

SDG LAB REPORT

Integrating Indigenous and Local Knowledge into Health Planning to Meet SDG 3 in Fiji

United Nations University- International Institute for Global Health (UNU-IIGH)

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ABOUT THE AUTHORS

UNU-IIGH undertakes research, capacity development and dissemination of knowledge related to key global health issues. The Institute contributes to the development and strengthening of health services policy frameworks and management actions, particularly for people in developing countries, and supports implementation of promotive approaches to human health.

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SUMMARY

The realisation of the SDGs will require a continuum of transformative systemic changes at many levels. The kev objective of the lab was to identify a set of smaller transitions beyond business-asusual that will facilitate the mainstreaming of Indigenous and local knowledge (ILK) into health planning in Fiji whilst addressing SDG 3 targets. Despite the rich presence of ILK in Fiji there is limited formal recognition of ILK in health planning that can help inform the SDGs. The Healthy Islands vision adopted across the Pacific Islands provided the impetus and the anchoring for the design of the lab which in turn supports more recent conceptualisations of planetary health. The lab facilitated a diverse set of stakeholders working across the policy-practice spectrum within and external to health to come together and envision a set of pathways towards creating innovative changes. Participatory methods were adopted, including scenario development and futures thinking through a process of back-casting. Participants' emphasised the potential role of ILK in ensuring the SDGs are percolated and adopted at the community level. In envisioning their preferred futures, respondents highlighted the exponential growth of ILK and its integration at the highest levels of governance if it is to be transmitted and valued amongst future generations. Key transitions that were identified to navigate towards the preferred futures included: creation of a national steering committee to mainstream ILK into all SDG related activities; establishment of a research centre (National Wellness Centre) to develop an evidence base for ILK related to health and capacity building activities; revitalisation of the Healthy Islands (HI) Vision by the Ministry of Health so that it is filtered down across various tiers of governance; and the establishment of a new NGO with representation from Indigenous and other minorities in Fiji who can advocate for change and hold government agencies accountable. There was a strong consensus amongst participants' that the lab was empowering as it provided the first opportunity to consider the role of ILK in SDG planning efforts in Fiji.

1. BACKGROUND

"There comes a time when humanity is called to shift to a new level of consciousness ... that time is now." Wangari Maathai

The new Sustainable Development Goals (SDGs) of the 2030 Agenda are bold and ambitious. requiring the collaboration of various actors, diverse knowledge systems and innovative methods for addressing development challenges that not only alleviates poverty but also enables our planet to flourish. Indeed, this demands transformative actions that sets us on a radically new development trajectory and enables the global South to achieve true post-colonial independence and agency (Leong, 2018). This is pertinent if the development bandwagon is to move away from re-packaging old ideas that support business-as-usual and truly mobilise the SDGs at the community level.

One such mechanism that can contribute to this vision of developing sustainably across the Pacific Island Countries is the role of Indigenous and local knowledge (ILK). ILK is now widely recognised as being critical to the development of effective and meaningful strategies to address socialecological crises (Tengo et al., 2014). ILK is highly valued across the Pacific Islands (e.g., related to traditional medicines and foods, architecture, natural resource management) but its integration in health planning and policy is often limited. Certainly, the requirement for diverse knowledge systems in dealing with complexities and informing the SDGs is clear, but its facilitation into formal health policies may be challenging. This may require new partnerships, challenging deeply held values and perceptions, innovative financing mechanisms or new tools for data gathering. The SDG 3 (human health) aims to ensure healthy lives and promote wellbeing for all ages. It comprises 13 targets and 11 indicators in which the last four targets are process oriented (see Table 1). Health has synergies with all the SDGs and retains a central position across the entire SDG framework, both as a major contributor and beneficiary of sustainable development policies (Nunes et al., 2016).

ILK is the set of knowledge, innovations and practices of indigenous and local communities which have been developed from experiences gained over the centuries and adapted to the local culture and environment. For example, in Pacific Island countries, agricultural practices based on Indigenous knowledge, including crop diversification and food preservation are adopted as a strategy to ensure food security and enhance nutrition under climate change and variability. Despite the range and quantity of traditional and non-traditional crops that are grown throughout Fiji, the country remains a net importer of food and its agricultural potential for food production has yet to be capitalised (Roberts et al., 2011). Efforts to integrate indigenous knowledge and western science frequently encounter difficulties due to differing systems of knowledge production and underlying worldviews(Mercer et al., 2009; Thornton & Comberti, 2017).

Fiji is a Small Island Developing State located in the South Pacific, consisting of 322 islands in which 106 are inhabited. Fiji has a population of approximately 869,458 in which 56 per cent are i-Taukei Fijians (Indigenous) of Melanesian decent whilst the remaining population consists of Indian, Chinese and European ancestry. Rates of urbanisation across the Pacific Islands have been on the increase over the last few decades. Pacific Islanders move to urban centres such as Suva to access new employment opportunities, improved infrastructure and associated services. Approximately, fifty-four percent of Fijians live in urban centres such as the capital Suva, which is one of the most highly populated cities in the Pacific Islands. This places pressure on essential services that are currently stressed including health care facilities, housing, water and waste management. Despite Fiji having achieved significant success over the past three decades in increasing life expectancy, improving health outcomes in mothers and children, and in reducing illness from communicable diseases it has a growing burden of non-communicable diseases (NCDs). As of 2011, NCDs accounted for 40% of all healthcare costs for diseases, and this figure is expected to continue to rise in the near future as countries struggle to meet their NCD target

under SDG 3 (Nishtar et al., 2018). This trend is visible across the Pacific Islands, mainly in urban areas and highest in the atoll states. The Ministry of Health and Medical Services is the key agency responsible for providing high quality healthcare. The Ministry's work is primarily guided by the Strategic Plan (2016-2020), which aims to improve health outcomes for its people and has been developed so that it aligns with the SDGs as well as the "healthy islands" vision of the Pacific Islands.

Despite the rich presence of ILK across the Pacific Islands (e.g., related to traditional medicines and foods, architecture, natural resource management) there is limited formal recognition or integration of such knowledge in health policies and plans that can help inform the SDGs. Recent reports such as the Rockefeller Foundation Lancet Commission report on planetary health emphasises that nature and society are inextricably linked and thus, the health of people are dependent on the health of the planet (Whitmee et al., 2015; Romanelli et al., 2015). There is a need for health practitioners and policy makers to recognise this duality and apply integrated conceptualisations that value plural knowledge streams in planning and policy processes if we are to ensure health security and meet the SDGs. This may require new partnerships, overcoming deeply held values and perceptions, innovative financing mechanisms or new tools for data generation. This lab provided the backdrop to explore such ideas in-depth. Sarin and Pisupati (2018) argues that in many countries the estimation of the health workforce at the grassroots level often fails to include the practitioners and healers involved in providing indigenous and traditional medicines, despite the formal recognition of traditional medicine practitioners by the World Health Organization (WHO). This is a concern given that in most developing countries traditional medicine remains the only affordable healthcare option, particularly amongst the poorest and marginalised sections of the communities (Sarin & Pisupati, 2018; Romanelli et al., 2015). These publications highlight the uneven context in which Indigenous knowledge is embedded in relation to health and wellbeing. Additionally, the increasing rates of NCDs in the Pacific, which are affecting human productivity and household financial stability, demands a reorientation of health systems that adopts novel approaches to healthcare and are aligned closely with Pacific identity and values.

