CLIMATE RESILIENT ISLANDS PROGRAMME

Community Resilience Profile & Planning

FACILITATION GUIDE

live & learn
ENVIRONMENTAL EDUCATION

NEW ZEALAND
FOREIGN AFFAIRS & TRADE
Manatū Aorere

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OVERVIEW

Think about the atmosphere, the neurons in a brain, the microbes in soil, the diatoms making oxygen in the ocean. The earth is an incredibly complex, interlocking self-organising system of continual flow and change. All forms of life are continually relating, adapting and emerging moment-to-moment, including humanity.

All complex systems can be described as collections of nodes and links. Think about a fishing net: the knots are nodes, and the twine between the knots are links. Resilience is like a fishing net. Each knot in the net is a relationship between people and place. Together all the relationships form a net that holds everything together. The universe, earth ecosystems, communities, our human-made systems, the bodies and minds of all living things are complex systems made up of billions of knots and links. A complex system is strong when there is a diversity of knots and links in the net, with back-up and duplicate knots and links.

Resilience is actions taken to promote or protect diversity, duplication and continual adaptation in a complex system. *'Resilience should never be thought of as a "state of being" in the world, but rather a way of acting on the world.'*[1]

When designing the Climate Resilient Islands (CRI) Programme Live & Learn wanted to develop a process communities could use to plan resilience actions that sat within the flow of complexity (without falling into the trap of trying to map everything!). The process developed by Live & Learn is innovative as it brings together a diversity of existing approaches and concepts, building a system or 'net' of knots and links through the activities that communities can use to explore ecosystem complexity and vulnerability in their context, and strengthen their resilience ability – especially in the context of adaptation to the increasing impacts of climate change.

1 Jeremy Rifkin, The Age of Resilience, 2023

The Climate Resilient Islands Programme commenced in 2021. It is supported by the New Zealand government and works with 65 rural communities in Fiji, Papua New Guinea, Solomon Islands, Tonga, Tuvalu and Vanuatu. Communities engaged in the programme work with Live & Learn to:

- explore interdependence of people and ecosystems (people are part of nature, not separate from it)
- explore ecosystem complexity, patterns and connections to place
- understand the impacts of climate change in their place (experienced and expected)
- identify short-term and long-term priorities for adaptation and resilience
- develop plans for adaptation
- learn about nature-based actions for restoration of elements of complex systems as part of adaptation and resilience actions.

The process is a set of 20 diverse activities that produce a **Community Resilience Profile**. These activities can be adjusted to context and focus. The Community Resilience Profile contains resilience indicators which are used to define a **Community Resilience Vision**.

The vision is a long-term view that guides the communities in developing a **Community Resilience Action Plan** (or pathways). Elements of this action plan are then implemented by the community themselves, with the support of government or other organisations, or by Live & Learn through a resilience granting mechanism. The Community Resilience Profile and Action Plan process is outlined in this facilitation guide.

INTRODUCTION

Climate Resilient Islands is a New Zealand Ministry of Foreign Affairs and Trade initiative, implemented by Live & Learn with funding from the New Zealand Government. Climate Resilient Islands (CRI) is working with rural communities in Fiji, Tonga, Vanuatu, Tuvalu, Solomon Islands and PNG to strengthen community resilience to the impacts of climate change through nature-based approaches.

The programme has three interconnected outcome areas:

1. Improved ecological resilience through nature-based land management
2. Enhanced community resilience through nature-based livelihoods and food security
3. Improved community preparedness and resilience to climate-related disasters

Communities engaged in the programme determine priorities and plans for strengthened resilience through pathways such as:

1. Intergenerational Indigenous land management
2. Ecological resilience
3. Restoration and strengthening of resilient local food systems
4. Access to small resilience grants to strengthen or establish community livelihoods
5. Disaster preparedness training

This facilitation guide is used by Live & Learn staff in the six countries to:

- Connect with communities engaged in the programme (Part 2)
- Work with the community to develop a Community Resilience Profile (Parts 3, 4, 5)
- Work with the community to develop a Community Resilience Plan (Part 6)

The communities use their resilience profile and plan to guide three types of resilience actions:

- Activities that communities lead and implement themselves
- Activities that communities do with support from other partners (government, other organisations, institutions, etc)
- Activities that Live & Learn supports through a small grants mechanism.[1]

Note for the reader:

This guide has been written so that any experienced community facilitators can follow the process, but the target audience is Live & Learn staff in the six countries where the CRI programme is being implemented. Live & Learn conducted inhouse facilitator training with teams as the process for testing and reviewing this publication. A specific Climate Resilient Training of Trainer guide is published separately.

Live & Learn provides support that includes assistance collecting baseline data about food insecurity, and in writing the community resilience profile based on all the activities. Information about the baseline data survey is included. Part 4 contains a template and overview for writing a community resilience profile, but the example profile provided was produced with the assistance of a technical writer and graphic designer. This is because a service Live & Learn provided to the community through CRI was the publication of a community resilience profile that would be a formal document the community can present to government and other stakeholders for support.

1 This facilitation guide does not provide information on the Live & Learn small grants mechanism, as at the time of publishing this guide the small grants mechanism was being tested.

The Islands Framework

The Climate Resilient Islands programme supports communities through a process that can be described as a journey to a series of islands. This facilitation guide provides the map and instructions for the first two islands – the Community Resilience Profile and the Community Resilience Plan.

The guide also provides an overview of the selection of community resilience pathways that can be implemented by the community themselves, or supported by government, Live & Learn or other partners.

Resilience Adaptation Transformation Framework

The Climate Resilient Islands activities are informed by the Resilience, Adaptation Pathways and Transformation Approach (RAPTA) developed by CSIRO[2] for use in working towards resilience in rapidly changing environments. RAPTA is an integrated framework designed to help research, plan and implement activities to address complex sustainability issues. RAPTA is based on three modules:

1. People – discussion, values, and visions
2. Systems analysis
3. Development of options and pathways for action

PEOPLE – DISCUSSION, VALUES, VISION

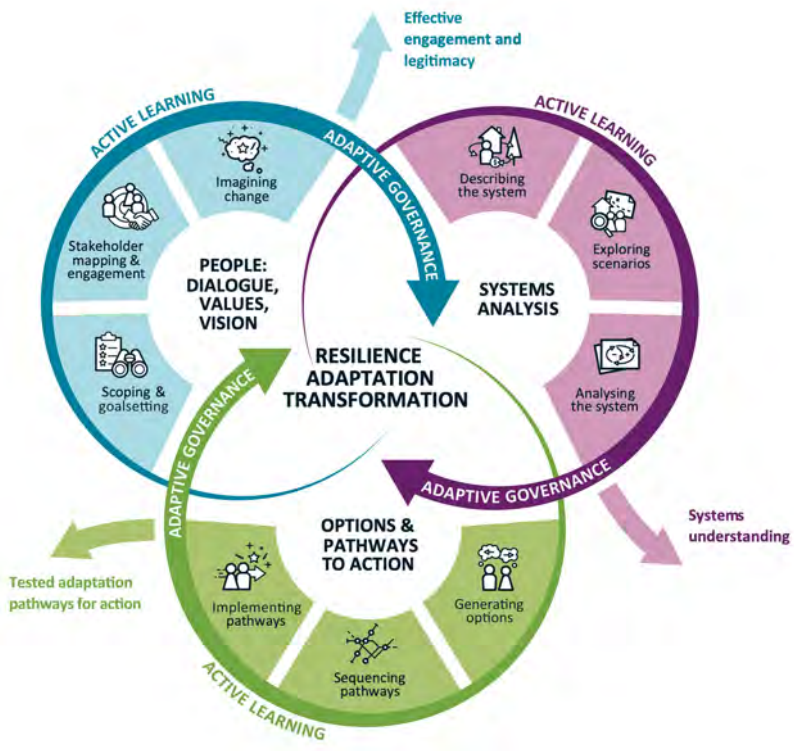
Get to know all the stakeholders, their roles and connections. Bring people together to imagine the future and set goals. This is done through the Community Resilience Profile facilitation process (part 3 of this guide).

SYSTEMS ANALYSIS

Work together to describe and analyse social and ecological systems, explore future scenarios, identify assets and strengths, uncertainties, stresses, shocks. This is done through the Community Resilience Profile facilitation process (parts 3, 4 and 5 of this guide)

OPTIONS AND PATHWAYS FOR ACTION

Work together to identify options for resilience, adaptation and transformation of systems and bring them together in a plan that is supported by all stakeholders. This is done through the Community Resilience Plans (part 6 of this guide).



2 O'Connell, D, Maru, Y, Grigg, N, Walker, B, Abel, N, Wise, R, Cowie, A, Butler, J, Stone-Jovicich, S, Stafford-Smith, M, Ruhweza, A, Belay, M, Duron, G, Pearson, L, and Mehard, S 2019, Resilience Adaptation Pathways and Transformation Approach. A guide for designing, implementing and assessing interventions for sustainable futures (version 2), CSIRO

PART 1

Key Concepts

> Concepts that inform Community Resilience Profile process

> Adaptive and Contextual

> Strengths - Positive

> Community-Led Curiosity & Learning

> Prefiguring/Visioning

> Connections & Complexity

> Metaphor - Story

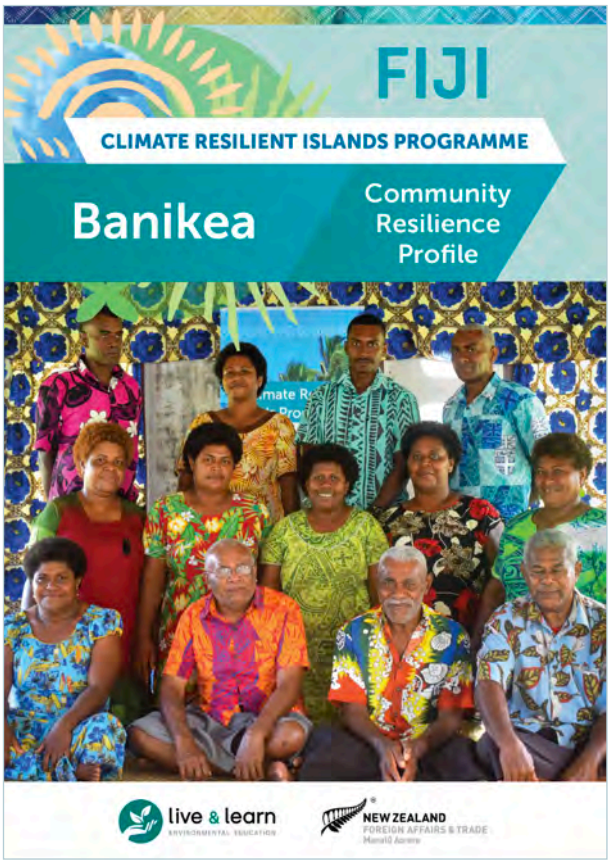
> Working with Diverse Knowledge

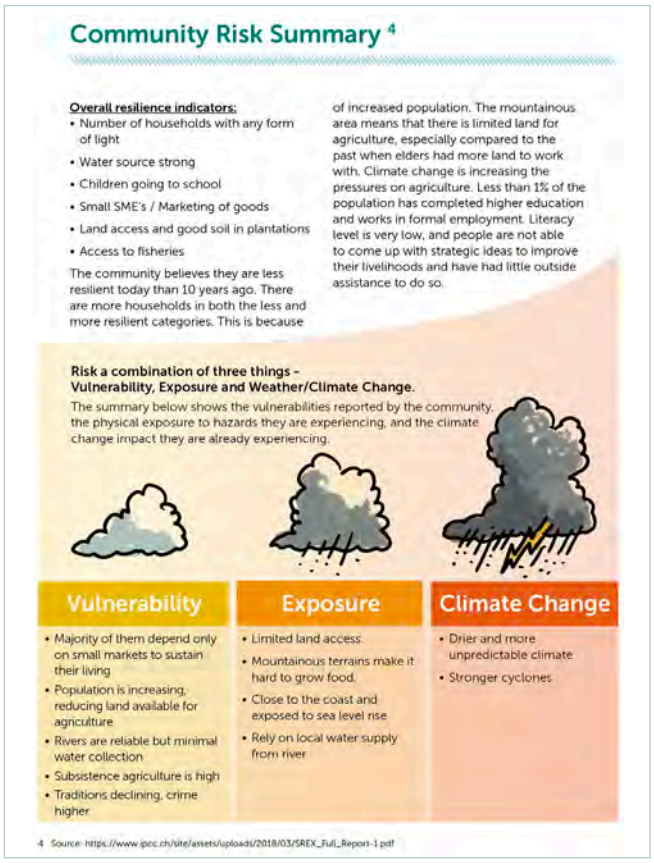
> Participatory Facilitation Tips

> Community Mobilisation & Stakeholder Analysis

Concepts that inform Community Resilience Profile process

The community resilience profile and planning process is a strength-based, community-led process that is anchored in the community sense of their home (sensing place) and informed by diverse approaches integrating elements of systems thinking, complexity, story-work, adaptive visioning and Indigenous knowledge.





Community Risk Summary [4]

Overall resilience indicators:

- Number of households with any form of light
- Water source strong
- Children going to school
- Small SME's / Marketing of goods
- Land access and good soil in plantations
- Access to fisheries

The community believes they are less resilient today than 10 years ago. There are more households in both the less and more resilient categories. This is because of increased population. The mountainous area means that there is limited land for agriculture, especially compared to the past when elders had more land to work with. Climate change is increasing the pressures on agriculture. Less than 1% of the population has completed higher education and works in formal employment. Literacy level is very low, and people are not able to come up with strategic ideas to improve their livelihoods and have had little outside assistance to do so.

Risk a combination of three things - Vulnerability, Exposure and Weather/Climate Change.

The summary below shows the vulnerabilities reported by the community, the physical exposure to hazards they are experiencing, and the climate change impact they are already experiencing.

Vulnerability	Exposure	Climate Change
• Majority of them depend only on small markets to sustain their living	• Limited land access.	• Drier and more unpredictable climate
• Population is increasing, reducing land available for agriculture	• Mountainous terrains make it hard to grow food.	• Stronger cyclones
• Rivers are reliable but minimal water collection	• Close to the coast and exposed to sea level rise	
• Subsistence agriculture is high	• Rely on local water supply from river	
• Traditions declining, crime higher		

4 Source: https://www.ipcc.ch/site/assets/uploads/2018/03/SREX_Full_Report-1.pdf

Resilience Picture

Resilience is like a bouncing ball or a yoyo. The resilience of Banikea is dependent on the community's relationship to the natural resources around the community, such as the river which runs through the village. The river contains the local fish Rediogobius (dome), which is endangered and requires pristine waters for its survival.

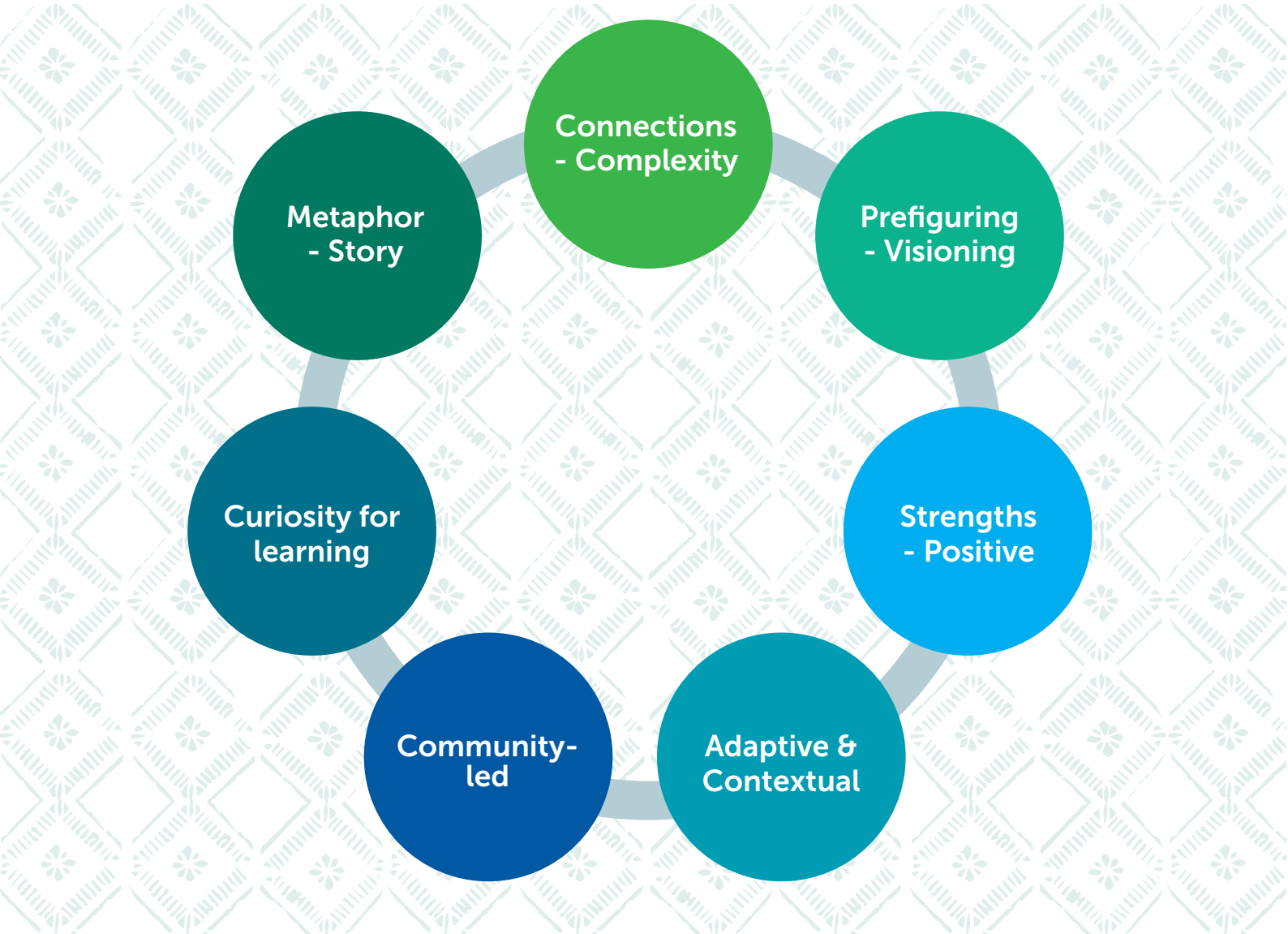
Resilience Vision

The community wants to maintain Indigenous knowledge, the clan system, religion and the tradition of working together to help everyone in the village. Resilience will come through managing time, increasing agriculture, restoring ecosystems, having good homes, roads and education, and being prepared for disasters.

