visible (International and domestic)
- Cultural activities, cultural experiences

By 2030 we are empowered by, and benefiting from tourism that is resilient, prosperous and inclusive. It improves the wellbeing of our communities and protects, restores and promotes our cultures, islands and ocean ecosystems.



Recommendations

The Meeting is invited to:

1. **Note** the developments in the area of traditional knowledge and the technical and financial support from **COSPPac, CREWS, UNEP CISPac5, VanKIRAP, RESPAC** and other donors and partners.
2. **Acknowledge** the commitment and support from NMHS and national stakeholder to elevate and integrate TK into national policies, and early warning activities.
3. **Acknowledge** the TK work that is implemented and coordinated across CROP agencies at the regional level.
4. **Recommend** the Revised Pacific Island Meteorological Strategy to include clear Priorities of members around Traditional Knowledge.
5. **Approve** and **task** SPREP to facilitate and coordinate the development of a strategy and implementation plan on traditional knowledge of weather, climate, oceans and natural hazards.
6. **Request** the Weather Ready Pacific Program and other regional funding initiatives to support the development of the strategy and implementation plan in the short to medium term
7. **Approve** the development of a regional traditional knowledge proposal to implement the traditional knowledge program in the long term.