In the context of the Pacific Islands, the planetary health approach to health and wellbeing resonates well with the "Healthy Islands" (HI) vision of the Pacific. This strategy which was adopted regionally in 1995, is underpinned by a set of key principles that consider healthy islands as places where (WHO, 2013a):

- children are nurtured in body and mind;
- environments invite learning and leisure;
- people work and age with dignity;
- · ecological balance is a source of pride; and
- the ocean which sustains us is protected

Additionally, one of the four guiding principles of the HI framework explicitly states the need to 'respect and value indigenous systems and cultures' of the Pacific Islands through robust systems, programmes and multi-sectoral partnership among communities, organizations and agencies. Actively engaging with the HI vision has the potential to ensure both communities and the natural environment can thrive whilst developing sustainably. Nagendra (2018) rightly argues that the global south is rich in sustainability lessons and often these highlight values related to harmony with nature without exclusively focussing on finite resources and population growth, prioritizing community wellbeing and collective action, social justice and integrating plural knowledge systems. Certainly, the HI vision has the potential to locally ground the conceptualisation of what it means to develop sustainably in the Pacific Islands without having to draw heavily on Western dominated frameworks, discourses and definitions of sustainability.

Table 1: SDG 3 Targets

- 1. By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- 2. By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
- 3. By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
- 4. By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
- 5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
- By 2020, halve the number of global deaths and injuries from road traffic accidents
- 7. By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes
- 8. Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
- 9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
- 10. Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate
- 11. Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all
- 12. Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States
- 13. Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

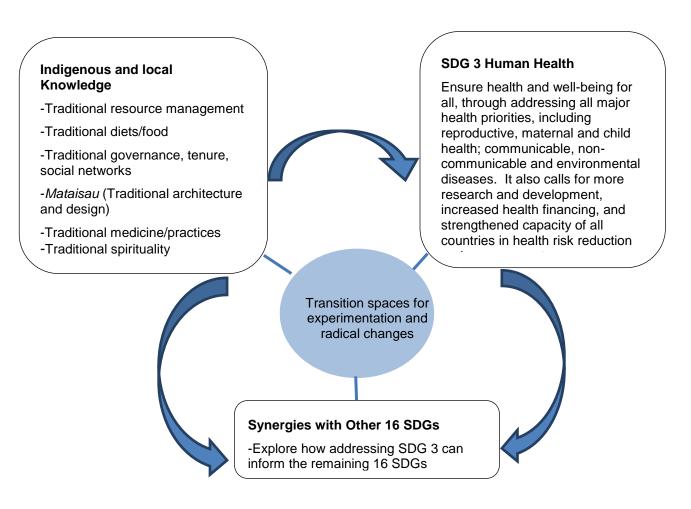
LAB AIMS 1.1

Transformations are often described as the creation of a radically new set of orientations, structures and ways of global understanding through the development of visions and narratives about the way the world does and should work (Pelling, 2011). Indeed, realisation of the SDGs will require a continuum of transformative systemic change at many levels (Asia-Pacific SDG Parnership, 2018). Moreover, a focus on transformations brings to light power inequalities through wider and inclusive forms of governance (e.g., allowing marginalised voices to be heard), changes to social structures and psycho-social processes related to individual values, potential to commit and effect change (Kapoor, 2007; Chappin & Ligtvoet, 2014). It also involves pluralising knowledge and power so that the most vulnerable members of society are as influential as scientists and government policy makers in making adaptation decisions (O'Brien & Barnett, 2013). The SDG lab acknowledged that transformations will be guided and navigated through a set of smaller transitions.

The Healthy Islands vision provided the impetus and the anchoring for the design of this lab. Here, transformational change was envisioned as a set of activities that could facilitate the integration of ILK into SDG 3 planning. The *key objective* of the lab was thus to co-identify a set of smaller transitions (e.g., changes to governance arrangements, requirement for new data and capacity building, integration of customary decision-making into national policies) that will enable the main streaming of ILK into health planning in Fiji whilst addressing SDG 3 targets. In doing so, the lab explored key elements that may impede or facilitate the navigation towards these transitions. It must be highlighted that the aim of the lab was not to fully generate transformative changes, but instead, seek to build the collaborative networks, understanding, and momentum to facilitate and affect transformational change.

The lab acknowledged that ILK is not confined to traditional medicine alone. Subsequently, the lab adopted a broader perspective and explored opportunities to revivetraditional diets to combat NCDs, *mataisau* (traditional architecture) and design for overcoming heat stress and natural disaster, and traditional biodiversity management which can enhance food security and wellbeing, reviving traditional social and governance structures as channels for health promotion etc. Guided by the core principles of the SDGs (i.e., people, planet, partnerships, peace, just and inclusive societies) the lab alsosought to account for synergies with other SDGs (e.g., land, water, climate change, partnerships) and local sustainability goals. This lab providedan initial opportunity within health planning in the Pacific Islands,to explore the potential role of ILK for enhancing planetary health and thus meeting SDG 3 targets. Figure 1 provides a pathway to explore the nexus between the three areas and to identify the transitions necessary for integrating ILK into health planning whilst addressing SDG 3.

Figure 1: Conceptual Framework



2. LAB ACTIVITIES AND METHODS

The lab brought together a diverse set of stakeholders working across the policy-practice spectrum within and external to health, including government representatives, NGOs, donors, regional actors. Indigenous community leaders, academics and the private sector to co-design and coproduce knowledge for facilitating transformational change. The inclusive nature of the lab reflected the Pacific way of encouraging transparent dialogue, which is often referred to as Talanoa. This involves openly sharing ideas, experiences and thoughts through story telling that can facilitate decisions to serve the collective good. The list of lab participants is included in Appendix A. The lab was conducted over one and a half days between the 25-26th May 2017 at Tanoa Plaza Hotel, Suva, Fiji. Participants were initially selected through a stakeholder mapping exercise completed between the research team at UNU-IIGH, WHO Fiji and University of Fiji. Primary, secondary and boundary stakeholders the research wanted to mobilise were identified through the mapping exercise (see Appendix B). Invitations to the lab were sent out to those identified as primary stakeholders who were most likely to be able to influence the goals and outputs of the lab. A few key informant interviews were also conducted pre and post event with those who were unable to participate in the lab or with those identified as secondary stakeholders.

In designing the lab, an initial step included a desktop study to identify a potential set of key constraints and enablers to the integration of ILK into SDG 3 planning efforts in Fiji. This included scanning databases for relevant academic and grey literature using key search strings such as health, traditional and ILK, SDGs, Fiji etc. The results (see Tables 3 and 4) from this activity informed the design of particular activities of the lab. The results highlighted that key enablers were related to cultural factors whilst key constraints were those related socio-economic factors. In general, the results indicate that there are greater opportunities than constraints to integrate ILK into SDG planning in Fiji.