The Community Resilience Profiles and Plans belong to the community, so:

- We don't publish them on our website
- We don't provide email copies to other organisations
- We do a small print-run and give all copies to the community to use for their further planning and advocacy with government
- At the moment all are done in English, with plans to localise through translation as resilience profile writing capacity grows in the Live & Learn teams.

The pages below provide a **brief overview** of key concepts that have informed the development of the community resilience profile and planning process. Familiarity with these concepts will help you understand the design of the different facilitation activities in this guide. A specific facilitator training of trainer guide is published separately[3] for readers of this guide that would like to learn more about these key concepts.



3 At the time of publishing this guide the facilitator training of trainer guide was under development

Adaptive and Contextual

Every facilitation event is a space with potential for great creativity and outcomes for those participating.

Each community knows their home and shouldn't have to explain details to outsiders. Every activity is in this facilitation guide has been assessed by its benefit/usefulness to community discussion and planning – including how the technology and information used remains with the community.

Indigenous knowledge is valued and included appropriately (discussed further in other sections below).

Strengths - Positive

Strength-based approaches:

- Start with a focus on what's strong so that we can use what is strong to address what is wrong.
- Support people to imagine and engage with non-linear change and uncertainty shaping the future – what do they REALLY value? (in good times and hard times)

Most damage and loss (eg. memories, sense of place, social cohesion and identity) cannot be measured in monetary terms but needs to reflect people's lives - values, place and experiences. The community resilience profile and planning process engages peoples' emotions, inspires hope, and helps people imagine change and recognise roles they can play in shaping their future by outlining broad pathways of change to achieve goals and vision. (RAPTA Guide)[4].

Analysing values and their impacts on vulnerability should reveal:

1. The ways in which people value certain things and why they value them in those ways
2. How this changes in different contexts, specifically between times of stability and times of disaster
3. Value trade-offs made in times of stability that make us vulnerable to disaster

Assessing these three aspects within a framework can help determine what needs to change to reduce vulnerability. Key categories of 'things of value' include: living things such as nature, animals and people; non-living physical things such as buildings, roads, money; critical services such as communications, health services, transport, energy and information; processes and rules such as regulations and standards, land-use planning and governance. [5]

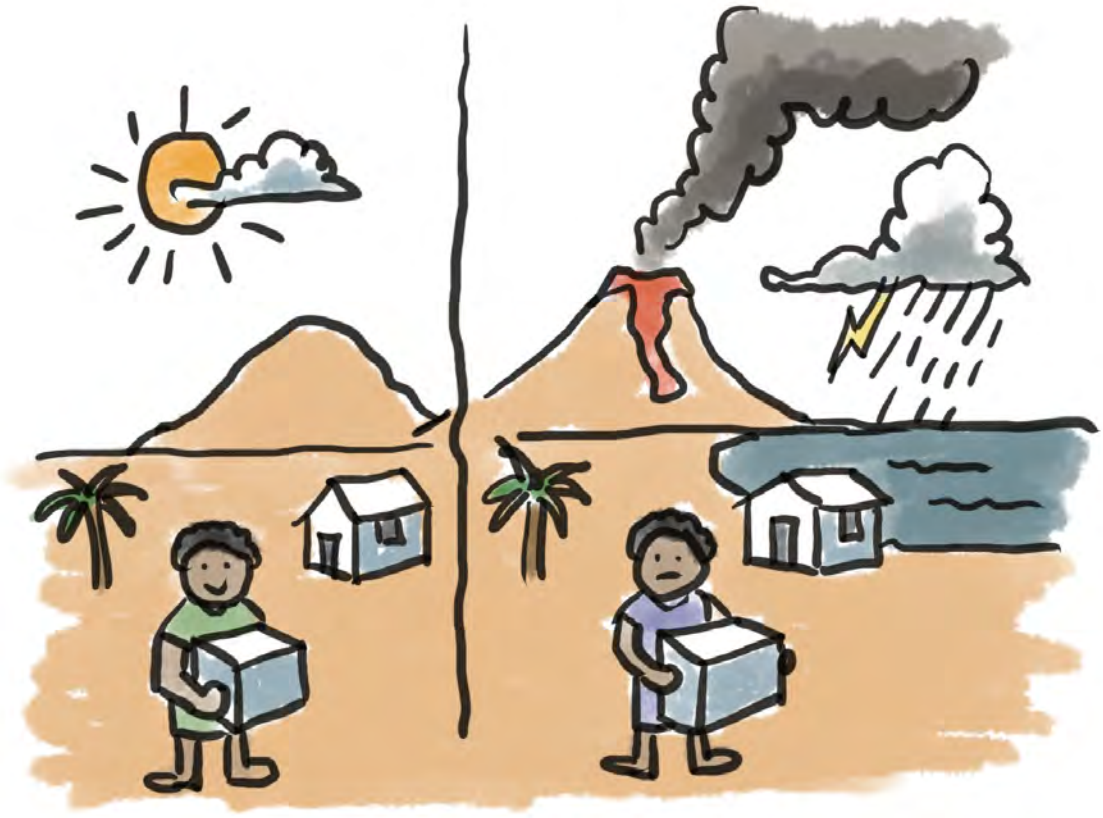
4 O'Connell, D, Maru, Y, Grigg, N, Walker, B, Abel, N, Wise, R, Cowie, A, Butler, J, Stone-Jovicich, S, Stafford-Smith, M, Ruhweza, A, Belay, M, Duron, G, Pearson, L, and Mehard, S 2019, *Resilience Adaptation Pathways and Transformation Approach. A guide for designing, implementing and assessing interventions for sustainable futures* (version 2), CSIRO

5 *Australian Government, Department of Home Affairs. 2019. Climate and Disaster Risk: What they are, why they matter and how to consider them in decision making. 3 Guidance on Vulnerability*

Community-Led Curiosity & Learning

- The community resilience profile facilitation activities foster curiosity in community participants and facilitators. "Curiosity is recognising a gap in our knowledge about something that interests us - and becoming emotionally and cognitively invested in closing that gap through exploration and learning." *Brene Brown*[6]
- The facilitation process should maintain a gentle balance between community-led and nudging the boundaries of existing community knowledge through sparking curiosity. The learning needs that grow as a result are acted on using the knowledge brokering approach provided by CSIRO in their knowledge brokering training.[7]

You value things differently in stable times versus times of disruption



6 Brene Brown, *Atlas of the Heart*
7 https://research.csiro.au/integration/knowledge-brokering/ & https://research.csiro.au/pkb/knowledge-brokering-support-program/

Informational	Relational	Systems

Linear dissemination knowledge from producer to user → Co-production of knowledge, social learning and innovation

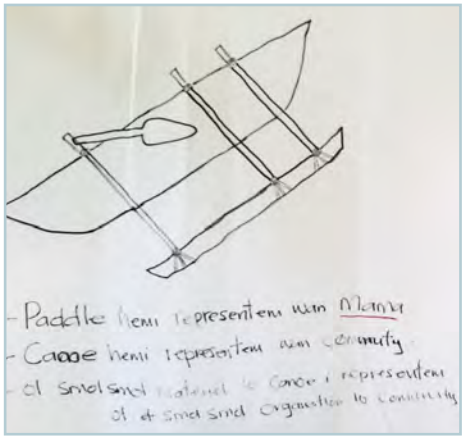
Information intermediary/ infomediary	Knowledge intermediary/ knowledge translator	Knowledge broker	Innovation broker
Enabling access to information from multiple sources	Helping people make sense of and apply information	Improving knowledge use in decision-making; fostering the co-production of knowledge	Influencing the wider context to reduce transaction costs and facilitate innovation

Prefiguring/Visioning

Each community develops their own resilience picture (metaphor) and vision. This process is based on 'prefiguring/visioning' anchored in metaphor or stories. '*What we need right now is an ability to recognize future visions with transformative potential but that are still in seed form. The future we need could be sprouting all around us, unseen: we need to be able to spot the future we want in unassuming little slivers, experiments, prototypes, or what could be.*' [8]

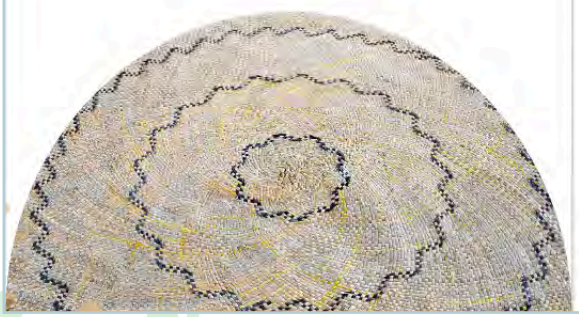
Examples of prefigurative experiments:

- creating space for new possibilities from within existing structures
- collective approaches to resource-management
- cultivating intergenerational relationships that support system change.



Resilience Picture

Freshwater reeds known as kuta in Fiji have long been a traditional treasure or yau ni vanua for the people of Nawailevu. It has existed in the province of Bua from the time of their ancestors and grew so abundantly in Nawailevu that villagers from other parts of Bua used to come and take their share of the kuta to weave their traditional attires. There were also rumours of the Kingdom of Tonga having a trade alliance with this province where Bua exchanged kuta for whales' teeth from Tonga.



Resilience Vision

For the people of Navailevu to achieve a better standard of life spiritually, socially and financially and to conserve their natural resources benefitting them and future generations the community will:

- Keep and uphold religion.
- Preserve culture and tradition and conserve natural resources.
- Be better educated, to contribute to the development of the community.
- Improve housing structures to withstand natural disasters.
- Improve and maintain natural resources for future generations.
- Prepare for climate change better than the current generations.
- Document and record kuta weaving tradition as a resource for the future generations.
- Strengthen and maintain communal relationships.
- Improve livelihoods.

8 https://commonslibrary.org/prefigurative-politics-in-practice/ Jess Scully, Glimpses of Utopia, 2023

Connections & Complexity

All life is 100% dependent on our ecosystem. Did you know that one out of every five breaths taken by all life forms on the planet comes from plankton drifting in all bodies of water?[9] How many breaths have you taken just reading through this guide! The community resilience profile process is based in exploring the importance and interdependence of the different parts of a healthy ecosystem. Everything that lives (or has lived) is part of our ecosystem – including humans. All life is nature, and nature is interdependent in ways we can see and ways we don't yet know how to measure or talk about.

A system is a set of things interacting in a way that produces something greater than all its individual parts.[10] Systems can be simple or very complex. For example, an out-board boat motor is an easy-to-understand simple system, and easy to figure out when something goes wrong. In contrast, a tropical rainforest is a very complex system and contains so many parts we are only just beginning to understand how they all work together.

All systems have a function or purpose. The universe can be viewed as a massive set of systems interacting in infinitely complex interdependent ways, with any given system containing various subsystems, while simultaneously acting as a subsystem of a larger system.

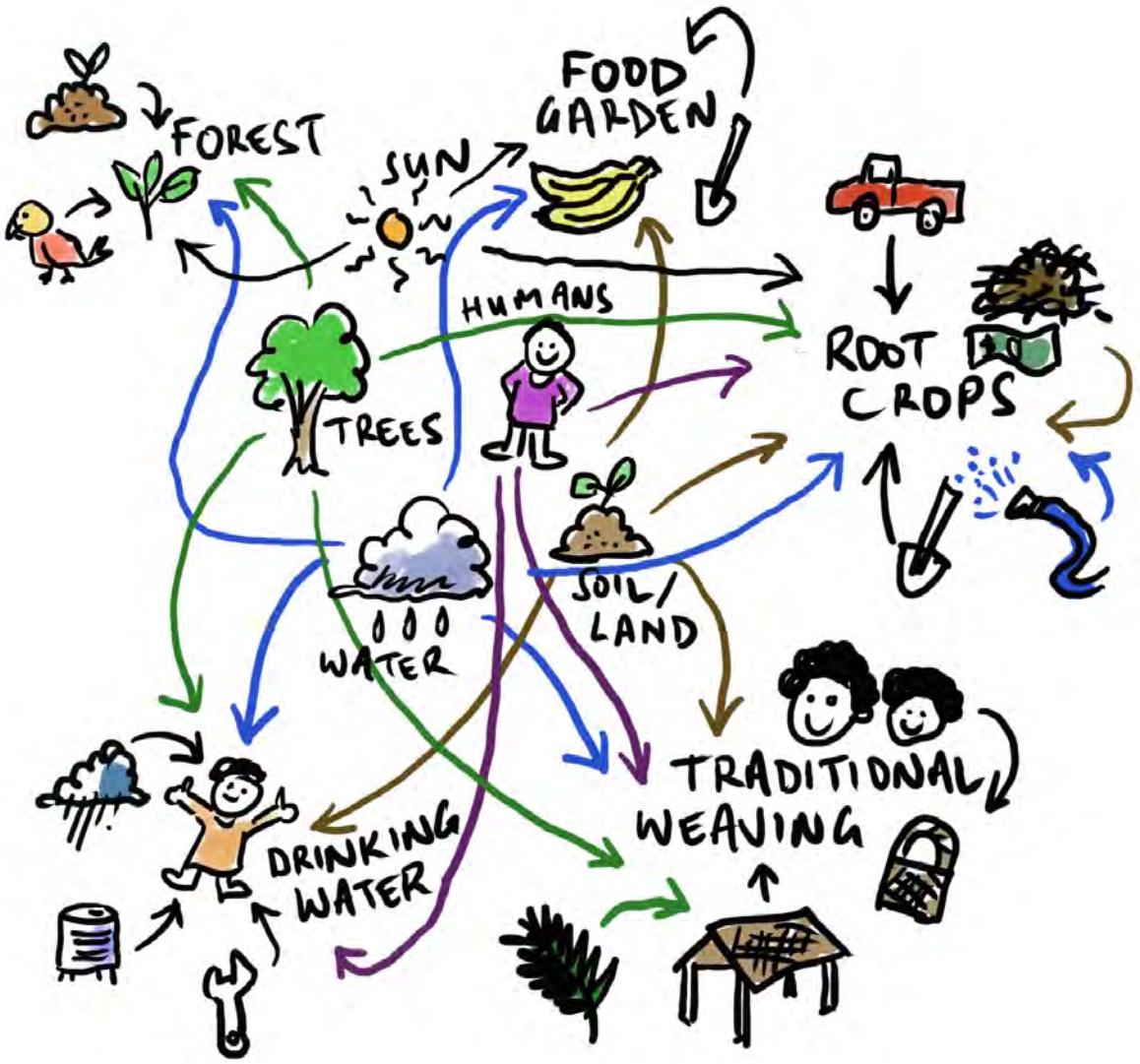
Everything is connected and interdependent, so the community resilience profile activities explore these connections through webs and discussions of systems.

- Connections include physical, social, spiritual.
- Mixture of technical and transformative approaches to "systems work." [11]
- Acknowledging complexity, so don't try to know/map everything.
- Indigenous ways of working are all systems thinking. In an Indigenous worldview everything is in relationship to everything else.

9 One out of every five breaths taken by any (and every) life form on the planet comes from a diatom. Diatoms are a kind of phytoplankton: that is, microscopic plants drifting in all bodies of water. They carry out photosynthetic processes, ultimately producing oxygen in the air we breathe. Half of the oxygen available to us has been produced by phytoplankton – this means that every other breath comes from microscopic organisms in the ocean. Getting to know them better, their processes, their current status, and how a changing climate will affect them is essential to us, because they are essential to life. https://earthobservatory.nasa.gov/blogs/fromthefield/2017/02/09/every-other-breath/#

10 Adapted from: https://thesolutionsjournal.com/2018/07/08/systems-thinking-can-help-build-sustainable-world-beginning-conversation/

11 Edited from the Introduction of *The Systems Work of Social Change : How to Harness Connection, Context, and Power to Cultivate Deep and Enduring Change, by Rayner, Cynthia, and François Bonnici. , Oxford University Press, Incorporated, 2021. ProQuest Ebook Central, Created from avondale on 2023-02-23 01:47:56.*



INDIGENOUS WAYS OF WORKING

The CRI programme has also developed a community activity specifically to support intergenerational Indigenous knowledge for nature-based resilience - the **Indigenous Knowledge Leadership Programme**. This programme has been contexualised and implemented in some communities in Fiji and Vanuatu. At the time of publishing this guide the Indigenous Knowledge Leadership Programme was being contextualized for use in Tonga, Tuvalu, PNG and Solomon Islands. Further information about this programme will be published by Live & Learn after the completion of the contexualisation and use of the program with communities in all 6 countries.