Table 3: Factors supporting the integration of ILK into SDG 3 planning in Fiji * n=frequency the theme appeared in the literature

No.	Socio-economic	Cultural	Political	Environmental	Other
01	(n=5)* Wealth sharing and cordial support within the community ensure socio-economic sustainability.	(n=10) Local culture embedded in community values sustains indigenous resource management practices.	(n=10) Health ministry incorporating traditional healing processes to healthcare provision.	(n=14) Cultural identity is closely linked with understanding and preservation of biodiversity.	(n=7) Women are more actively engaged in the preservation of indigenous knowledge and at times using their own financial resources.
02	(n=10) Indigenous knowledge practices help communities in coping with life and wellbeing challenges.	(n=11) Traditional self-sufficient identity among rural communities sustains indigenous practices.		(n=7) Environmental change monitoring is complimented by traditional calendar.	
03	(n=10) Social activities of the indigenous people are bound to availability and sustainability of resources within the environment.	(n=4) Traditional-medicine healers are revered in the community and therefore approached for medical advice.		(n=7) Indigenous knowledge is actively used in agricultural activities.	
04	(n=10) Indigenous people living in the city support their extended familyback in the village through remittances.	(n=21) Systems of reciprocity and exchange amongst communities sustain peace and harmonious relationships among communities.		(n=7) Traditional perceptions and conceptualisation of the eco-system is considered most effective means of preserving nature.	
05	(n=10) Transmission of traditional knowledge conserves cultural practices that ensure sustainable development.	(n=6) Indigenous practices are generally organized around kinship and strengthened by elders.			
06		(n=7) Indigenous communities relate with the environment as it is, without attempting to change how it is, as done by scientific community.			

Table 4: Factors constraining the integration of ILK into SDG 3 planning in Fiji

No.	Socio-economic	Cultural	Political	Environmental	Other
01	(n=13) Lack of small business opportunities related to indigenous knowledge development.	(n=11) Rural-urban migration threaten the resilience on indigenous practices.	(n=10) Exclusion of traditional knowledge in national curriculum depreciates its practice.	(n=7) Secret indigenous knowledge related to fishing and other related environs linked to spiritual protection inhibit the integration of indigenous knowledge in formal sustainability polices and strategies.	(n=4) Failure to inculcate traditional practice into youth, constitute a barrier to its incorporation.
02	(n=13) Limited financial investments and market opportunities hindered indigenous knowledge growth.	(n=4) Traditional system of food provision is often abandoned for commercial practices.	(n=10) Conflicts between science and cultural practice affects incorporation of indigenous knowledge into modern systems of governance.	(n=7) Gaps in understanding indigenous sustainable means of environmental protection practice.	
03	(n=13) Women were discriminated upon in areas of entrepreneurship associated with indigenous knowledge sustenance.	(n=21) Unwritten transmission of indigenous knowledge such as the use of flora and fauna inhibit its adoption into modern system.			
04	(n=5) Traditional orthodox methods of indigenous system transmission challenges the continuity and sustainability potentials of indigenous knowledge.	(n=15) Traditional medicine sometimes fail to cure patients of simple illnesses.			
05	(n=10) Elders-youth indigenous knowledge gap inhibits its sustainability.	(n=4) Preference for urban lifestyle by youth, inhibit sustainability of traditional practice.			

06	(n=10) Engagement	(n=4) Culturally
	with Information and	women areforced to
	Communication	obey husband as
	Technologies (ICT)	obligation not option.
	restrict the youth from	
	developing	
	indigenous	
	knowledge skills.	

2.1 Design of the lab

The lab was designed to create opportunities for new dialogue amongst stakeholders and enabled possibilities to envision pathways towards creating innovative changes (e.g., to current governance structures). From the outset the lab engaged with key actors working within the Ministry of Health, WHO Fiji and Indigenous groups in co-designing the contents and in ensuring the outputs remain end-user relevant. The design of the lab drew upon Transition Management theory as a tool to guide the navigation process. The theory emphasises the requirement to bring together key strategic actors from diverse areas to: redefine a social problem, reassess the goals and craft a set of strategic activities through a deliberative process of back castingthat will help navigate the transition paths leading to the desired transformational goal(s) (Boodoo et al., 2018). Transitions Management often comprises three sphere of activities, which includes (Twomey & Gaziulusoy, 2014, p.20):

- Strategic activities that lead to the formation of long terms goals and visions that will support the required transformations (e.g., via dialogues on norms and value, ethics and identity)
- Tactical activities support the implementation of actions and overcoming barriers along the transition path that will eventually meet the desired transformation (e.g., changes in structures, rules, distribution of resources)
- Operational activities involves the experimentation of radical and disruptive innovations that may support transformative change that is just and equitable.

A key component of Transition Management approach is the establishment of a transition arena, which provides an informal but structured space for a small group of diverse change-agents to engage in a series of meetings to develop a new-shared vision of the necessary transformation(s) and link it back to their everyday practices. Integral to this process is the development of transition scenarios which is a set of coherent pathways supporting the realisation of the desired transformation(s). The lab thus provided the arena to envision the desired transformations and develop a set of appropriate transition pathways. Scenario development was also guided by futures thinking which prompts participants to envision a set of alternative futures and how best to transition toward the preferred future through a process of back-casting (Inayatullah, 2008). Focussing on alternative futures allows participant to prepare for uncertainties whilst filtering out potential differences amongst participants' that could be discussed collectively (Ernst et al., 2017). Pereira et al., (2018, p.11) asserts that narratives of the future is a critical aspect in the creation of transformative spaces as it inspires and empowers stakeholders to act towards these visions despite the complexity of the sustainability challenge.





3.SUMMARY OF OUTCOMES

The following section outlines the activities and key outputs from the lab. Each of the activities were designed to engage participants in rich discussion and generate novel ideas for integrating ILK to SDG 3 planning. Activities were all group based and included 3-4 groups comprising 4-6 participants from diverse backgrounds. Each group was facilitated by a project team member who ensured that all participants' were provided opportunities to contribute to the discussions, probed participants on particular ideas and facilitated the discussions relevant to the assigned activities.

3.1 DAY 1 - WORKSHOP PRESENTATIONS

The day began with an opening prayer by Rev Reverend Saimoni Vunilagi who provided blessings for a productive lab.





The lab was officially opened by Dr Luisa Cikamatana, Deputy Secretary for Hospitals at the Ministry of Health who stressed the importance of the Healthy Islands Vision in meeting the SDG 3 targets, particularly if the targets are to meet the needs of communities. She highlighted areas in which SDG 3 can be harmonized with the goals of the Healthy Islands Vision so that particular actions can gain traction at various levels of governance. A rich group discussion followed her opening speech.





Participants then heard presentations from four speakers who provided context to the lab and situated the lab objectives in both local and international settings. A group discussion facilitated by Dr Luisa followed the presentations.

Dr Rokho Kim, Environmental Health Specialist, WHO Fiji presented on recent activities undertaken by WHO to sensitize Fiji to SDG3 and SDG 6 (related water). The presentation stressed the pertinence of understanding the inter-linkages between SDG 3 and the other SDGs by demonstrating how health related gaols are included in the remaining SDGs. It was thus emphasised that coordinated action across the goals and sectoral areas is a necessity.

Dr Litiana Kurudrani, A/Prof -Centre for i-Taukei Studies, University of Fiji, presented on the role of women in Indigenous knowledge related to health with a case study on HIV-AIDS in Fiji. She highlighted the tensions that exist between younger and older women in relation to their cultural identity, which at times can limit their health choices. She concluded by emphasising that Indigenous knowledge has an influence on the cultural meanings of health and illness, the perceived causation of illness especially HIV and AIDS in the Fijian society, and the culture of healing processes.

Dr Natasha Kuruppu, UNU-IIGH Postdoctoral Fellow, introduced the context of the lab, its objectives and expected outcomes. She also provided some background to the concept of planetary health and the work being undertaken at the international level to integrated ILK into health planning efforts in general.

Ms Keasi Vatanitawake, Project Officer from the Ministry of i-Taukei Affairs provided an overview of how ILK can be woven into our understanding and operationalisation of SDG 3. Keasi emphasised how ILK practices are currently being lost in Fiji but remains a useful tool for meeting SDG targets, particularly at the village level. She introduced the concept of Vanua which is integral to Fijian way of life and culture but also central to communities across the Pacific Islands. Vanua encompasses the land, people (i.e., how they are socially structured) and their sense of place (values, worldviews, spirituality and beliefs). Fijians have their own way of dealing with their resources, "yaubula" and these are linked to their traditional knowledge, their totem plants and animals, beliefs and practices. She provided examples of traditional farming systems and food preservation techniques as well as Indigenous indicators for monitoring environmental change which can benefit formal SDG planning efforts.









3.1.1 Activity 1 - Bonding with SDG 3

Working in groups, participants were asked to familiarise themselves with the goals and specific targets of SDG 3 and subsequently reflect on how these may resonate with the values, mission and activities of their respective organisations. Not all participants were working specifically in public health so it was important for all participants to feel comfortable with the core gaols of the SDG 3. Participants then shared how specific current and planned activities can support the realisation of SDG 3. Such activities amongst participants' included, health promotion and awareness raising, capacity building and community adaptation projects, policy development, curriculum development and training within universities and developing funding proposals through international mechanisms. However, various limitations to the achievement of the goal was also highlighted, which included the establishment of locally relevant baseline indicators at the community level, lack of coordination between various agencies, funding, capacity (i.e., both human resources and skills), geographical isolation and limited awareness of SDGs. Participants stressed the significance of SDG 3 to the achievement of the remaining SDGs. It was vital to reflect on these synergies when designing activities supporting SDG 3 if they are to gain traction and have tangible impacts, particularly at the community level.







3.1.2 Activity 2 - Perceptions about Indigenous Knowledge

This activity first asked all the groups to discuss their understanding of Indigenous knowledge (ILK) and its potential benefits for enhancing the health of Fijian communities whilst simultaneously identifying possible limitations in its use. These ideas were then discussed collectively and allowed participants to share their personal stories.

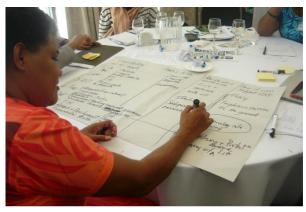
ILK was highly valued amongst all participants and was described as a set of values, beliefs, rituals and practices embedded in the traditional governance systems and i-Taukei ways of living. The importance of understanding Vanua was stressed (e.g., how people relate to their environment) as important for shaping health related behaviour at the community level which often overlooked in formal health planning efforts. Several participants noted how illness is traditionally perceived as an effect of deviating from social norms. For example, respondents highlighted that health may be compromised when people start disrespecting their Vanua. Most participants agreed that integration of ILK into SDG 3 planning has the potential to bring new voices that may be traditionally overlooked in discussions related to health policy and practice. They also believed that it provided an opportunity for health professionals to learn from communities and healers who are holders of the ILK. Participants also highlighted the diversity of the knowledge forms which covers all aspects of life and health which co-exists with Western knowledge. For example, various types of traditional healers exist in Fiji (e.g., midwives, throat specialists, bone setters). Key uses of ILK related to health included traditional birth attendants, traditional massage therapist who treat fractures, traditional medicine (e.g., for breast-feeding mothers) and traditional burns healers, particularly from the outer island of Bega. However, access to this knowledge may be difficult as it may be contained to a particularly healer or their family and at times may only be used to benefit their extended families.

A key concern was the need for the government, particularly the Ministry of Health to accredit and register the traditional healers as they have the potential to complement health services, particularly in the remote outer islands. Often the healers provide their services free of charge through community recommendations. Urban households continue to source traditional herbs and medicines through their extended families in the outer islands. A participant commented that plans are underway to host the Traditional Healers Association of Fiji at the University of Fiji. Despite its currency, participants agreed that ILK related to health seemed more in the domain of the informal and not actively promoted within the Fijian health sector. Patients are often reluctant to divulge to their doctor that they may be simultaneously undertaking treatment from a traditional healer.

ILK also was highlighted to be integral part of *i-Taukei* identity and enabled communities to draw on this knowledge (e.g., food preservation, building techniques) as needed particularly during times of environmental stress (e.g., tropical cyclones). Within the community, women are often seen as the repository for ILK whilst men are seen as the owners of the knowledge. Thus women traditional healers often see their role as a form of empowerment. However, a key concern amongst participants, related to the loss of ILK amongst the younger generations who perceived it as outdated. Certainly, a need remains on how best to translate this knowledge using innovative methods (e.g., via mobile phone apps) to increase its uptake. Rapid urbanisation and a shift towards individualistic versus communal lifestyles was another key driver for the decline in interest for ILK amongst youth. Concurrently, participants stressed the importance of Vanua which often transpires through a community and their collective actions (e.g., showing respect and looking after the wellbeing of each other) rather than through individuals. Additionally, there was a need for education institutions, including universities and theological colleges to review their courses and enhance the integration of ILK into their curriculums. This may require the need to decolonize current health related curriculums so they are more inclusive and adopt a wider understanding of health. Current training programmes for doctors, nurses and other medical professionals have limited exposure to ILK. There was thus limited understanding amongst health professionals on how ILK can be used in health promotion and wellbeing activities that can complement existing advocacy initiatives.

An additional point that was discussed included the spiritual and psychological wellbeing that ILK knowledge provided. Both ILK and Christianity (i.e., predominant religion) in Fiji co-exist. The cosmologies related to ILK enabled *i-Taukei* to build relationships with the natural environment, provide stewardship and empathy for all living things and act as a collective during times of stress. A key concern that was raised related to how the term ILK can remain relevant as Fiji continues to grow as a multicultural society consisting of diverse ethnic groups such as the Indo Fijians and

those with Chinese heritage. It was highlighted that both these ethnicities well established health related ILK systems (e.g., Ayurveda and Traditional Chinese Medicine) which have the potential to benefit wider Fijian society. Participants agreed that perhaps Fiji needed to have more further discussions related to this issue so they can develop a new definition of ILK that was encompassing and accommodated the values of various Fijian ethnicities.