Indigenous ways of working are all systems work. In an Indigenous worldview everything is connected in many ways, nothing is considered in isolation because everything is in relationship to everything else. This way of thinking is very important for considering climate resilience.

An easier way to think about this is through word pictures (metaphor):

Indigenous ways of working have many similarities with what community development workers call "participatory activities." Indigenous ways of working are participatory, community-led, and address information owned by (and relevant to) the community. Because every community is a complex interdependent system of relationships, Indigenous ways of working usually involve lots of consultation and discussion, allowing different perspectives and taking the time for direction or consensus to emerge.

Here is another word-picture that helps describe Indigenous ways of working:

> "This is how I look at an Indigenous cultural system, an Indigenous way of doing things. Say you have a fire, and you have people sitting in a circle around the fire. You ask any person to describe the fire. While they are describing it, and you are looking at the same fire, it's not the same thing. But that doesn't mean they are wrong. They are at a different vantage point altogether. So we say, if we share this information in the circle, we share this experience, the collective experience; we will get a bigger picture."[12]

12 Adapted from: Shawn Wilson, Research is Ceremony: Indigenous Research Methods, 2008

Metaphor - Story

Indigenous knowledge is often expressed through story and metaphor. The community resilience profile process integrates story-work through the resilience picture, resilience vision, and uses of different knowledge systems – such as the seasonal calendar.

"I think that we need to talk in metaphor. 'Cause our language is built like metaphor. One word is like a zip file that crunches all this information into it."[13]

Resilience is like a fishing net.
Each knot in the net is a relationship between people and place. Together all the relationships form a net that holds everything together.

Resilience is like a woven basket or mat.
All the pieces woven together are relationships between people and place. Together all the relationships form a basket that keeps everything inside safe.

Resilience is like a forest.
Each tree, plant, animal, insect, person, is in a relationship with everything else in the forest. Together the relationships make the forest thrive.

13 Shawn Wilson, Research is Ceremony: Indigenous Research Methods

Climate resilience can be defined as (Mitchell, 2013)[14]:

The ability of social-ecological systems to absorb and recover from climatic shocks and stresses, while positively adapting and transforming their structures and means for living in the face of long-term change and uncertainty.

The community resilience actions are planned around a framework of three concepts from risk management expressed here through metaphor developed by Live & Learn CRI staff:[15]

Coconut palm - ABSORB

When storms hit, coconut palms bend and lose fronds, absorbing shocks but not breaking. After a storm, their fronds grow back, healthy. Their fruits have layers of protection, allowing them to survive long journeys.

Communities that absorb are informed about risks, and have layers of cooperation, various ways of working together to protect livelihoods and surrounding ecosystems, embedded in tradition. When hardships strike, they can use their resources and collective knowledge, and bounce back, as healthy as ever.

ABSORPTIVE CAPACITY

What is already there (like assets, people, organisations, natural features, Indigenous knowledge) that helps a community quickly recover from a bad event.

Examples include: Early warning systems, family savings, diverse sources of food and income, strong community groups and institutions, trained disaster risk reduction teams, healthy forests and water catchment, etc

14 Mitchell, A., 2013 Risk and Resilience: From Good Idea to Good Practice, OECD Development Co-operation Working Paper No 13

15 Adapted from Assessing and Monitoring Climate Resilience. From Theoretical Considerations to Practically Applicable Tools - A Discussion Paper, GIZ 2014

Crab - ADAPT

Crabs are adaptive creatures. They can survive and thrive at the bottom of the ocean, in rivers and mudflats, and in forests. They are resourceful at finding whatever food is nearby in these various environments.

Communities that adapt make adjustments to their ways of living and working due to changing circumstances that threaten livelihoods and ecosystems. They have strong but flexible networks, using new ideas to adapt housing, education and livelihoods to meet continual new challenges, and look to tradition to recover ways of adapting that their ancestors used.

ADAPTIVE CAPACITY

How a community or natural system can use opportunities and adjust or change the way it is or how it works in order to respond better to expected bad events.

Examples include: Changing how food is grown, diversifying food and income sources, improved natural resource management (planting trees, ecosystems services), expanding early warning systems, etc

Butterfly - TRANSFORM

The butterfly is a primary symbol of transformation because of its surprising change into what looks like a completely new creature. The caterpillar goes into a state that looks like death, but then it breaks out of the cocoon as something surprising and beautiful, able to fly. This transformation is not unprecedented, though – it is something butterflies have always done.

Communities that transform respond to a time of hardship, or the threat of hardship, by changing substantially rather than collapsing. This involves deep changes, at both individual and community levels, such as changing location, societal structures or ways of making a living, discarding ways of doing things that are not working, going back to traditional ways, to make a community completely different but better than what was before.

TRANSFORMATIVE CAPACITY

Parts of a community or a natural system that can be completely changed to be able to reduce impact of climate disasters and other bad events.

Examples include: Livelihood change (like from vegetable farming to fish farming), changing from fossil fuels (oil, petrol) to renewable energy (solar power), etc

Often we immediately think about vulnerability when we talk about resilience, and we don't think about capacity or strengths. Vulnerability is important, but only as a result of a gap in capacity. A practical way to think about this is to see resilience and vulnerability as two ideas that overlap in interesting ways. A situation with high resilience usually has low vulnerability. A situation with high vulnerability usually has low resilience.

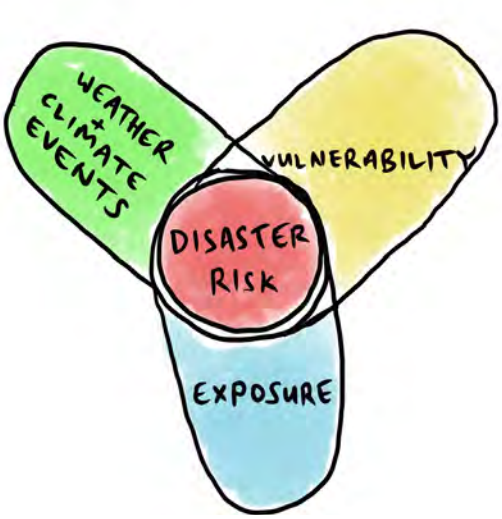
For example,

Village A is a farming village that has a weather insurance plan for farmers, and a strong church community with a new school building. But they are not willing to change their traditional planting behaviour or establish other income sources, other than recent logging of the hills above the community. A large part of the village is located directly on the beach.

Village B is a farming village that also has a strong church community, and has a weather insurance plan. They have changed the crops they grow to include varieties that can handle longer dry periods. They have also established a drip irrigation system to save water use. They have established a village business that provides natural woven mats to a shop in town, as well as implementing a tree planting program on the hills around the village, and mangrove planting along the coastline where the strongest weather comes from. The village business is run by a council of leaders who have also set up disaster planning training for different groups in the community. Through this program the older school building and church have been repaired and had toilets constructed so both buildings are safe evacuation areas.

	Village A	Village B
Absorptive Capacity	Social – Strong church community Economic - Weather Insurance Plan Physical – new school building	Economic - Weather Insurance Plan
Adaptive Capacity	None (and have recently logged the hills above the village for income from the timber)	Social – Disaster response training for different groups in the community Economic – Planting different crop varieties Ecological – Tree planting, mangrove planting Physical – Drip irrigation system
Transformative Capacity	None	Economic - Established woven mat business Physical – Repair of church and school as a safe evacuation centre
Resilience?	**High vulnerability, low resilience**	**High resilience, low vulnerability**

Climate resilience depends on a combination of these three capacities, along with a willingness to implement different responses.



Another important term when thinking about climate resilience is **Risk**. Risk is a combination of three things [16]:

Weather and Climate events = Storms, cyclones, droughts, floods, landslide, fire

Vulnerability = Things that makes a family more likely to have something bad happen to them if there is a disaster. *For example, only one livelihood source, having to care for sick or elderly family members, less money than other families.*

Exposure = Things about where the community lives (or part of the community) that makes the impact of weather or climate events worse. *For example, houses located at base of logged hillsides can be affected by landslide, or the community is based on the coast where cyclones winds are stronger.*

Households in a community have the highest RISK when the three ovals combine – which are the areas where there is the most vulnerability and exposure to strong weather and climate events.

Let's look at the example of Village A and Village B again. Which Village do you think has the highest **RISK**?

Answer – *Village A*

16 Source: https://www.ipcc.ch/site/assets/uploads/2018/03/SREX_Full_Report-1.pdf

Working with Diverse Knowledge

Rather than thinking that Indigenous knowledge and 'science' are different types of knowledge, CRI works from the perspective that Indigenous knowledge itself includes knowledge that is scientific. The programme brings bodies of knowledge together and works within the space where they meet.

All knowledge sharing is based on first strengthening and preparing the knowledge systems that will be shared. Four steps can help:

Communicate, Discuss, Bring together and Apply.[17]

Communicate involves presenting knowledge in a format that can be understood by a different knowledge system, e.g. a seasonal calendar.

Discuss requires us to talk together and interact around our different knowledges. 'Boundary objects' that people from different knowledge systems can connect to, like mapping zones in the community resilience profile facilitation process, can help discussions.

Bring together After discussions and negotiations, we can bring together our different knowledge systems, for example in Indigenous Protected Area management plans.

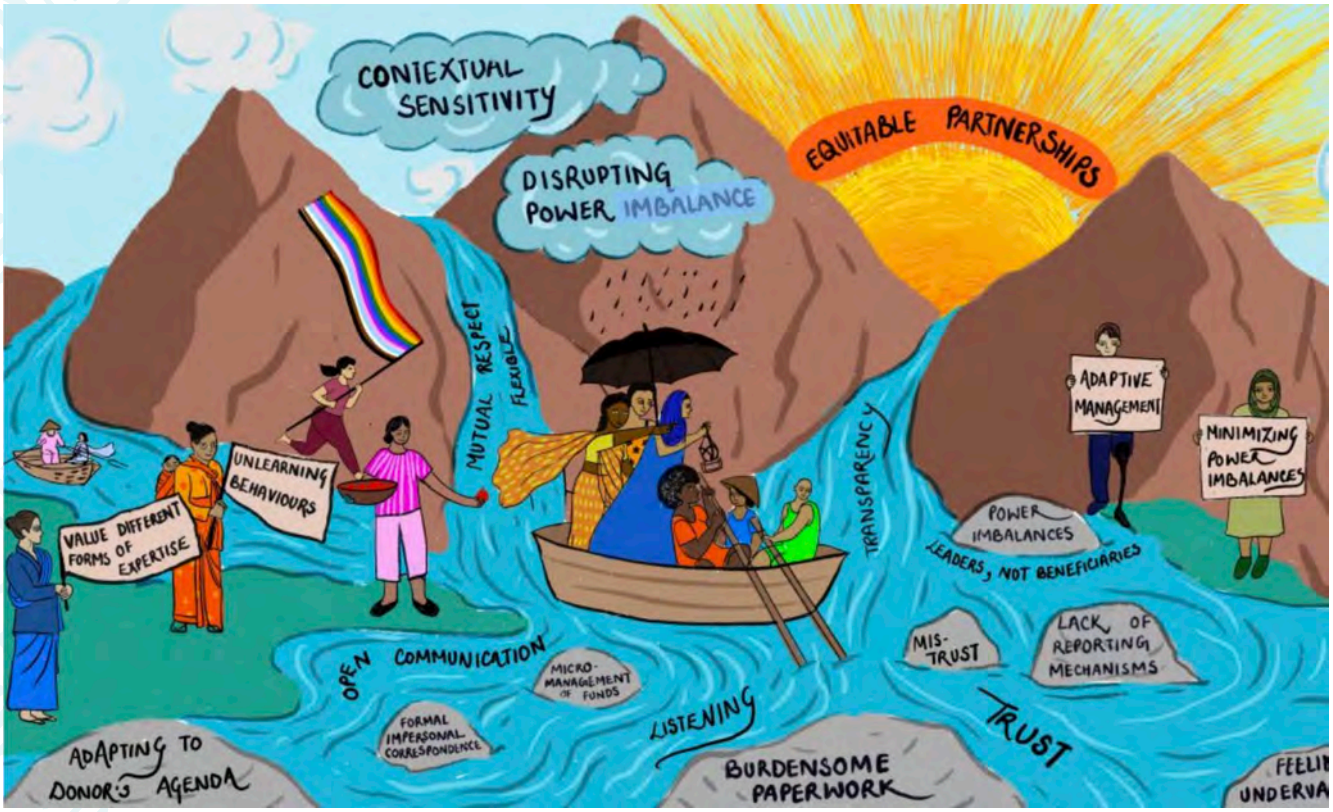
Apply The final step in weaving knowledge is application of the new, (partly) woven knowledge, which has been shown to deliver many co-benefits.

17 https://www.csiro.au/en/research/indigenous-science/Indigenous-knowledge/Our-Knowledge-Our-Way/OKOW-resources

We need to ask ourselves often: "Whose knowledge is being under-valued in this discussion?" Opening up our ways of knowing means talking about the enduring effects of colonialism and making space for diverse forms of understanding around what it means to 'live well'.

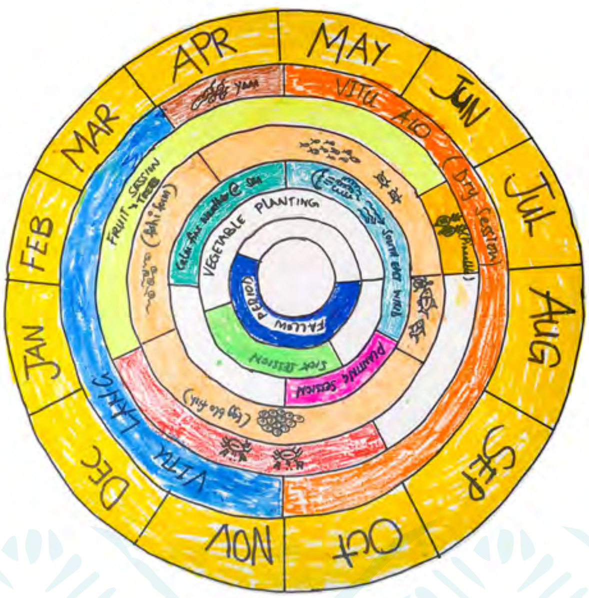
When we do this we look at Indigenous worldviews and practices, unpack power dynamics in our organisations and in how we work with communities, and talk openly about what it means to work together well. The image below is a great point to start discussions about diverse knowledges, different ways of collaboration, and how to develop mutual learning to strengthen our work.[18]

It will be helpful to discuss the picture in your team. Think about the diverse knowledge and ways of working between the CRI country team and the Network Support Office, and (very important) the diverse knowledge and ways of working between the CRI country team facilitators and the community.