3.1.3 Activity 3 - Constraints, Opportunities and Enabling Actions for Integrating ILK into SDG 3

The first part of the activity required groups to identify three critical barriers and opportunities for integrating ILK related to health into their current work programmes. Finally the groups were asked to identify a set of actions that can overcome the critical barriers. The following tables present the key results from the group discussions:

THEME	Barriers	Opportunities	Actions
Economic value of ILK	Limited information and		Greater investments
	quantifiable data		from international
	demonstrating the		agencies (e.g., WIPO -
	economic benefits of ILK		World Intellectual
	to Fijian society (e.g.,		Property Organisation)
	benefits for nature,		and other regional
	society, tourism industry,		donors that can support
	health etc). Such		the economic case for
	knowledge would be		promoting and
	valuable for policy		integrating ILK into
	makers and planners in		health planning efforts

	г		
	designing programmes related to SDGs and health.		and SDGs. Identification of new economic opportunities (e.g., microenterprise development) related ILK would be valuableincreased studies and development of innovative business models that can support the innovation, marketing and financing of these enterprises (e.g., through the Fijian Women's Association for Natural Medicinal Therapy -WAINIMATE) efforts were made to encourage these medical practitioners to work with groups such as the WAINIMATE to incorporate safe and effective traditional medicines into national health delivery systems to supplement and/or replace increasingly expensive imported
cultural ownership	Lack of appropriate skills and knowledge in maintaining (intactness and integrity), interpreting and transmitting ILK. Lack of custodians and young leaders to take ILK forward. No national platform to capture this information.	-Strong Indigenous governance structures exist on the outer islands and need MoH to seek new partnerships at the sub-national level to connect with village Chiefs. -Faith based organisations are respected throughout Fiji and they are closely connected to communities. Most church leaders also have a strong understanding of	-Review and integrate ILK to school and university curriculum and ensure they align with the new SDGs; a new definition of ILK may be needed for Fiji given its growing multicultural society. -Emphasize south-south learning and establish new platforms between various countries that can support the exchange of ideas, foster new youth connections (particularly targeting females) and facilitate exchange programs. -Encourage church and other faith based organisations who are

political will and weak policy setting	Lack of interest from policy makers at various tiers of government to integrate ILK as Western scientific knowledge is perceived as superior. This also stems from a lack of policy guidance, capacity and resources. Healthy Islands vision is contained to MoH and not filtered down to other Ministries or the traditional governance systems (e.g., Chiefs and village)	-i-Taukei Affairs currently mandated to protect and promote ILK. -Healthy Islands vision advocates for a bottom-up approach and includes the need to consider ILK.	seen as leaders at the community level to take an active role in promoting and applying ILK amongst communities for improving health outcomes (e.g., promoting traditional diets). New forms of partnerships between Ministry of Health or i-Taukei Affairs and faith-based organisations would help mobilise such activities. -Formally engage the Chiefs at all levels as role models for transmitting and promoting ILK for improved health outcomes. -Review of key legalisation related to health and ILK so that ILK can be integrated into the operational plans of relevant ministries. This can be promoted through the existing cross intuitional working group on health. -MoH need to integrate the Healthy Islands vision actively into the work programmes of relevant Ministries by consulting widely and also generate community relevant indicators for SDG 3. -MoH and universities such as Fiji National University must build the capacity of doctors and medical professionals (e.g., nurses, environmental health professionals), including
			environmental health

			improved guidance to
			patients on how both
			traditional medicines
			and Western medicines
			can be used together.
			It would also provide an
			opportunity to understand each actor's
			values and worldviews.
environmental change	Lack of knowledge on	-Fiji has the COP	Prioritisation of ILK as a
impacts on ILK	how global environmental	Presidency and	vulnerable area under
	change processes (e.g.,	thus has the	current and proposed
	climate change,	potential to	national climate
	biodiversity loss) is	leverage support	adaptation initiatives so
	affecting ILK and its long-	at the	resources can be
	term sustainability. How	international level	appropriately allocated
	will it impact	for greater	to addressing this gap.
	communities, resources, spiritual and mental	integration and understanding of	ILK does not appear in formal climate
	wellbeing etc. Lack of	ILK issues in	adaptation and disaster
	knowledge specifically on	relation to climate	management activities
	how ILK related to	change	related to health.
	climate vectors (e.g.,	3	
	dengue) can be used to	-Many	
	reduce climate risks (e.g.,	international	
	mosquito breeding	projects (e.g.,	
	grounds)	administered	
		through WHO and UNDP)	
		related to climate	
		change and	
		health in Fiji	
Evidence base for ILK	-Documentation (written,	-WHO Fiji -	-develop cultural
medicine and practices	peer-reviewed) related to	Pacific Health	inventory and registry
	ILK remains sparse and	Systems team	documenting traditional
	thus unable to support	has a focus on	medicines and practices
	government policy,	traditional medicines and	so they can be validated
	regulation and planning efforts.	capacity building	adopting WHO protocols. This
	Chorts.	and in the	evidence base can be
	-General safety concerns	process of	spearheaded jointly
	related to the application	initiating actions	through the newly
	of ILK health related	under the WHO	established National
	practices as limited	Traditional	Research Council under
	resources available for	Medicine	Ministry of Environment
	testing and validation.	Strategy 2014-	and the existing National
	- Lack of interest both in	2023 ((WHO, 2013b).	Health Promotion Council at the Ministry of
	Fiji and in the region for	20100).	Health.
	understanding the role of	-WAINIMATE	
	ILK in the context of	has previously	-draw on the
	health and subsequently	compiled a	experiences of other
	limited funding in this	directory of	Asia-Pacific countries
	space to address key	traditional	who are more advanced
	knowledge gaps	healers and	in this area (e.g., PNG,

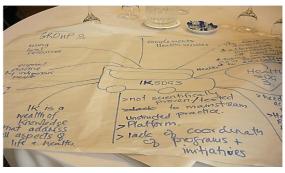
undertaken awareness training workshops in villages related to traditional medicines.

South Korea) and international bodies (e.g., WIPO) for technical support/capacity building related to IPR and associated policies that can protect ILK practices and healers

- establish research centre for ILK in Fiji that can act as a central hub for advancing the theoretical knowledge, develop capacity of policy makers in its use and integration (e.g., University of Fiji currently has an ad-hoc program to train staff at i-Taukei Affairs). Existing scholars in the field of ILK can be catalysts and role models for the younger generation and organise regional conferences related to the topic.
- New capacity building programmes needed for traditional midwives and other healers, particularly on the outer islands in which formal health services are constrained.
- -Supporting and promoting the work of WAINIMATE and encouraging medical practitioners to work with WAINIMATE to incorporate safe and effective traditional medicines into national health delivery systems to supplement and/or replace increasingly expensive imported medicines.













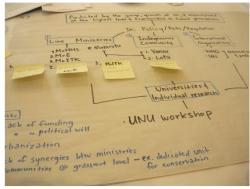
3.2 DAY 2 - DESIGNING PREFERRED FUTURES

The activities on the second day of the workshop were designed to generate discussions related to participants preferred future(s) in relation to ILK in Fiji and to identify a set of actions that will enable the realisation of those futures. The activities were designed to allow participants to be bold and creative in designing their preferred futures whilst being cognizant of the radical transformations that may be required to meet the SDG goals. Participants were allowed to work in the same groups as the previous day and each group had a facilitator.