18 https://oxfamapps.org/fp2p/creating-new-horizons-paths-to-shift-power-and-imagination-in-development/


Our History With the Land.
Season Calender - Khole
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Cyclone Season
Wet Season
Skull preparation


APR
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JAN
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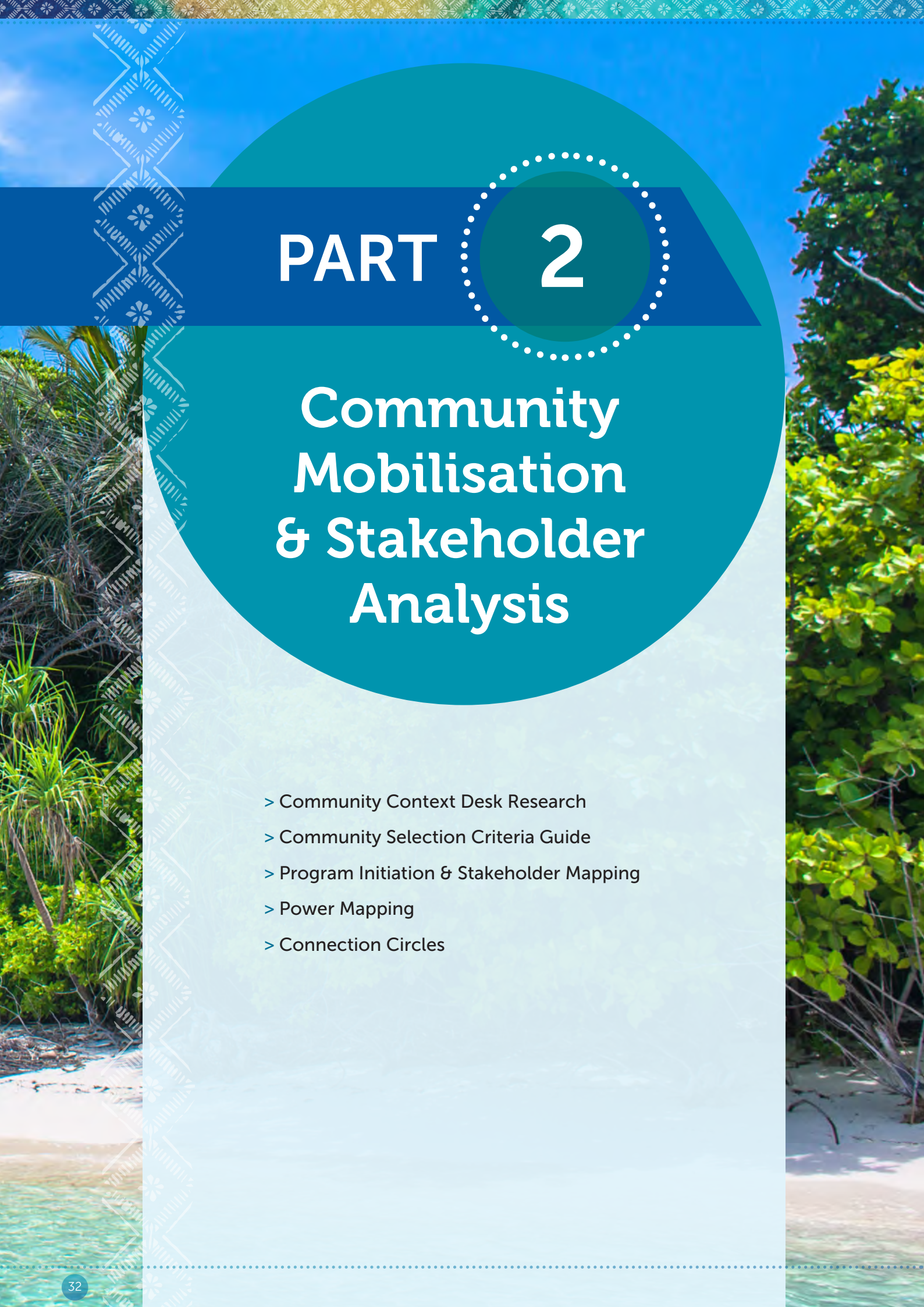
MAR
YAM
VITU
FRUIT SESSION
VEGETABLE PLANTING
FALLOW PERIOD
PLANTING SESSION

Participatory Facilitation Tips

- Always try to work first from the perspective of what might be interesting and of value to the community, rather than just participatory activities that collect information that benefits outsiders.
- The processes will not be linear (progressing in neat order) – but will reflect real life conversations, where concepts and plans will be revisited often, with incremental depth building over time.
- Although we do get the community to establish a working group for this process, the reality is that during each visit different people from the community will probably participate in the activities throughout the whole climate resilience process. So it is important from Visit 1 and onwards to continually develop relationships with a wide range of participants from the community, so that during each field visit and activity there are always some people present who have been involved throughout most of the process.
- Resilience goals may be developed early on, but will likely be adjusted, changed or even abandoned organically throughout the process, so allow for this in facilitation and don't be too rigid.
- Systems will be looked at throughout all the activities, with the complexity of the systems emerging throughout the facilitation journey (think circles, within circles, overlapping circles) – we will never reach a complete mapping of all the elements of resilience systems for a community, so we will always be working with information that will continue to deepen and grow. The activities will reflect this, by looking at resilience from a broader perspective at first, and then going deeper with the community throughout following visits as specific issues and interests arise.
- Don't use acronyms or jargon when talking about the climate resilience process with the community. We might use shortcuts inside Live & Learn when talking about our projects (like MFAT, or CRI, etc) but when we talk in the community we always use clear language, and as much as possible translate terms like "Resilience" and "Vulnerability" etc into appropriate local language.
- We also want to avoid the concept of "Project" so don't use this word when talking about the climate resilience activities. Ongoing resilience is a process, and the major goal of our work is community-led and community defined resilience concepts and actions that they can continually refine and develop as their resilience is strengthened.
- Find as many ways as possible to engage local government in all processes. Invite them to accompany you on community visits and in between visits provide short briefings to them of the information that is being documented by different communities.
- Always take clear and focused photos of the work done on flip chart paper. Aways take detailed notes in addition to photographs, as the learning that comes from the discussions will build each individual Community Resilience Profile incrementally – it won't be completed via a neat form or survey. Because of this it will be very important that you do regular debriefs and discussion with your team – both during downtime or quiet time in the community and back at the home office. Keep good records of your debrief discussions so you can refer to them in the finalised Community Resilience Profile.



PART 2

Community Mobilisation & Stakeholder Analysis

> Community Context Desk Research
> Community Selection Criteria Guide
> Program Initiation & Stakeholder Mapping
> Power Mapping
> Connection Circles

Community Context Desk Research

Before selecting communities to work with you need to build your understanding of the context. This is especially important if you have not done any work in an area before, but it is still important even if you are familiar with the area, as new information is being collected and published by governments and other organisations all the time that is helpful in resilience planning. This work is done in the office with some initial calls or visits to government departments needed.

Review and summarise existing information that is available for that area, based on the following three categories.

PEOPLE INFORMATION:

- Available census data on population and number of households
- The way the community may be geographically divided. Many communities are divided into zones or groups. These are used for a range of purposes – fundraising activities, community work – and in many villages date back to missionary/colonial times. In some places, zones may be dominated by a single clan, while in others there may be a mix of clans residing in a single zone. If you don't already know, in this step identify how you expect the community to be structure, how many zones, and if they are predominately made-up of one or multiple clans.
- Any gender and social inclusion information available, including known or potential forms of social marginalisation in community (e.g. poorer households, evident by type of house, geographically isolated households, migrant families etc.)
- Population forecast for the province and/or community
- Data on illnesses (may be available from government ministries responsible for health)
- Other social information, such as faith groups, sports groups, women's groups
- Education and health institutions in the community

LIVELIHOOD INFORMATION:

- Relevant economic activity (e.g. logging, agriculture)
- Overview of food systems of the community or the area (available from government ministries responsible for agriculture (for example, level of subsistence agriculture, any food security assessments, cash crops, etc)
- WASH statistics for the province (or community, if available)
- Reports from any previous significant community projects that have been implemented in the area

GEOGRAPHY INFORMATION:

- Any village maps already available – being familiar with a map before your first visit allows you to be prepared for facilitating mapping activities, and also means you have a better idea of moving around the community if you have not been there before. Suitable maps can be a drawing from a previous village mapping activity from another project, government maps, or a print-out from Google maps.
- Any information on water sources used in the area
- Climate change projections for target area, e.g. more rainfall, less rainfall, sea level rise, storm surge, and eco-systems overview. This information may be available from:
    - www.pacificclimatechangescience.org (general information)
      Government ministries responsible for Environment, Climate Change, Disaster Management and Meteorology, etc
- Emergency Management policies and procedures in place for this province and/or community

A Google map allows discussion of village and infrastructure to ensure that all households are included, for example those at the bottom of this map on the other side of the river.

Community Selection Criteria Guide

CRI SITE SELECTION CRITERIA CHECKLIST GUIDE

This is designed as a simple guide to build a case for a potential location to be included in the CRI programme. It is not a definitive list, potential locations do not need to fill all of these requirements, it is designed as a mechanism to help staff weigh up all options and make a good case for the site inclusion.

Background Question – Give a brief overview of the community: (100 words maximum)

Why do you think this site would make a strong CRI Community? (200 words maximum)

What are the current ecosystem types and what is the current status of those ecosystems for example is there deforestation or soil erosion etc.? (Maximum 100 words)

Essential Criteria Questions For a site to be selected all answers here must be yes	**Yes/No**	**Comment**
Is there a strong indication for successful implementation of ecosystem management and restoration?		
Have the local, provincial, state or national governments supported the selection of this particular location?		
Are the community leadership interested in working with Live & Learn?		
Is the community currently safe from any issue that may jeopardise the safety and security of Live & Learn staff?		

Community Questions	Yes/No	Comment
Does the community have strong leadership structures in place?		
Does the community have an established women's leadership committee or similar?		
Is the population of the community manageable by the program with the current level of resources? (can the current number of CRI staff interact with a community of this size and still ensure the integrity of the program?)		

Local Government Questions	Yes/No	Comment
Are there current/previous development efforts or initiatives from the Government or other NGOs in this location?		
Have there been other NGOs working in the community? If yes, in what project and how did the work go?		
Is Live & Learn already engaged in program work in this community?		

Capacity for Implementation Is there a strong indication for successful implementation of:	Yes/No	Comment
Increased Food Security		
Nature Based Livelihoods		
Indigenous Knowledge leadership empowerment		

Logistics Questions	Yes/No	Comment
Is the location easy to reach? (Is it on a separate island, is the road suitable to drive to, does it require a long trek?)		
Is the location less than 3 hours drive from the implementation CRI office?		
Is the location reasonably close to other CRI locations in the area?		
Is the location far enough away from essential services and major townships/cities that the community would be likely to take up the program?		
Does the area have telephone coverage?		

Additional Comments or Questions:

Is there any other information that you think is worth noting about this site?

Program Initiation & Stakeholder Mapping

Initiate the programme by following appropriate processes in your country for securing approval to work in communities. This could include establishing MoUs or Partnership Agreements, or preparing letters of request for senior community leadership, gaining approval from different government departments.

Also make arrangements for an appropriate launch of the Climate Resilient Islands programme in your country. The launch should be modest, but still engage key leadership required to ensure the program is known by the government and they are engaged

When making contact with appropriate government departments and others collect information in a format like the following tables to track important policies and other useful information for the programme.

NATIONAL POLICIES/STRATEGIES – CLIMATE, DISASTER PLANNING, FOOD SYSTEMS, CONSERVATION, ETC

Document	Responsible Agency/ Department	How it relates to our program?	Strategy for integrating our program to existing policy/strategy

POTENTIAL GAPS IN NATIONAL POLICIES

Document	Responsible Agency/ Department	How it relates to our program?	Strategy for integrating our program to existing policy/strategy

KEY PEOPLE & POTENTIAL PARTNERS

Stakeholder/ Partner Name	Contact *Phone, email, address*	Impact *How much does the project impact them; high, medium, low*	Influence *How much influence do they have; high, medium low*	What is important to the stakeholder?	How could the stakeholder contribute to the project?	How could the stakeholder block the project?	Strategy for engaging with the stakeholder

CURRENT & COMPLETED RESILIENCE-BASED PROGRAMS

Name of Project	Donor/ Organisation	Contract Value	Duration of activity	Types of activities undertaken	Status or Date Completed	Key Lessons Learnt	Contact Details *Phone, email, address*

Power Mapping

After the first visit to a partner community it can be helpful to do some reflection to guide establishing a good working relationship with a community. Power Mapping and Connection Circles are helpful activities for this.

PARTICIPANTS

Live & Learn Climate Resilient Islands country-office team, plus other senior staff as appropriate

MATERIALS

Flip chart paper/whiteboard with coloured markers, or blackboard with coloured chalk, post-it notes or scrap paper

Encourage people to think analytically about how change happens:

The 'core questions' in each section outline the topics and concepts that need to be discussed; the 'discussion points' will prompt people to think about analytical concepts such as incentives, interests, and ideas. However, the discussion points are not intended to be definitive, rather suggestions to guide your analysis.

Knowledge gaps:

It is likely that there will be some questions that the group will struggle to answer. Minimise this risk by planning in advance to ensure you have a good range of knowledge and experience in the workshop (including external guests, if appropriate). Throughout the discussion encourage people to be honest about what they don't know. Challenge people on facts and assumptions. Keep a clear list of where more information is required. Encourage people to think about how they can find this information (e.g. is there someone we can speak to, or a publication we can read?). Work through the discussion questions below, taking notes as required.

WHAT IS THE SITUATION NOW?

- Who are the **main people or groups** involved? What are their respective roles and responsibilities? Are there any 'unusual suspects' (Ministry of Finance? Prime Minister? Private Sector? Ministry of Women, Children and Family Affairs?)
- Who are the main people involved in gender and social inclusion? What are their roles and responsibilities? Etc.
- What **legislation and policy** influence the change we want to see?
- Do any **country characteristics** (geography, climate, social structures, political systems, etc) play an important role in climate resilience work and how?
- What **formal ways of working** influence the change?
- What **informal ways of working** influence the change?
- Which **ways of thinking** influence the change, and how?

WHY ARE THINGS THIS WAY?

- What are the main short and long-term **interests**?
- How do **historical legacies** shape the issue? (eg. previous legislation or reform?)
- Why do certain **ideas** have more influence than others? Whose interests dominate decision making?
- Are there any important **inequalities** related to the issue?
- What are the main **drivers of change**? How has the issue been evolving?

WHAT TYPE OF POWER CAN WE SEE?

There are four different types of power:

a) Power within – personal self-confidence and a sense of rights

b) Power with – collective power, through organisation, groups and working together

c) Power to – the ability to decide actions and carry them out

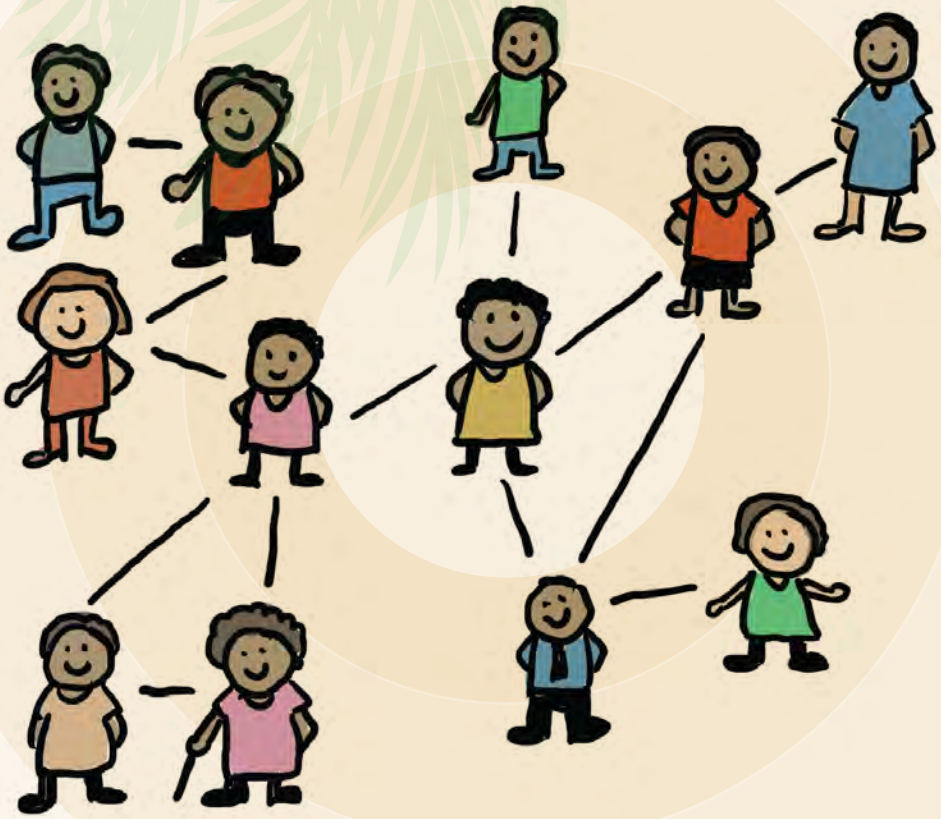
d) Power over – the power of hierarchy and domination

Discuss and complete the power matrix below on flipchart paper

	Situation Now	What we will influence	Situation when change is achieved
POWER WITHIN 			
POWER WITH 			
POWER TO 			
POWER OVER 			

Connection Circles

Connection circles are a quick and powerful way to assess the key people who are important to influencing change. This activity can be done at a high level (such as national government) or at a community level (such as influencers in a community church congregation). It is useful to take time with your team to draw a quick connection circle throughout project implementation as different people come and go in different positions relevant to project activities.This connection circle builds on the discussion from the power analysis.



PARTICIPANTS

Live & Learn Climate Resilient Islands country-office team, plus other senior staff as appropriate

MATERIALS

Flip chart paper/whiteboard with coloured markers, or blackboard with coloured chalk

STEPS

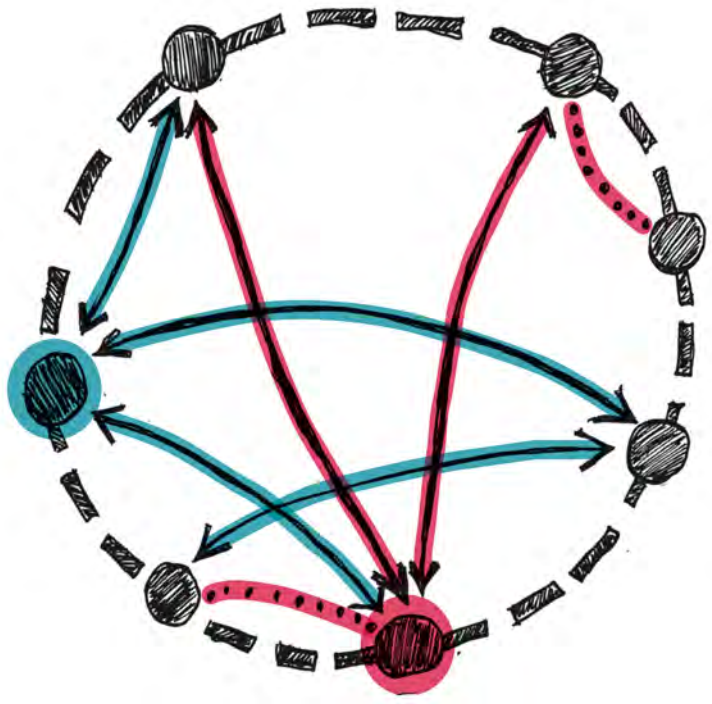
1. Name key individuals or positions and plot as points in a circle

2. Remember to include Live & Learn!

3. For each person/position discuss and map connections between them:

    - Who does each person work with?
    - Who has influence over others?
    - Are they any other key individuals or organisations outside the circle that have strong influence? (If yes, identify them and draw them)
    - Use different colour markers or chalk or line types to distinguish formal and informal connections. Identify the person/position with the greatest power/influence regarding the targeted intermediate outcome

4. Photograph each Connection Circle when completed, and type up important points from the discussion during the mapping. Save this information with other Stakeholder mapping information.



PART 3

Community Resilience Profile Activities

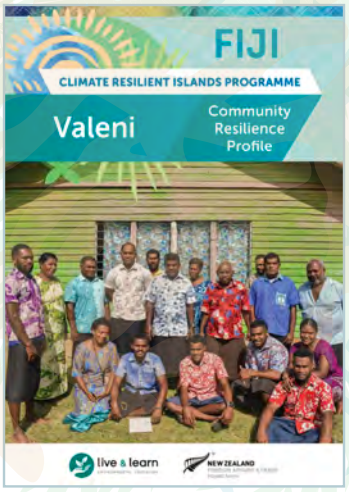
> ACTIVITY 1: Introduction
> Community Resilience Working Group
> ACTIVITY 2: The Big Picture (Systems and Resilience)
> ACTIVITY 3: Talking About the Land (Ecosystems maps)
> ACTIVITY 4: How We Live with the Land (Ecosystem Zones & Seasonal Calendar)
> ACTIVITY 5: Our Story with the Land
> ACTIVITY 6: Community Resilience Picture and Story
> ACTIVITY 7: Ladder of Life - Resilience
> ACTIVITY 8: Web of Life (Local Ecosystem Connections)
> ACTIVITY 9: Keeping us Strong (Community Strengths and Hazard Assessment)
> ACTIVITY 10: Working Together
> ACTIVITY 11: Baseline Data Collection

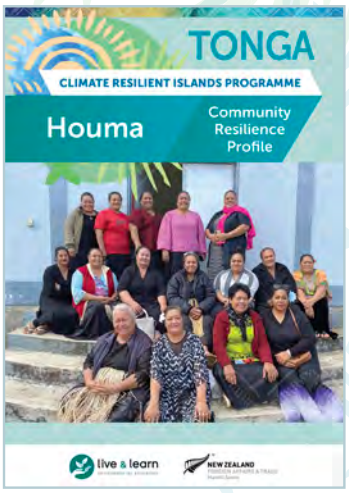
The Climate Resilient Islands activities start in each community with the creation of what we are calling a "Community Resilience Profile." The Community Resilience Profile is the foundational tool for a Community Resilience Plan.

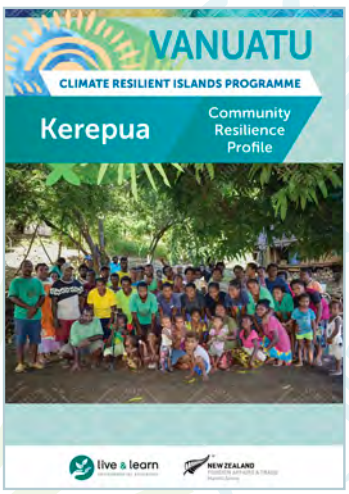
A Community Resilience Profile is produced by each community with the support of Live & Learn. The Community Resilience Profile also contributes information needed for a project baseline on income, livelihoods and food security.

During the production of the Community Resilience Profile relationships are established with the community, an understanding of the community context and place is developed, and Indigenous knowledge, stories and visions for climate resilience are explored.

A series of community-based activities explores the contextual systems in the community between people and place, explores various scenarios concerning climate and other hazards, and does some specific analysis in the areas of livelihoods, food security, nature-based systems and climate vulnerabilities.







BRIEF FACILITATION INSTRUCTIONS

The facilitation activities described below are conducted in the order presented by Live & Learn staff, but at times that suit the participants. This may mean conducting the activities at different times or on days that best suit each community. This needs to be planned for before commencing the activities. Other programs can contextualise the activities or adjust the order. Note that the instructions are written from the perspective of Live & Learn CRI teams working in communities.

During times in between activities LLEE staff should focus on building relationships with key individuals, observing the ways of working in the community, and physically explore (go for walks!) different things mentioned by the community as priorities or hazards affecting their resilience.

After each activity, or at the end of every day, the facilitators should come together to write up the activity using the reporting template provided. Best results are when this work is done while the discussions and information shared during the activity or during the day are fresh and easier to remember.

ACTIVITY 1:
Introduction

OBJECTIVE

- Introduce team members to the community in a way that places the team members in a relational context to the community and starts the relationship building process.
- Provide information on the activities that will be done during this visit.

PARTICIPANTS

This is an open community discussion. So select a time that is convenient to most in the community (after church, at a weekly market, etc). Try to ensure that as many people in the community can be present, including women, elderly, young adults, and people living with disabilities and their carers, etc.

MATERIALS

- None required

TIMING

Keep the introduction short, and have it naturally lead into **Activity 2: The Big Picture (Systems and Resilience)**

30 minutes

PROCESS:

Intro: Each team member should introduce themselves in a culturally appropriate way. (Tips, highlight any prior connection to the community or area, share information that the community will find interesting, etc). The team member who will be the primary contact for this community for the full time of the project should give a very brief introduction of Live & Learn, and overview of the climate resilience activities.

Climate Resilient Islands is working with rural communities in Fiji, Tonga, Vanuatu, Tuvalu, Solomon Islands and PNG to strengthen community resilience to the impacts of climate change through nature-based approaches.

The programme has three interconnected outcome areas:

- Improved ecological resilience through nature-based land management
- Enhanced community resilience through nature-based livelihoods and food security
- Improved community preparedness and resilience to climate-related disasters

Communities engaged in the programme determine priorities and plans for strengthened resilience through pathways such as:

- Intergenerational Indigenous land management
- Ecological resilience
- Restoration and strengthening of resilient local food systems
- Access to small resilience grants to strengthen or establish community livelihoods
- Disaster preparedness training

Climate Resilient Islands is a New Zealand Ministry of Foreign Affairs and Trade initiative, implemented by Live & Learn with funding from the New Zealand Government.

Community Resilience Working Group

ESTABLISHING A COMMUNITY RESILIENCE WORKING GROUP

Ask for the appointment of key community representatives to a Community Resilience Working Group.

This working group can be an existing committee in the community, so long as there is sufficient representation of women, youth, and marginalized groups (like elderly and people living with disabilities).

Explain that it is a voluntary group.

The purpose of the Resilience Working Group is to:

- Work with Live & Learn on the Community Resilience Profile facilitation activities
- Work with Live & Learn to review the draft Community Resilience Profile
- Work with Live & Learn to participate in the Community Resilience Planning
- Hold all the posters and papers from the activities in a safe place in the community, so they can be used in future activities

Record the names and contact details for the members of the Community Resilience Working Group

ACTIVITY 2:
The Big Picture (Systems and Resilience)

OBJECTIVE

Introduce discussion about the systems in the community, and how changes can affect complex systems in the community and the land.

PARTICIPANTS

This is an open community discussion, so select a time that is convenient to most in the community. Try to ensure that as many people in the community can be present, including women, elderly, young adults, and people living with disabilities and their carers, etc.

MATERIALS

A dozen soft balls, such as tennis balls, or socks rolled into a ball, or other soft materials that can be scrunched into a ball

TIMING 30 minutes to one hour

PROCESS:

Explain: This activity helps get the group thinking about the complexities of systems,especially the ecosystem of life, and the different systems in a community.[19]
Thinking and talking about systems is a foundation of the community resilience profile process. Share the information below with participants in an interesting way. The words and examples can be adjusted to best fit the community situation, as long as the meanings remain clear. Make sure all the facilitators have a common understanding of systems thinking before facilitating this activity (and the entire community resilience profile!).

WHAT IS A SYSTEM? [20]

A system is a set of things interacting in a way that produces something greater than all its individual parts. Systems can be simple or very complex. For example, an outboard boat motor is an easy-to-understand simple system, and easy to figure out when something goes wrong. A tropical rainforest is a very complex system and contains so many parts we are only just beginning to understand how they all work together.

The universe can be viewed as a massive set of systems interacting in infinitely complex ways, with subsystems operating within larger systems. Systems thinking is when we expand our awareness to see the relationships between parts and wholes, rather than looking at just the isolated parts.

19 Adapted from The Climate Change Playbook, 22 Systems Thinking Games for More Effective Communication about Climate Change, Dennis Meadows, Linda Booth Sweeny and Gillian Martin Mehers, Chelsea Green Publishing, 2016

20 Adapted from: https://thesolutionsjournal.com/2018/07/08/systems-thinking-can-help-build-sustainable-world-beginning-conversation/

It is important to understand two things when talking about systems:

1. Systems aren't 'real' things that exist "out there". They are ways of thinking humans use to make sense of the world. We are all in many different systems every day (from our own bodies, to our families, to our community, to the earth ecosystem that enables all life to exist).

2. Since 'systems' are human constructions and can be thought of in many complex ways, we must be clear about the system we want to think about. An example is the system of a family farm. We would ask questions such as: What are the boundaries of this system (the land that belongs to the family)? How do its parts (the soil, the water, the plants, the animals, the pests) work together? How does the farm connect with the natural landscape around it – such as how does water move through the farm?

SYSTEMS THINKING GAME

Instructions:

The game is for fifteen to twenty people. If you have more than twenty, split into two groups.

- Ask everyone, including facilitator, to stand in a circle facing inwards, standing a metre or more apart.
- Have all balls handy, close to the facilitator (on a chair is good).
- Each person holds their hands out at waist level.
- Explain that you will throw a ball around the circle and once a person has received the ball, they need to throw it to someone else with their hands out.
- Encourage people to throw across the circle, not to someone next to them.
- Each person *must remember* who they threw their ball to – this establishes the pattern of the ball-throwing.
- Once a person has received the ball, they are to put their hands by their side so the team can see they have already had a turn.
- Once everyone has received the ball, ask the last player to throw back to the facilitator.
- Check that everyone remembers who they threw the ball to.
- Now the group must keep as many balls in play as possible.
- The facilitator will throw balls to anyone in the circle, but the players must throw a ball on to their designated receiver. (Ask the team members to point to their receiver. Team members may need to be reminded of who they are throwing to!)
- Begin the game with one ball but keep adding balls into the circle. If a player drops a ball, encourage them to pick it up and continue. Keep doing this for five or ten minutes, or until the group has become chaotic, then ask the group to stop.

Share: Talk about the process of throwing balls. How many could the group successfully manage? How long? Was there a point where they couldn't manage the same amount of balls? What happened when there were too many balls in play?

Explain: The rules of this game are simple, even though it might look complicated to someone who didn't know the rules. Someone watching from outside the group may have seen balls flying randomly through the air, but the group knows there was a strict plan on who the ball should be thrown to. Once the system of throwing was made clear to the group, they could understand how it should work.

Simple systems are like this. When we understand the rules, we can see much easier how a system works. In community systems the rules might be who has responsibility for things, or that crops need certain amounts of light and water, or that when wild weather is coming, we need to prepare in certain ways.

Discuss: Only when the system became more complex from the number of balls involved (but still the same rules), things became a bit harder. Can the group think of real-life systems that become harder to manage when there are more parts to think about? Can the group think about real-life systems that have so many parts it is almost impossible to think about them all? Earth's ecosystems are complex like that.

Now the group is thinking about systems, ask the group to brainstorm what systems are in their community. You can suggest systems like the reef, forests, backyard garden, community food gardens, traditional knowledge and cultural systems. Talk about how all these systems connect in many different ways. Talk about how all these systems are important parts of the ecosystem for life. Discussion at this stage is fine. No need to draw anything (that comes later!).

Ask the group to share how the idea of growing complexity, as in the ball game, might affect community food security and dealing with multiple challenges.

Show the group the illustration of the fishing net or the basket. Explain that a net or basket can be repaired but when they get too many holes, they no longer work properly. Ask the group to talk about what systems or ways of working are in place to deal with climate-related problems. How many climate-related challenges might they be able to manage at once by sharing resources or changing practices?

» Take good notes of the main points in the discussion, including the systems, their elements and challenges specifically discussed by the community.

ACTIVITY 3:
Talking About the Land (Ecosystems maps)

OBJECTIVE

The community will look at the natural patterns of their land and the natural factors that affect the ecosystem in the landscape. The perspective at this stage is large and general.[21]

PARTICIPANTS

This activity should be completed by the Community Resilience Committee (if one is in place), along with any other interested community members or community members who hold relevant knowledge. The group needs to be a size that can work together around large pieces of flipchart paper or a blackboard.

MATERIALS

- Pens, pencils or markers in different colours OR chalk in different colours
- Large pieces of flipchart paper OR other paper OR large blackboard

TIMING 3 hours

PROCESS:

Instructions:

- Set up the group in an area where everyone can sit around a big table or flat ground and contribute to the map.
- If the group is very big you can divide them into 2 or 3 groups – divide the sector areas (see below) between each of the groups. (Ensure that any groups agree on the extent of the maps and features included so that the maps can be brought together at the end.)
- Participants might do lots of drawing on their maps before they agree on all the information, so at the end of the activity a final neat version of the analysis map should be drawn.
- The maps can contain more information than the examples provided, but this activity is about obtaining a general overview, and it is important that the maps aren't full of so much detail that they become unreadable.
- Have lots of paper available, as the groups may make multiple maps before bringing it all together at the end.
- Take good quality, clear photographs of all the final maps, making sure each one is clearly labelled, and the details can be seen in the photograph. Leave the papers with the Community Resilience Committee.

21 Adapted from site analysis exercise from Tropical Permaculture Guidebook Volume 1, Chapter 3, pages 103-117

Explain: We are going to look at community knowledge of natural patterns and things that affect the landscape and landscape use. The knowledge gained from a careful observation of the land is an important part of resilience to disasters and extreme conditions such as fire, floods, erosion, and strong winds.

We will look at the following sectors/areas:

1. Water availability
2. Human access
3. Sun exposure
4. Water flow and land slope
5. Flooding
6. Wind
7. Fire
8. Soil types
9. Sacred, ceremonial, forbidden land
10. Community-specific factors

Step 1 The community should draw a large map that shows surrounding natural systems beyond the land the community live on and owns.

- Begin with the boundaries of the community - what shape is it?
- Next, draw in any roads or paths. This will help with sizing and proportions of the map.
- Ask the group to identify the main landmarks in the village.
- Mark gardens and plantations on the map.
- Be sure to add in creeks, rivers, forest and any ocean coastline.
- If appropriate, you can mark in offshore landmarks that may be important to the community, such as mangroves and reefs.

Then the group needs to work through the following steps.

Step 2

Water availability mapping: Where do households get their water? Where does water for crops come from? Are there any springs or places where springs used to run? Is there underground water?

On the map show all the water sources, main water and irrigation pipes, all water points (including taps) and all water infrastructure (such as water tanks, dams).

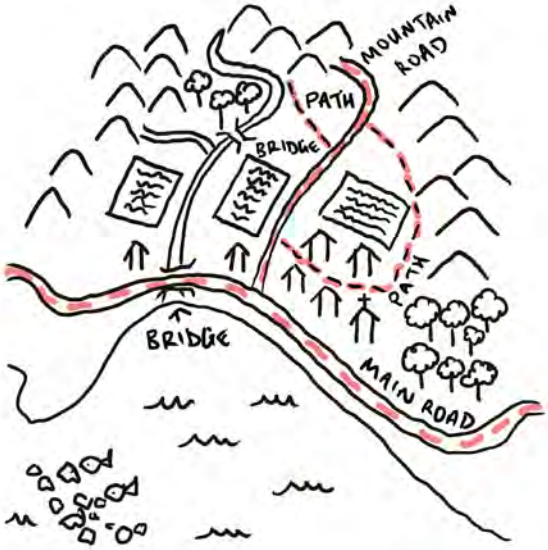
- Write down short points of important community knowledge about water availability.
- Write down any questions or gaps in community knowledge about water availability.

Step 3

Human access mapping: Access is being able to enter somewhere easily when needed. For example, walking, pushing a wheelbarrow, riding a bicycle, pulling a cart, driving a car or tractor. Show all the current access paths on the map.

A road, path or bridge in the wrong place can lead to continual maintenance or create erosion or flooding – mark any current access paths that have problems on the map.

- Write down short points of important community knowledge about human access.
- Write down any questions or gaps in community knowledge about human access.



Step 4

Sun exposure mapping: The direction of the sun is important. By observing its path during the day, you know where the maximum and minimum sun exposure areas are. Remember that these change from the wet season (the sun is higher in the sky) to the dry season (the sun is lower in the sky).

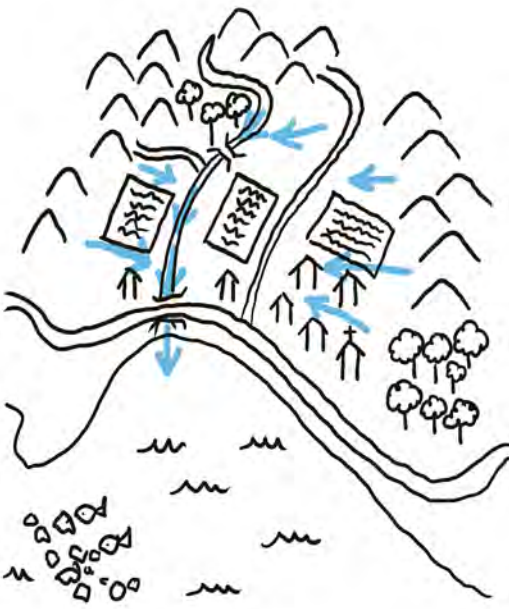
On the map (or a separate copy) show the following:

- the lowest path of the sun – the shortest day and winter solstice (June 21 for southern hemisphere)
- the highest path – the longest day and summer solstice (Dec 21 for southern hemisphere)
- areas that receive the most sunlight and might dry out easily.
- Write down short points of important community knowledge about sun exposure.
- Write down any questions or gaps in community knowledge about sun exposure.