3.2.1 Activity 1 - Preferred Future(s) in Respect to ILK

The first part of the activity required participants to develop predictions of the future based on historical and existing trends in Fiji (e.g., rapid urbanisation, climate change) and to subsequently identify the futures they may fear. The second part of the activity required participants to design alternatives to those predicted futures and then to identify a preferred future, including its key dimensions (social, technology, economic, environmental, political, ethics, values) and underlying assumptions.

Respondents predicted the following scenarios of the future based on current development trajectories in Fiji and highlighted their fear of them:

- rapid urbanisation had created a loss of connection to their Vanua, leading to unhealthy lifestyles and increased in NCDs which had overtaken infectious diseases
- no contribution of ILK to SDG planning efforts
- rapid decline of ILK which cannot be revived and leads to a loss of i-Taukei identity
- technology and Google knowledge had overtaken preference for the use of ILK, particularly amongst the youth, with limited consultation and respect for village elders as the conduits for transmitting ILK

- displacement of populations from climate change and the subsequent loss of cultural heritage and ILK which will also have psychosocial effects on the population
- tensions between religious values and government policies which may create divisions in society
- introduction of undemocratic processes in which communities fear the government and the inability to openly voice concerns
- ILK has been promoted as dark and undermined by the church and its doctrines
- loss of biodiversity will lead to loss of ILK related to herbal medicines and other traditional practices
- Ministry of Health is not supportive of the use of ILK for improving public health (e.g., traditional midwives are not consulted)
- government agencies and stakeholders are too fearful of the unknowns and negative attitude towards ILK related to health is an impediment to moving forward

In designing alternatives of their preferred futures, respondents highlighted the following visions that would facilitate the transitions needed for Fiji to integrate ILK into SDG 3 planning:

- exponential growth of ILK and its integration and maintenance at the highest level so that ILK is transmitted and valued amongst the future generations
- a national steering committee within Ministry of i-Taukei Affairs would ensure ILK is mainstreamed into all aspects of sustainable development planning, including health
- gender is a key focus in the ILK mainstreaming agenda to enable greater participation and representation of women in decision making
- greater funding to support evidenced based research on ILK related to health and capacity building of research staff
- i-Taukei healers are formally recognised and own their own pharmaceutical drugs and have intellectual property rights over this knowledge
- Ministry of health increases the incorporation of traditional medicines and recognises the role of ILK in achieving wellness goals in Fiji
- mobilised and empowered communities who use their own agency to sustainably develop themselves through participatory processes without dependence on government
- communities value the richness of their natural resources and ILK
- a national monitoring and evaluation framework for ILK is established and hosted within Ministry of i-Taukei Affairs
- economic development activities related to ILK, particularly targeting outer islands and women entrepreneurs which can support cash generation and sustainable livelihoods at the local level







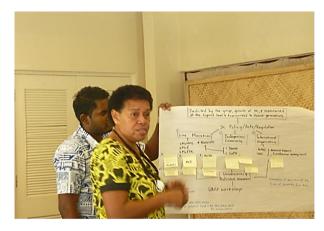
The final activity required participants to adopt back casting techniques and identify a set of key activities that would enable Fiji to transition to their preferred futures. Through back casting respondents were encouraged to develop radical changes/ actions that could be adopted by health planners and policy makers. In doing so, participants were asked to be cognizant of the socioeconomic conditions necessary to facilitate these activities and the types of existing formal plans that will support such processes. The actions identified suggest that changes need to occur at multiple levels, including at the individual, political and practical spheres in which agency and leadership will be critical factors in catalysing these transitions. Key actions identified included:

Establishment of a national steering committee as the key driving force to oversee the integration of ILK into SDG planning efforts as well as other relevant development activities. This would be chaired by the Ministry of i-Taukei Affairs who are responsible for promoting ILK and developing, implementing and monitoring government programs focused on the governance and wellbeing of the i-Taukei people. Initially a concept note will need to be developed (e.g., led in collaboration with the University of Fiji- Centre for i-Taukei Studies) related to this activity which will be submitted to Cabinet for approval. The steering committee will work closely with Ministry of Health, WHO and other stakeholders to promote participatory planning and management to mainstream ILK into SDG 3 planning. A key focus will also be on how to harmonize activities related to ILK between various agencies as well as local communities. As part of this process a national framework will be developed on how to mainstream ILK into various sectors (in addition to health) so that ILK can provide both socio-economic and environmental benefits. Further activities on how to strengthen existing governance systems so that they can mainstream/ operationalise ILK into health related policies and activities would be included. The recognition of ILK in formal mechanisms (e.g., Ministry Operational Plans) will provide the necessary budgetary support within the Line Ministries and impetus for action. The committee should also take action on how best to protect the rights of Indigenous knowledge holders, including intellectual property rights through strengthened legislative and policy mechanisms by working with the Office of the Attorney-General and WIPO. Currently the Attorney- General's Office is undertaking training in this space and has the ability to link their work with the Ministry of Health.

Ministry of Health to work with the three leading academic institutions in Fiji to establish a research centre (National Wellness Centre) that would support evidenced based research related to traditional medicines and health related ILK. The centre will also be responsible for developing a new definition of ILK relevant to contemporary Fiji. It is vital that all Fijians can discuss openly about their values and worldviews attached to the term ILK and then develop consensus on the type of definition they want to adopt if they are to transform their development pathways collaboratively. Through the centre, capacity development activities will be undertaken that includes staff training (e.g., on the documentation of traditional medicines), academic and report writing, grant application writing etc. Curriculum development related ILK would also be a key component of this centre. Awareness raising and training will also be provided through the centre on how various agencies and stakeholders can integrate ILK into SDG planning efforts and other initiatives. For example, the Environmental Health Unit under the Ministry of Health is responsible for operationalising activities under SDG 6 but they have not previously considered the role of ILK as a tool in their WASH related planning efforts as it is not integrated into formal policies.

In the short-term, revitalisation of the Healthy Islands (HI) Vision by the Ministry of Health is pertinent particularly in the context of SDGs and other regional initiatives such as the recent SIDS Health Initiatives from Bonn COPs. Currently the HI Visions is not well filtered down through the various governance mechanisms to other Ministries, Chiefs or village level but contained to the Ministry of Health. The Ministry should work closely with WHO in coordinating this process.

Establishment of a new NGO consisting of various i-Taukei and other minorities in Fiji who can advocate for change related to the use and protection of ILK, hold the government accountable and report to UN bodies such as WIPO. The NGO would play a key role in empowering local communities related to the use of ILK for improved health outcomes and facilitate collaborative activities between government and communities. Participants envisioned this NGO as taking a lead role in influencing and contributing to changing attitudes and behaviour related to ILK in Fijian society. A starting point would be strengthening the existing NGO - WAINAMATE based on promoting ILK and traditional medicines. University of Fiji- Centre for i-Taukei can take the lead in facilitating this process given their previous work with the NGO.







4. CONCLUDING RELFECTIONS

The SDG lab provided a unique space to bring together diverse stakeholders who may not necessarily work together to share thoughts and generate new pathways that can support transformative change in relation to integrating ILK into SDG 3 planning. During the lab respondents were able to openly discuss their ideas, concerns and possible solutions. It also provided a venue to connect with stakeholders who may not necessarily come together to address health related issues. Certainly, there was a strong consensus amongst participants that the lab provided the first opportunity to consider the role of ILK in SDG planning efforts in Fiji. Moreover, the workshop was empowering for participants as it enabled them to consider ILK in its diversity (beyond traditional medicines) in the context of health planning efforts in Fiji.