Step 5

Water flow and land slopes: How steep are the slopes on the land? How can the soil be protected, and the slopes used to benefit production? Where does the water flow from and to? Are there areas of erosion? Are there natural water collection points? Are there areas where water collection points could be made?

On the map (or a separate copy) show the rivers, wet season waterways, steep slopes, gentle slopes and erosion areas across the land.



- Write down short points of important community knowledge about water flow and land slope.
- Write down any questions or gaps in community knowledge about water flow and land slope.

Step 6

Flooding: Are there any areas of the land that flood in heavy rain or storm surges? Look for naturally swampy areas, water plants and places along water courses that show evidence of overflowing water.

On the map (or a separate copy) show where there is permanent water, wet season water, potential flood areas, river overflow areas and sources of floodwater.

- Write down short points of important community knowledge about flooding.
- Write down any questions or gaps in community knowledge about flooding.

Step 7

Wind: Where does the wind usually come from? Does the direction change from season to season? How strong is the wind and how often is it strong (during storms and cyclones, for example)? Are homes protected from the impact of strong winds? Wind greatly reduces plant growth and increases water use, as it dries out plants.

On the map (or a separate copy) show where the winds most often come and at which time of the year.

- Write down short points of important community knowledge about wind.
- Write down any questions or gaps in community knowledge about wind.

Step 8

Fire: Where do fires occur? What direction is fire most likely to come from? Where has it come from in the past? Usually, fire moves fastest going up the slope and from the direction the wind most often comes.

If fire is a potential problem for this community show on the map (or a separate copy) from which direction it is likely to come.

- Write down short points of important community knowledge about fire.
- Write down any questions or gaps in community knowledge about fire.

Step 10

Soil: Does the land have different types of soil? Are there differences in the depth of the topsoil? How much water does the soil hold? Areas that are rocky, swampy or salty should be noted.

On the map (or a separate copy) show different soil types, especially any areas with very poor soil. Mark areas that need special treatment for poor soil or have special features.

- Write down short points of important community knowledge about soils.
- Write down any questions or gaps in community knowledge about soils.

Step 11

Sacred or cursed places: Are there any sacred or cursed areas in the landscape that affect what can be done with the land?

On the map (or a separate copy) show any areas of land that are allowed to be documented and note if the land can be healed, or sacred places that must be protected.

- Write down short points of important community knowledge about sacred or cursed places (if appropriate).
- Write down any questions or gaps in community knowledge about sacred or cursed places.

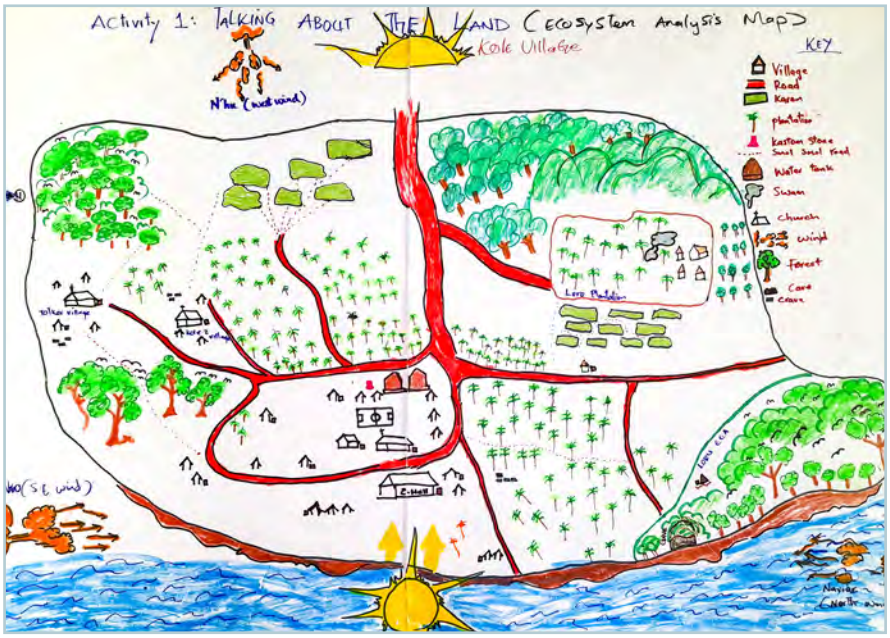
Step 12

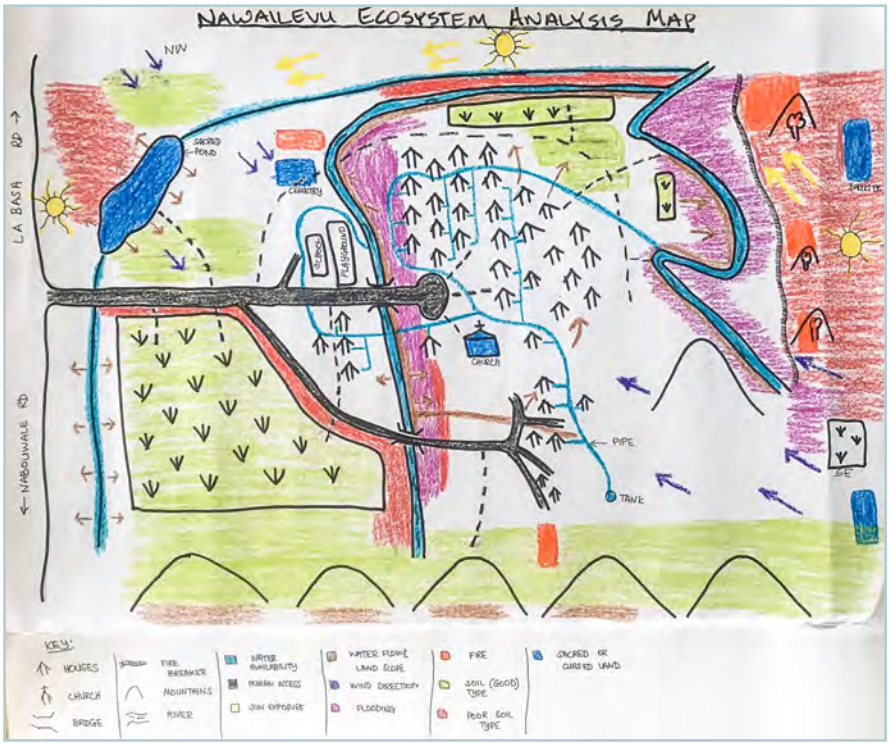
Important local factors: There are many local important things that vary from community to community. They can include wild animals, scenic views, important wild places, neighbours, busy roads, etc. On the map (or a separate copy) draw in any important local factors that were not covered by the earlier sections.

Step 13 **Bringing the information together**: If you are working with a single group, they may have drawn several maps. It is good to also make a summary map. If you are working with separate groups who have mapped different sectors, their information needs to be combined on a summary map. Below is an example:

Take good quality, clear photographs of the final Sector Maps, making sure all the labels and the details can be seen in the photograph. Leave the final Sector Maps drawing with the Community Resilience Committee.

Examples from other communities:





ACTIVITY 4:
How We Live with the Land
(Ecosystem Zones & Seasonal Calendar)

OBJECTIVE

This activity follows on from the landscape mapping done in Activity 3. Part A looks at details of local ecosystems, how they interact, and the value of their local knowledge. Part B documents a local seasonal calendar, observed changes in seasons, tracking of climate-related changes in the seasons.

PARTICIPANTS

This activity should be completed by the Community Resilience Committee (if one is in place), along with any other interested community members or community members who hold relevant knowledge.

MATERIALS

- Pens, pencils or markers
- Large pieces of paper
- Copy of the base map used for Activity 3

TIMING

2 Hours (1 hour for Part A and 1 hour for Part B)

PROCESS: PART A

Explain: Keeping in mind the different components of the landscape mapping in the previous activity, we are now going to look at the different ways the community engages with your landscape. We are going to do this by dividing our landscape use into the following *zones*:

- **Zone 1** – This is the most intensively used zone, and the most controlled. It is the area where you spend the most time or visit multiple times. It is often nearest to the house.
- **Zone 2** – This zone is visited at least daily, containing vegetable gardens, vulnerable fruit trees, small livestock such as chickens, ducks, pigs, and their yards.
- **Zone 3** - This zone is basically farmland, where the main crops are grown (for personal use and to sell), where orchards of larger trees are located, and where livestock is kept and grazed. Once these areas are established, they only require minimal maintenance and care.

- **Zone 4** – This zone is part wild/part managed, and its main use is for collecting wild foods, timber production, as a source of animal forage, and pasture for grazing animals. The trees in this zone are managed by allowing animals to browse to control new growth, or by thinning (removing) seedlings to select the variety of trees that will be allowed to grow. This zone may also include reef fishing areas.
- **Zone 5** – This zone is an unmanaged wild natural ecosystem, such as bushland, forest, ocean, or similar natural area, free from human intervention or control. Zone 5 is a wilderness space. Zone 5 doesn't have to be restricted to the outside of a community, it can extend right up to the house as a wildlife corridor or other area.[22]

We can determine different zones by the things and connections that are in the zone, and by the activities there and how much effort they take. Livestock might be in one zone, nut trees in another. Zone 1 takes the most human work to maintain. Zones 4 and 5 look after themselves!

Talk/draw:

Draw a community map like the one used in Activity 3. As before, you can include the community boundary, forests, beach, rivers and croplands, and landmarks – things like main buildings, roads and mountains. This time, ensure you include areas surrounding the community that might be in zones 4 and 5. This may include mountains, forests, lakes and areas of ocean and reefs.

Discuss what zones there might be in the community. Use the list of zones above.

1. Map the rough outline of the different zones so we can see the approximate size.
2. Write down important connections between the zones.
3. Discuss and write down community knowledge about these connections.
4. Discuss and write down any formal community system for managing different zones (for example, a committee that makes decisions on the removal of trees from Zone 4).

The following points are helpful for the discussion:

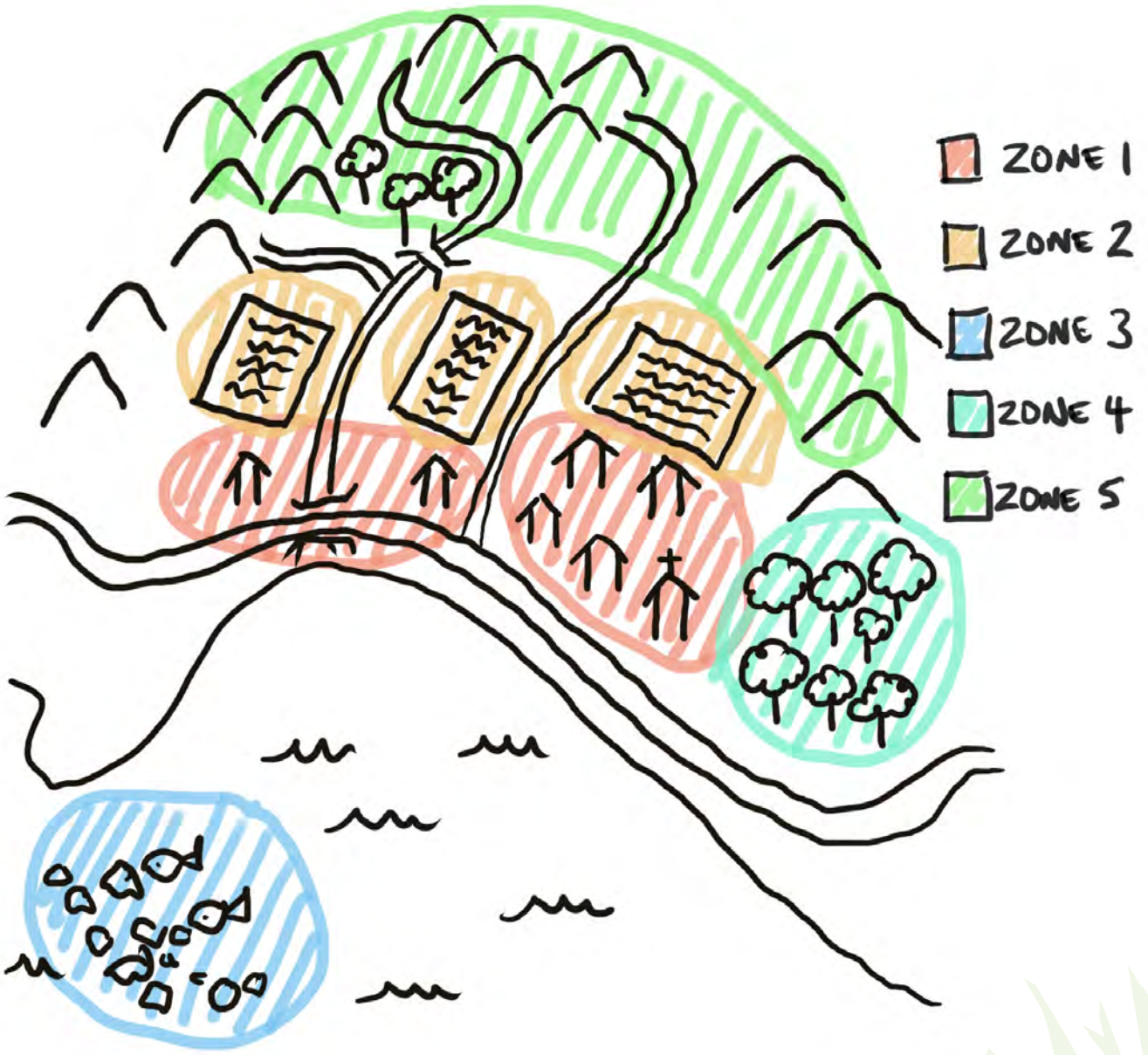
- Is there any land that is used for other purposes or where people do not go, such as to do with taboo, or polluted land?
- Are there zones that were used differently in the past? Have elements been shifted to new zones?
- Is what is happening in one zone harming another zone?
- What did ancestors do with ecosystems? Did they look after them? If so, how?
- Were there farming techniques that the ancestors do that we no longer do?

22 Adapted from https://deepgreenpermaculture.com/permaculture/permaculture-design-principles/4-zones-and-sectors-efficient-energy-planning/

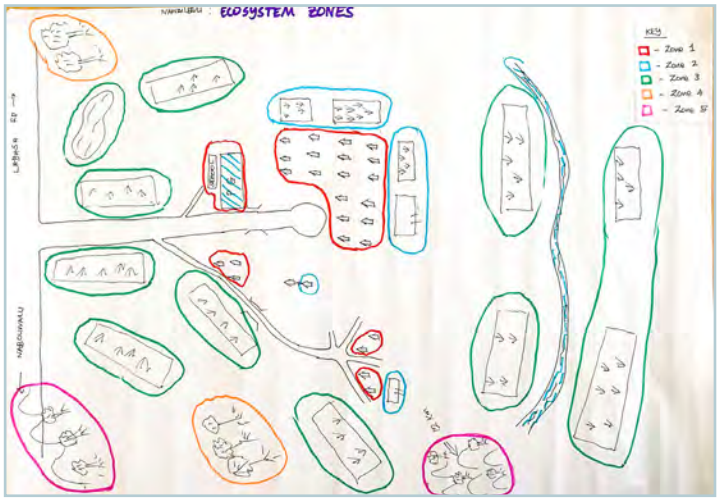
Take notes of any important points raised in the discussion.

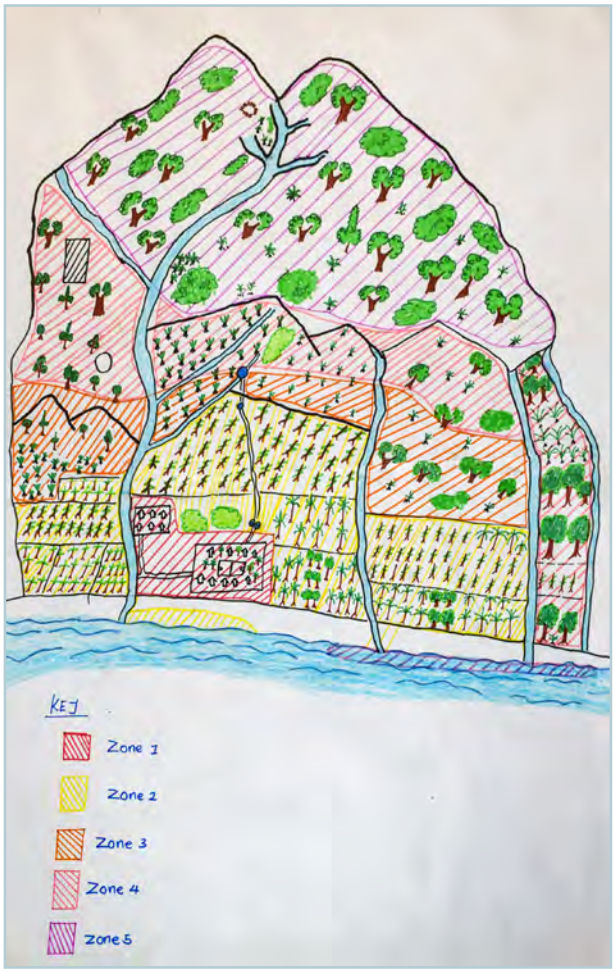
Let the community discuss positions. Sometimes the boundary between zones is hard to define, but that's okay. We just want a rough idea.

Take good quality, clear photographs of the final Zone Map, making sure all the labels and the details can be seen in the photograph. Leave the final Zone Map drawing with the Community Resilience Committee.



Examples from other communities:





Baseline activity: At the conclusion of this exercise, when the hand-drawn Zone Map is completed, show some group members a screenshot of a Google Satellite picture of their area and get them to draw the zones onto the photograph. This provides an estimation of physical area of different eco-systems and zones in the community.

PROCESS: **PART B**

Explain: Seasonal or traditional calendars are based on relationships between communities and their environment: the land, sea, and climate. Features of these calendars often relate to food production, for example, fishing, hunting, gardening, or agroforestry, which in turn may be driven by regular changes in dominant wind patterns, temperature (less so in the tropics), ocean currents and wave activity, rainfall, and lunar or astronomical cycles. In the Pacific, these seasonal calendars also have a cultural aspect, incorporating ceremonies, rituals, and community activities that are not always related to production or resource management.[23]

Begin by talking about how there are different times of the year for planting, harvesting and fishing for different foods. While sometimes we measure time using a calendar with months – January, February and so forth, we also mark the year by what is happening in the forest, in the garden and in the sky.

Adaptation to climate change can be facilitated by seasonal calendars because many seasonal calendars are not designed to measure time but to organise seasonal activities.

Seasonal calendars are also useful tools for traditional climate education and awareness. Although traditional knowledge is highly regarded in the Pacific, younger generations are typically less aware of traditional forecasting methods.

Group: Get the group to draw and discuss the seasonal calendar for their community. Draw it as a circle – a circular format better represents the continuous nature of time and the seasons.

Note down the characteristics of each season using the questions in the following list as a starting point:

- What is the local name of the season/month/period?
- What is the weather like? Is it stable? Are there storms?
- What stars and constellations are in the sky?
- How much rain is there?
- Does it flood at this time?
- Which fish are around? Which animals? Which birds? Which insects?
- Are there diseases that appear at regular times of the year (in animals or plants)?
- Which plants are flowering or fruiting? Which fruits are ripe?
- What needs to be planted?
- What needs to be harvested or dug up?
- When are fields left fallow?
- Are there changes in the sea?
- How windy is it? Where does the wind come from?
- Are there important ceremonies at different times of the year?

23 Seasonal Calendars Enhance Climate Communication in the Pacific, Lynda E. Chambers, Roan D. Plotz, Siosinamele Lui, Faapisa Aiono, Tile Tofaeono, David Hiriasia, Lloyd Tahani, 'Ofa Fa'anunu, Seluvaia Finaulahi, and Albert Willy, https://doi.org/10.1175/WCAS-D-20-0035.1

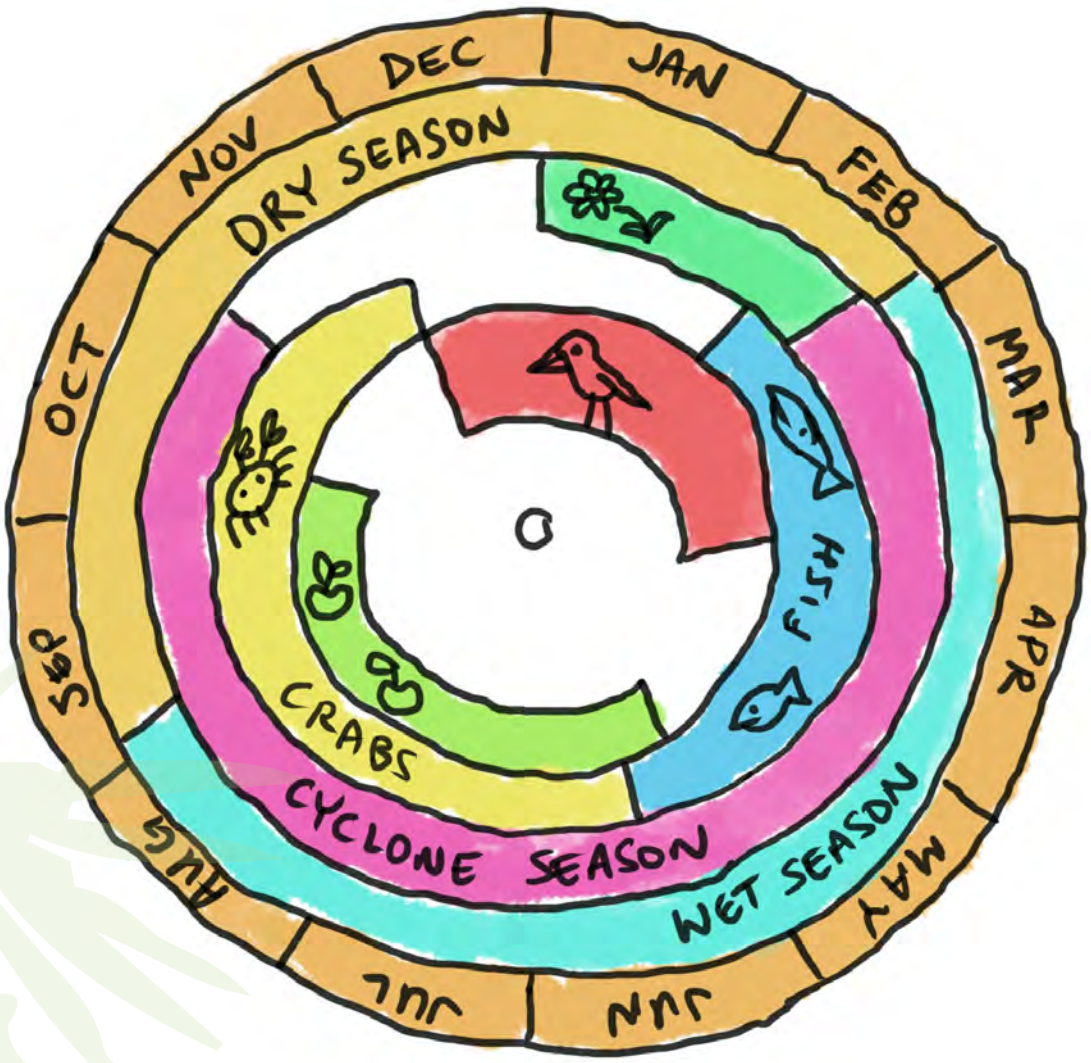
Encourage the team to include any of the above list in their calendar (where appropriate). Also encourage them to use both drawings and words in the calendar – to make the calendar clear for people with lower literacy levels. An example is below. They can put as much information as needed on the calendar, as long as the information remains clear.

Discuss: Ask about any community stories about the seasons that they are allowed to share. Are there times in the calendar when life is harder than other times?

What recent changes to the seasons, including weather patterns, animal movements and harvesting times, has the community observed? Write these down.

We want to record the changes throughout the year so that we can think about the knowledge we have for managing ecosystems.

Take good quality, clear photographs of the final seasonal calendar. Take notes on all significant changes mentioned are observing. Leave the final seasonal calendar drawing with the Community Resilience Committee.



Examples from other communities:

ACTIVITY 5:
Our Story with the Land

OBJECTIVE

Local knowledge and relationships with place are essential for resilience. In many communities the elders are a rich source of local knowledge, history and relationships that strengthen resilience. This activity provides space for elders to share appropriate knowledge, and for the community to discuss significant events and changes over the past 80-100 years (two generations).

MATERIALS:

Appoint a team member to take detailed notes from this activity.

PARTICIPANTS

All available elders and/or holders of Indigenous and local knowledge for the community, Community Resilience Committee members, and any other interested and available community members. If possible have youth participate (though listening and asking questions).

TIMING

This process needs time for talking and listening without hurry. So, allow at least 2 hours. Be guided by your participants in what works best for them, their schedule, and how long they wish the discussion to flow. This discussion might be better held in the evening.

PROCESS:

PART A – ELDERS CIRCLE

Discuss: Have the participants sit in a way that they are comfortable and is appropriate.

Begin by explaining that this activity is to hear elders/knowledge keepers talk about the story of place, and how ancestors were resilient in their ways of living, the stories of living with nature, and how the ancestors prepared for disaster. It might be helpful to start by sharing this quote about sitting in a circle around the fire:

> *There is a fire, and you have people sitting in a circle around the fire. Any person who describes the fire is looking at the fire from where they sit. Everyone is looking at the same fire, but they are at a different vantage point altogether. So... if we share information in the circle, we share this experience, the collective experience; we will get a bigger picture.*[28]

24 Adapted from: Shawn Wilson, Research is Ceremony: Indigenous Research Methods, 2008

The fire represents the community resilience. Everyone has a different perspective on community resilience, and the perspective and knowledge of the elders is essential for the collective picture.

Allow the conversation to proceed naturally. The elders and knowledge holders will know when and what they want to say. If the conversation strays too far off topic you can ask prompting questions like this:

- Did the ancestors have a good life? Why?
- What did the ancestors do to look after ecosystems?
- "What do we still do today that the ancestors did to make them resilient? What do we not do?
- How do we still know how to prepare for disasters like the ancestors?
- What knowledge do we still have today that the ancestors had about the land and our environment?

Appoint a team member to take detailed notes from this activity. Share the notes with elders and/or leaders afterwards to make sure that there is approval for the information written down.

PART B – TIMELINE

Working with the elders and other group participants make a timeline of significant events for the community, and note the intensity of positive or negative impact of these events:

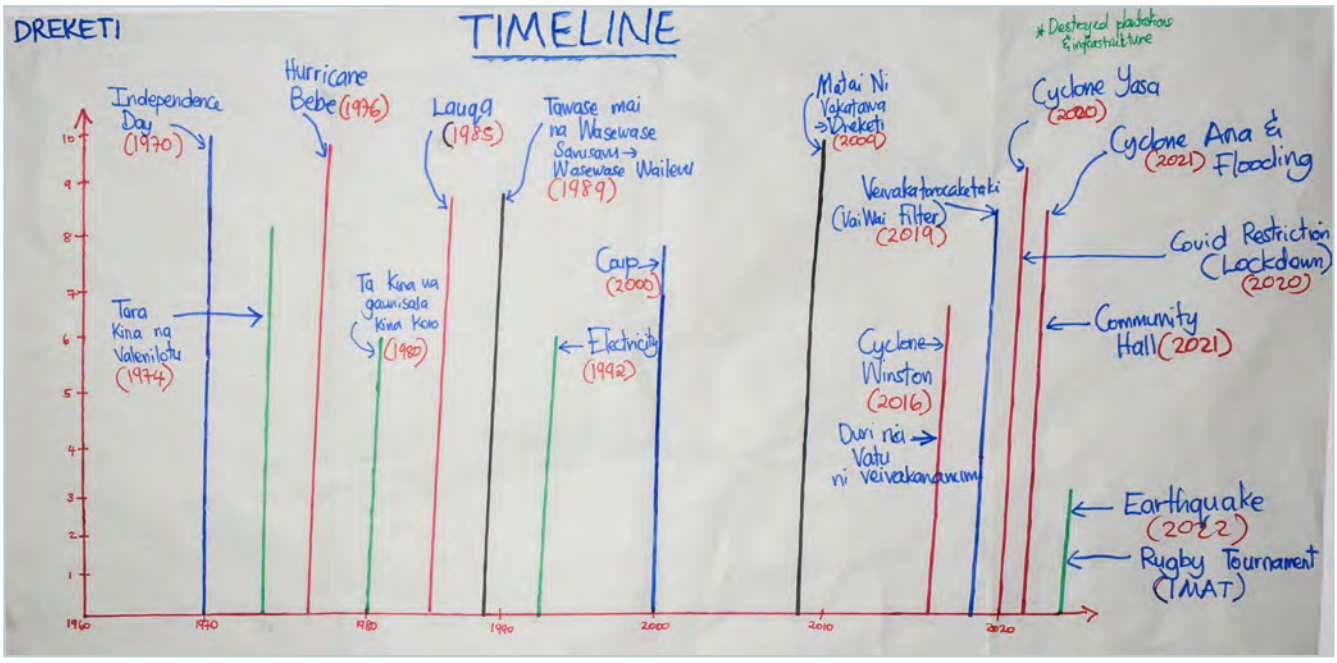
- Get the group to draw a graph like pictured below. The vertical (tall) line should have marks from 1 to 10. The horizontal (flat) line should be years (at least 80-100 years ago on the left and 2024 on the far right)
- Ask the group to remember any significant events in living memory or stories – this is usually from the present back about 80-100 years, though if stories are strong the timeline can be longer.
- The significant events should include weather, such as large storms or droughts. It is also important to note significant shifts in seasons.
- The group can also mention significant cultural events such as migration of the community, changes in religion, installation of infrastructure like water supply, or other significant social events like sickness, or important political events.
- The timeline doesn't have to be for every year but can be things that happened during different decades.
- Ask them to describe what happened and what effects it had on crops, food security or community infrastructure. Was the effect good or bad?
- Good things should be marked with a green line and be rated out of 10 (10 being the best)

- Difficult things should be marked with a red line and rated out of 10 (10 being the worst)
- The ratings are community perceptions.
- Extra details that the community thinks are important should be written down.

Can the group spot trends or shifts in climate? Are women listing different events to men? Are younger people listing different events? Take notes of significant things discussed.

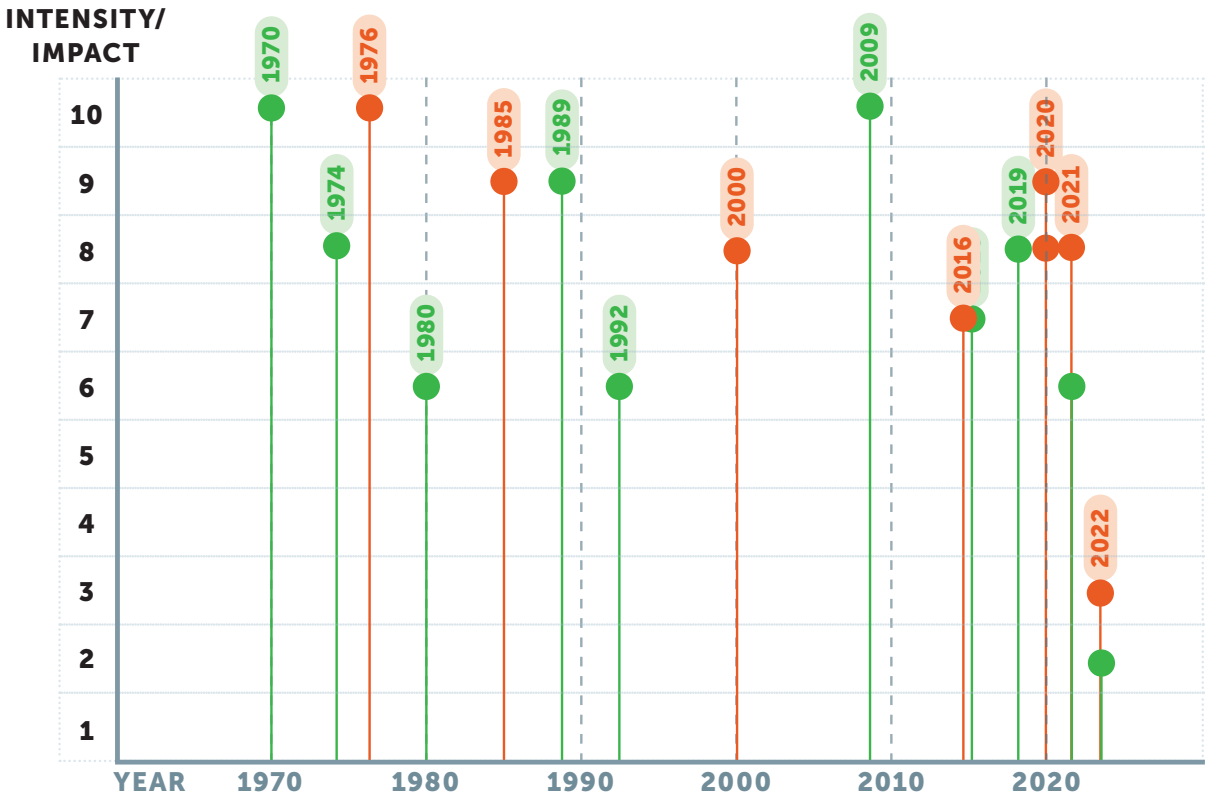
Discuss: Have changes been made to deal with these events? How well are they working?

Take a good quality, clear photograph of the final timeline calendar, making sure all the labels and the details can be seen in the photograph. Fill in the table in Part 4 with the translated details (date, event, rating). Leave the final timeline calendar drawing with the Community Resilience Committee.[25]



25 Adapted from Care Capacity Analysis

Timeline of important events



1970 Fiji Independence Day

1974 Methodist church built

1976 Hurricane Bebe

1980 Access road constructed

1985 Long dry spell *(low crop yield)*

1989 Dreketi Methodist circuit was separated from the Savusavu Division *(included under the Wailevu Division)*

1992 Electricity

2000 Coup

2009 First lay pastor to Methodist Dreketi Circuit

2016 Cyclone Winston

2016 Memorial Stone erected

2019 Filter water tank supplied

2020 Cyclone Yasa

2020 Covid lockdown

2021 Cyclone Ana and flooding

2021 Community hall

2022 Earthquake

2022 Rugby tournament

ACTIVITY 6:
Community Resilience Picture and Story

PART A – SEVENTH GENERATION ROLEPLAY

PART A OBJECTIVE

This activity is a role play to reflect on present day in the community, and on the kind of future the community would like to have in 200 years (7 generations forward).[26] This will help the community come up with ideas for a resilience picture and vision.