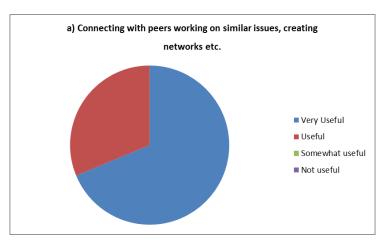
A constant theme that arose during the lab was the role ILK can play in ensuring the SDGs are percolated and adopted at the community level. This will be a key issue for the Ministry of Health and other leading health organisations in Fiji such as WHO to address as they move forward in implementing the 2030 Agenda. Various mechanisms such as ongoing efforts related to the establishment of water committees through the Water Safety Planning efforts under SDG 6 may offer an entry point to the integration of ILK and ensure co-benefits for communities and the natural environment. However, as participants emphasised, an enabling policy environment is critical in which health policies and associated operation plans need to recognise and integrate ILK if the Healthy Islands vision for the Pacific Islands is to be realised in Fiji. Subsequently, this will enable appropriate resources and funds (both government and donor support) to be mobilised to meet the suggested initiatives identified in the lab. These activities identified in the lab have the potential to be scaled-up and harmonized with other SDGs such as SDG 7 related to climate change. For example, Fiji is currently developing its national Climate Change Law and there are opportunities to integrate ILK into this process which will in turn have implications for health (identified as a key climate vulnerable sector). Additionally, village climate adaptation plans are currently being developed and this provides an opportunity for health professionals to ensure ILK is mainstreamed accordingly into these plans.

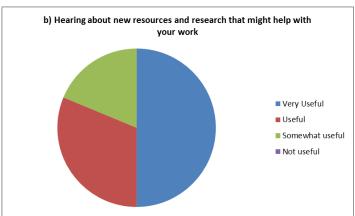
Finally, participants suggested how the contents of the lab can be trialled in other sectors spearheading SDG work in Fiji. Future labs can use the lessons learned here as a starting point to dive deeper, experiment and develop innovative transformative pathways. Certainly, there is potential for the lab to also be scaled-out wider and grounded contextually to other Pacific Island countries, given the strong leadership role Fiji plays in the region. This will provide an opportunity for the lab participants to share the learnings and network with other Pacific Island countries and develop new narratives and visions of sustainable development whilst advancing the transformative process. However, one size-fits all process will not be possible and the need to account for uncertainty and the inherent dynamism of transformations will be vital to enable communities to flourish in their local environments.

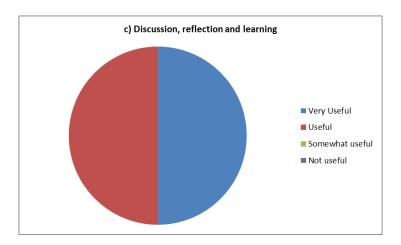
5. LAB EVALUATION AND FEEDBACK

Following are the results from the lab evaluation:

Q1. Overall, how would you rate today's workshop in terms of:







Q2. What would you most like to see emerge as a result of this project?

- 1. Create a website where all ILK is stored and i-Taukei people can access it too
- This project to go through to Ministry of Health and i-Taukei Affairs so that something to be standardized for the indigenous people of Fiji
- 3. Action plan & Political engagement (high level)
- 4. Come to reality
- 5. Resolutions into policy
- 6. Developing policy framework to develop ILK in the country
- Discussion about ILK linked to SDG3 in UN level
- 8. Have it realized
- 9. Resolutions/ Recommendations are put into action connectivity of ILK + SDG3 affecting on goal
- 10. Networking and collaboration with stakeholders
- 11. Integrating ILK into the National Health Planning
- 12. Strengthen the integration of indigenous knowledge into health issues practically
- 13. All participants should be given the result/ data of this workshop. Ideas been given- we should be happy to receive data
- 14. I would really like to see this project (integrating ILK) not only to SDG3 but to other SDG's
- 15. A list of recommendations which taken into consideration by responsible bodies
- 16. A strengthened Indigenous people

Q3. Any suggestions for next time?

- 1. More of this kind of workshops and probably move it to 3-4 days
- 2. Follow up workshop
- 3. More similar workshops for other SDGs
- 4. A streamlined definition of indigenous knowledge and roping in the Fijians of Indian Descent and Fijians of Chinese Descent to make it more inclusive
- 5. More advertisement of the workshop, more time to discuss per activity
- 6. More change to the affected people
- 7. More Time 1 1/2 day is not enough
- 8. Different venue and more discussion on ILK and well-being and follow up workshop
- 9. Identify the urgent risks and way forward and if there is a next meeting, lets get together and innovate great ideas
- 10. Extend time to 4-5 days
- 11. Time and movement is important in workshops- punctuality
- 12. 2-3 days for this workshop next time

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APPENDIX A: LIST OF LAB PARTICPANTS

No.	Prefix	Full Name	Organization
1	Dr	Sampson Viulu	Centre for Drug Discovery & Conservation, Faculty of Science Technology and Environment
2	Mrs	KeasiVatanitawake	Department of Culture, The Ministry of iTaukei Affairs
3	Dr	LitianaKuridrani	Centre for iTaukei Studies, University of Fiji
4	Ms	VasitiQionimacawa	Live & Learn WASH, Live and Learn Environmental Education (NGO)
5	Dr	WiniferetiNainoca	Resilience & Sustainable Development, UNDP Pacific Office
6	Mrs	Salanieta Matiavi	Fiji Nursing Association
7	Mr	Rolling May	Ministry of Education, Heritage and Arts and National Archives
8	Mrs	Amelia Tuilevuka	University of Fiji
9	Ms	TitiliaRabuatoka	SPC
10	Mr	Peni Hausia Havea	SPC -Health learning and teaching resources for new Regional Certificate Levels 3&4 in Resilience (Health stream)
11	Ms	Iva Bakalevu	Suva City Council
12		Reverend SaimoniVunilagi	Korolevu Methodist Circuit, Navutulevu
13	Mr	AvneetNand	Fiji National University and Colonial War Memorial Hospital
14	Mr	AsaeliBabiau RAIKABAKABA	WHO Fiji
15	Dr	Rokho Kim	WHO Fiji
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23	Mrs	Kelehi W Segah	Ministry Of Health (Makoi H/C)
24	Dr	Luisa Cikamatana	MOHMS
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29	Mr	SimioneSevudreohe	i-Taukuei Affairs
30	Ms	Kelera Oli	MoH/WHO
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32	Ms	ShivikaBhandhana	МоН
33	Mrs	NenenteitiAbeta	USP-PACE
34	Ms	Yerim Lee	WHO

APPENDIX B: RESULTS OF STAKEHOLDER MAPPING EXERCISE

No.	Organisation -Primary Stakeholder Name &role	Organisation -Secondary Stakeholder
1	A/Prof JoeliVeitayaki USP Head of School of Marine Studies (has published extensively on ILK in the context of Fiji)	
2		ManasaKatonivualiku Climate Change Project Coordinator Ministry of Foreign Affairs and International Cooperation
3	National focal points for SDGs from the National Strategic Planning office of the Ministry of Economy Ms Geetashni Chand is a Senior Economic Planning Officer –	Ministry of Finance Committed to green growth in development efforts as part of National Development Plan 2015-2020
4		Habitat for Humanity Fiji (urban health issues, DRR, low cost housing)
5	NepoteKatonivualiku Permanent Secretary i-Taukei Affairs Mrs KeasiVatanitawake Department of Culture Acting Administrative Officer iTaukei Institute of Language & Culture Ministry of iTaukei Affairs	
7	Dr. Mike Kama NCD National Coordinator Fiji	
8		Ministry of Women, Children & Poverty Alleviation
9		Permanent Secretary for Women Dr.JosefaKoroivueta Ministry of Women, Children & Poverty Alleviation
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APPENDIX C: MEDIA

Spotlight on SDG Labs: Indigenous knowledge for healthy islands **SEP 2017** ByDaniel Strain

thttp://www.futureearth.org/blog/2017-sep-8/spotlight-sdg-labs-indigenous-knowledge-healthyislands

A new project in Fiji is working to better integrate Indigenous knowledge into efforts to improve human and environmental health in this Pacific island nation.

This is the second in a series of stories that focus on the SDG Labs, a group of prototype projects supported by Future Earth, Stockholm Resilience Centre and The University of Tokyo Integrated Research System for Sustainability Science (IR3s).

To learn about another SDG Lab based in Nigeria, read Trees grow in Kano.

To read about sustainability in the craft beer industry, read Brewing up sustainability.

You can also watch presentations on the SDG Labs given at the 7th International Sustainability Science Conference in August in Stockholm, Sweden. You can find the conference programme here, and the live stream here.

In 2012, residents of a coastal village in Fiji called Vunidogoloa made a drastic decision: Facing worsening floods and storms, the residents moved their entire community, about 30 homes according to news reports, to a site one kilometre inland.

It's a situation that may become more common in Fiji and other island nations where populations are clustered close to the ocean. The World Bank, for example, reported that climate change could cause economic damages of up to 50 million USD each year just in Viti Levu, Fiji's largest island.

On the surface, such environmental crises may not seem like public health concerns. But they are, says Natasha Kuruppu, a Post-doctoral Fellow at the United Nations University-International Institute for Global Health in Malaysia. She says that in Fiji, the health of people is intricately tied to the health of their islands – a concept of human wellbeing that researchers call "planetary health." One study from Fiji, for example, showed that spikes in temperature, such as those caused by climate change, can drive up incidents of diarrheal diseases like Dengue fever.

To put a spotlight on those links, Kuruppu teamed up with Litiana Kuridrani, a public health specialist at the University of Fiji. They launched a series of conversations this year to explore how the country could improve the health of its people and islands at the same time to meet international sustainability targets. And they took a new approach to that goal: Kuruppu and Kuridrani asked how the knowledge held by Indigenous groups in Fiji could become an integral part of that effort.

Their project was one of more than 20 "SDG Labs" recently supported by Future Earth and its partners to "generate prototype solutions to complex problems."

"Whether it's in architecture, economics or in other fields, we should be looking at other domains of knowledge, not just Eurocentric or Western-based knowledge," Kuruppu says. "That's how I feel about medicine or health. We need to look more broadly."

i-Taukei knowledge

And there is no shortage of knowledge about health among Indigenous Fijians, or iTaukei, who make up about half of Fiji's nearly one million citizens, says Litiana Kuridrani. She heads the Centre for iTaukei Studies at the University of Fiji.

Traditional midwives, for example, have long held an important role in Fiji. That's because on this archipelago, people inhabit more than 100 islands, making it difficult for some expectant mothers to get to the hospital. Kuridrani has known traditional midwifes who can readjust a fetus in the breech position – with its feet, rather than head, pointed toward the birth canal. "By small rubbing, the baby automatically turns so that its head can focus down," she says.

Health initiatives in Fiji, whether those run by the government or international organisations, could gain a lot from incorporating that knowledge into their work, Kuruppu says.

Take the United Nations Sustainable Development Goals (SDGs), a set of international targets for making the world more sustainable. The third of those 17 goals focuses on human health, seeking, among other things, to lower the percentage of

women who die during childbirth. Kuruppu says that similar health campaigns have failed in Pacific island nations. She says that's because campaigns didn't seem relevant to people at the village level. Incorporating Indigenous knowledge could be an effective way of connecting sustainability initiatives to the values and knowledge of Fijians.

It would also align with policies that many Pacific Islands, including Fiji, have adopted with a focus on "Healthy Islands." This concept acknowledges that the health of island communities is intertwined with the health of their surrounding environment.

"Everyone is moving toward more evidence-based policies, whereas traditional knowledge is seen looking backward," Kuruppu says. "This happens in any context, whether it's health or climate change. Changing minds is always a key barrier."

To begin to break down that barrier, Kuruppu and Kuridrani held a workshop in May that drew experts from in and out of the country. They included researchers, government officials, representatives from the World Health Organization and religious leaders. During the two-day event, participants discussed what Indigenous knowledge meant to them and how it might help to solve the challenges facing Fiji. Based on those discussions, participants recommended that the government of Fiji put one of its ministries in charge of building Indigenous knowledge into efforts to make the island more sustainable.

In recent years, the government of Fiji has launched efforts to discourage smoking among its citizens as part of a larger campaign to combat non-communicable diseases. Photo: Natasha Kuruppu

And there is some urgency. At the same time as the island nation faces a growing threat from climate change, it has also experienced soaring rates of non-communicable diseases like obesity and heart disease. The reason, in part, is because many Fijians are living in urban settings and no

longer have access to their traditional foods like taro and greens for a variety of economic and environmental reasons – instead, many Fijians have turned to imported and processed foods.

"In the next 30 years, non-communicable diseases are going to be a huge issue across many Pacific island nations," Kuruppu says. "There's a real need for other ways of knowledge to combat obesity or cardiovascular disease."

Village clean up

Litiana Kuridrani says that she hopes the workshop, and a subsequent report, will help to raise the profile of iTaukei knowledge in Fiji. "I'm hoping that, as an outcome of our report, the Ministry of Health will take it seriously, to recognise Indigenous knowledge as integral to health system planning."

One example of how that might look is happening in her home village of Namatakula, a community on the Coral Coast of Viti Levu, the country's largest island. Kuridrani calls it "the most beautiful part of Fiji." In August, she travelled back to the village to take part in a series of activities that coincided with the naming of Namatakula as a "green village."

As part of those events, children ran up and down Namatakula's beaches, cleaning up and recycling trash. Kuridrani and other researchers from the University of Fiji also worked with elders to replant shorelines with native trees and other vegetation to protect against floods. And she talked with local fishermen to map out where they catch their fish as a first step toward coming up with a plan to manage those fisheries sustainably.

In other words, everyone from the community participated. That will be an important part of rolling out sustainability initiatives on a wide scale, Kuridrani says – not just in Fiji but in other Pacific island nations like Vanuatu, Tonga, the Solomon Islands and others.

"For Fiji, to achieve success, you have to do it communally," she says. "In the Western world, it's much more independent, whereas for us, it needs to be done collectively by the whole village."