MATERIALS:

- The 4 question cards – each written clearly on a separate piece of paper before the session
- Appoint a team member to take detailed notes from this activity

PARTICIPANTS

This activity builds on all the previous activities. It is a role play performance by a small group, followed by an open community discussion. Select people for the role play who have participated in all the earlier activities. Make sure that in the audience there are some men, women, elders, youth and any other marginalized groups present in the community. This activity should be implemented in the most culturally appropriate way for the community.

TIMING

Give participants time to review the script cards before this activity. The role play itself should go for no longer than 20 minutes. The following discussion can be limited to 40 minutes before moving on to the next activity.

PROCESS:

Role Play: Select 6 people for the role play. Divide them into two groups of 3. The two groups should stand facing each other. One group are "Today People." The other group are the "Future Ones" – seven generations (approximately 200 years) in the future.

Be sure both groups are clear about what role they're in and have practiced their questions and answers before performing the role play for the audience.

The facilitator is the narrator for the role play. It is very important that the narrator has practiced the script and is confident to lead this activity.

The role play should be conducted in the language most appropriate for the audience, so allow time in preparation for the people to read and translate the question cards.

26 This activity is adapted from https://workthatreconnects.org/resource/the-seventh-generation/

Script:

Narrator:

"Today we are going to travel outside everyday time and talk with humans who are living in our place here 200 hears from now. These Future Ones have a cultural memory of today that has been carried for them by their storytellers.

For us to travel to this place outside everyday time we all need to make the sound "AH!" long and strong. This word "AH!" stands for all that has not yet been said by people."

After everyone (the role players and the audience) have called out "AH!" together the narrator points to the two groups and says:

"You Today People can see the people before are Future Ones. The Future Ones know you live back in the year 2024 (or current year). The Future Ones have something to ask!"

A Future One reads out Question Card 1 to the Today People:

"Ancestor, I greet you. It's so amazing to see your face, because all my life I have heard stories from teachers and grandparents about the time you are living. Some of the things I've heard I find hard to believe. They say that in your time there are a few people richer than the richest ancient chiefs, while billions of people are without enough food or shelter or clean water. They tell us that whole species of animals and plants are going extinct. Is that true...? What is that like for you?"

The Today People should answer Question 1. There is no script for this. They should answer based on how they feel about life right now, with the challenges of climate change and their observations on resilience (based on all activities done so far). Allow about 5-10 minutes for the Today People to respond.

Then another Future One reads out Question Card 2 to the Today People:

"Ancestor, I greet you. When we drink water from our water supply and grow food in healthy soil it is because of the work you are doing for us. It must be hard for you, especially with the challenges of climate change. So, I want to ask you this question: What inspired you to start on this path? What were the first steps you took?"

The Today People should answer Question 2. There is no script for this. They should answer based on what they think is important resilience work (based on discussion in all the activities done so far). Allow about 5-10 minutes for the Today People to respond.

Then a person from Today People reads out Question Card 3 to the Future Ones:

"Now, you people of the 7th generation, it is your turn to talk. You have been listening to three ancestors speak of their experience. Now is your chance to speak. What is in your heart to say to us living in the Today? Very soon we will be returning right to our time. What words do you have for us?"

The Future Ones should answer Question 3. There is no script for this. They should answer based on how they feel. The answers should be positive, describing how the community provides for the well-being for everyone, how the community has resilience.

Allow about 5-10 minutes for the Future Ones to respond.

Narrator:

"My dear people, now we must return to real time again. We travel by together making the sound "AH!"

After everyone (the role players and the audience) have called out "AH!" together the narrator introduces open discussion.

SEVENTH GENERATION ROLE PLAY QUESTIONS

Give these cards to people in the role play to practice. They can change the language to the most appropriate language for the community, so allow enough time for on-the-spot translation of the concepts by those doing the role play.

QUESTION CARD 1 – FIRST FUTURE PERSON

"Ancestor, I greet you. It's so amazing to see your face, because all my life I have heard stories from teachers and grandparents about the time you are living. Some of the things I've heard I find hard to believe. They say that in your time there are a few people richer than the richest ancient chiefs, while billions of people are without enough food or shelter or clean water. They tell us that whole species of animals and plants are going extinct. Is that true...? What is that like for you?"

QUESTION CARD 2 – SECOND FUTURE PERSON

"Ancestor, I greet you. When we drink water from our water supply and grow food in healthy soil it is because of the work you are doing for us. It must be hard for you, especially with the challenges of climate change. So, I want to ask you this question: What inspired you to start on this path? What were the first steps you took?"

QUESTION CARD 3 – TODAY PERSON

"Now, you people of the 7th generation, it is your turn to talk. You have been listening to three ancestors speak of their experience. Now is your chance to speak. What is in your heart to say to the us living in the Today? Very soon we will be returning to our time. What words do you have for us?"

Discuss: Congratulate the role players for their performance.

Ask for any reflections the audience would like to share with the whole group. What inspired the *Today People* to take their steps for climate resilience? What is the positive situation of the *Future Ones*? Get the groups to talk about practical things that ensure resilience, not just ideas.

After some discussion move onto Part B – Resilience Picture and Story.

PART B – RESILIENCE PICTURE AND STORY

PART B - OBJECTIVE

Through telling stories and talking, the community identifies a shared drawing (picture metaphor) and paragraph that demonstrate their resilience vision.

PARTICIPANTS

This is an open community discussion that builds on Part A, so should be conducted after the Seventh Generation role play. Try to ensure that as many people in the community can be present, including women, elderly, young adults, and people living with disabilities and their carers, etc. When everyone has gathered together, divide them into groups that will allow open discussion (such as groups of all women, all men, all young women, etc).

MATERIALS

- Information sheet of resilience story picture (metaphor) examples
- Useful props to start discussion (fishing net, local basket, etc)
- Flip chart paper for community to record picture / story
- Camera (to photograph the flip chart paper)

TIMING

This is an important process, so allocate enough time for all needed discussion. Possibly, you can start the discussion with a 1-hour session, and then return to the ideas raised the next day so people can think about their story overnight if needed.

PROCESS:

Explain: Begin by explaining that we want them to describe what resilience means for the community – through a drawing/picture and story that have meaning for the community.

Share: Use the information sheet of resilience picture examples, and/or some useful props relevant to the community (fishing net, baskets, woven mat, etc) and talk about how these objects show what resilience is like.

Discuss: Organise everyone so they are sitting in a big rough circle. Then ask everyone to imagine they are traveling through time to a hoped-for future hundreds of years from now. They should imagine they are at a gathering of storyteller-historians in this place sometime far in the future. Each of them is a storyteller.

By vividly imagining a hoped-for future, we begin to believe that it is really possible. Talking about this vision with all our senses—imagining colours, shapes, sounds, smells, tastes, and the "feel" of this possible future—activates our creative skills.[27]

- Ask for people to take turns sharing stories about what this future time is like. What is the relationship with nature and climate like? How does everyone in the village have health and happiness? What are the most important stories for the village, that can be a guide for today in planning for improved well-being and increased climate resilience?

- Gently guide the discussion to make sure that different types of people (older women, youth, a person with a disability) have opportunity to share stories.

- Allow time for different ideas to be discussed and changed. Slowly allow the discussion to move towards agreement on a Resilience Picture – one simple image that symbolises resilience for the community. (This image might be a plant, animal or something from their surrounding environment. Or it could be a tool that they use in their everyday lives.) If the participants are unsure, you can help them by asking about their community stories and beliefs (Kastam, Indigenous knowledge, etc).

- Ask the community members to draw the image on the paper provided. They can write down a sentence or two about what the image means or why they chose it (such as 'resilience is like a fire').

- Now ask the community to agree on a Resilience Vision for the community – a short description of their hoped-for future. The wording of this should be guided by the discussion they have had here and in the Seventh Generation role play about what their resilient community would look like.

At the end of the session the community should have a drawing (and explanation), and a short, written paragraph describing their community resilience vision for the future.

27 This activity is adapted from https://workthatreconnects.org/resource/the-storytellers-convention/. Enriching this vision with all our senses—imagining colours, shapes, sounds, smells, tastes, facial expressions, and the "feel" of this possible future—activates our creative and intuitive skills. Research shows that people who approach a problem by imagining it has already been solved tend to be more creative and detailed in inventing possible solutions. The Storytellers Gathering, created by Chris Johnstone and described in Active Hope, uses "imaginary hindsight" to support people's visions and work for a life-sustaining future.

Examples from other communities are shown below.

Resilience Picture

Resilience is like a fire. Each piece of wood in the fire represents different organisation in the community. The different organisations work together to strengthen governance within the community for positive outcomes.

Resilience Vision

We believe preserving our traditional knowledge, attending different capacity workshops, and our spirit of working together gives us strength to strive forward despite all the obstacles. In the future, Kerepua wants to be a resilient community by having buildings that resist strong cyclones and sea walls that protect the community from strong waves. Our water system and health facilities will be upgraded. We want our own secondary school, and a hydropower system to supply electricity. Households will have an easy life in finding jobs and having enough food.

Resilience Picture

Freshwater reeds known as kuta in Fiji have long been a traditional treasure or yau ni vanua for the people of Nawailevu. It has existed in the province of Bua from the time of their ancestors and grew so abundantly in Nawailevu that villagers from other parts of Bua used to come and take their share of the kuta to weave their traditional attires. There were also rumours of the Kingdom of Tonga having a trade alliance with this province where Bua exchanged kuta for whales' teeth from Tonga.

Resilience Vision

For the people of Navailevu to achieve a better standard of life spiritually, socially and financially and to conserve their natural resources benefitting them and future generations the community will:

- Keep and uphold religion.
- Preserve culture and tradition and conserve natural resources.
- Be better educated, to contribute to the development of the community.
- Improve housing structures to withstand natural disasters.
- Improve and maintain natural resources for future generations.
- Prepare for climate change better than the current generations.
- Document and record kuta weaving tradition as a resource for the future generations.
- Strengthen and maintain communal relationships.
- Improve livelihoods.

Resilience is like...

Resilience is like a fishing net.
Each knot in the net is a relationship between people and place. Together all the relationships form a net that holds everything together.

Resilience is like a woven basket or mat.
All the pieces woven together are relationships between people and place. Together all the relationships form a basket that keeps everything inside safe.

Resilience is like a forest.
Each tree, plant, animal, insect, person, is in a relationship with everything else in the forest. Together the relationships make the forest thrive.

ACTIVITY 7:
Ladder of Life - Resilience

OBJECTIVE

This activity is a focus group tool that explores the understanding and interpretations of climate resilience within the community. When completed the participants will have discussed where in the community there is good resilience, and where there is greater vulnerability and exposure to climate risks, and how these have changed over time. The community should also have started on identifying resilience indicators that will be used in the Community Resilience Profile.

MATERIALS:

- Flip chart paper, chalk and blackboard, or pointed stick to draw in the sand (with labels written on cards or paper if needed)
- Markers or sticky notes and pens
- Stones, shells or buttons – about 20 to represent all households (not exact number of households)

PARTICIPANTS

Select a time that is convenient to most in the community. Try to ensure that as many people in the community can be present, including women, elderly, young adults, and people living with disabilities and their carers, etc. Make sure that there are some men, women and youth present who have participated in the earlier activities.

TIMING

This is an important process, so allocate enough time for all needed discussion. Allow at least 2-3 hours, with a break.

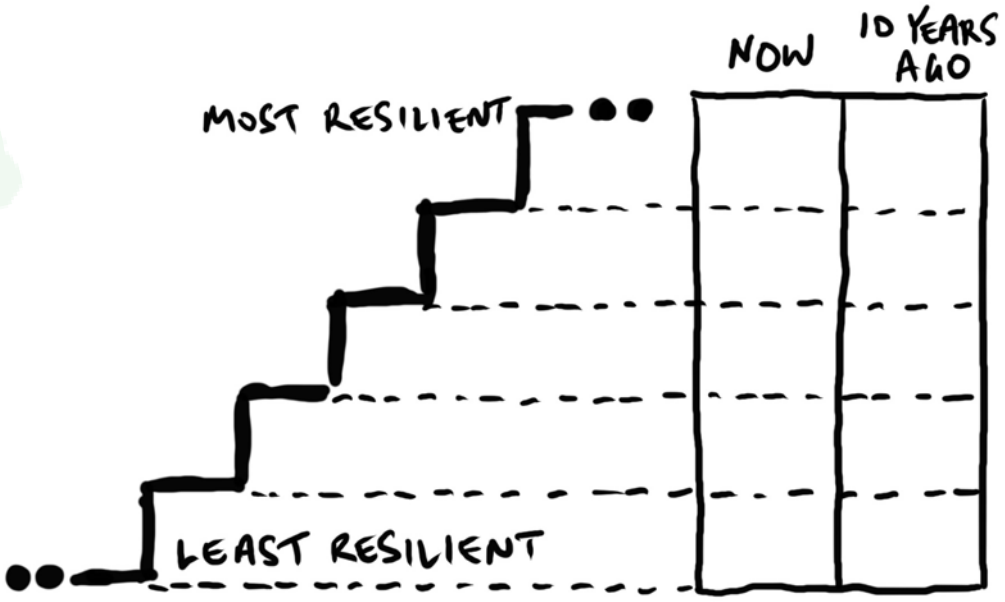
PROCESS:

Draw: Draw a Ladder of Resilience diagram on a on large piece of flip chart paper, on a blackboard with chalk, or in the sand or dirt. An example is given below.

Group: Facilitate a general discussion about life, well-being and livelihoods in the community.

Physical Security = Things that people need to live – like water supply, clean air, land, shelter, food supply and ability to earn income. Includes both natural things (like forest plants), and human things (like an outboard boat and motor).

Knowledge and Connections = Things that make people feel happy and safe – culture, knowledge, kinship, social groups, faith or beliefs, connection to special natural places, etc.



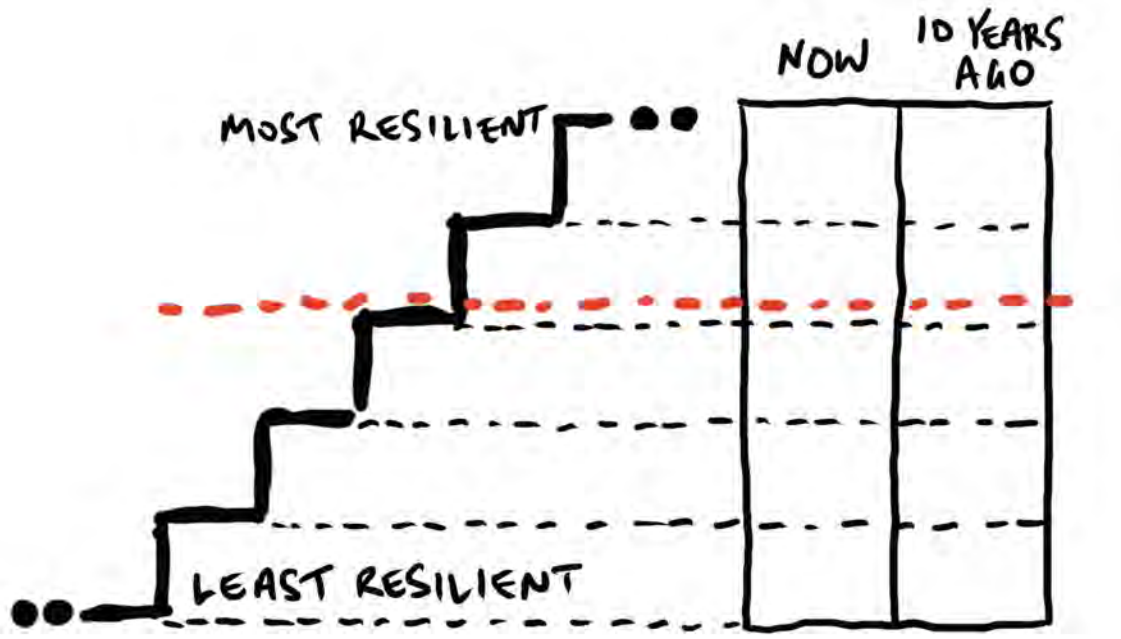
Get the group to discuss each of these things. They should imagine the most resilient household possible in their community and write down all the most important things that make this imaginary household resilient. They should also consider how their ancestors were resilient, and if this resilience is relevant today. These notes should be written on cards or sticky notes, or write as a list, at the top of the ladder diagram.

- Next, get the group to imagine a household in their community that is not resilient at all and write down why this imaginary household is not resilient. These notes should be written on cards or sticky notes, or write as a list, at the bottom of the ladder diagram.
- The steps in-between are the Ladder of Resilience. The community can write in notes about these levels based on their discussions.
- The community will now talk about the households in their community and where they are on this Ladder of Resilience.
- The stones, shells or buttons represent the total number of households in the community. It doesn't have to be the exact number of households, just a representation. (If you don't have stones or shells you can just write numbers or information, as in the example below.)
- The community should place the stones in the **Now** column to show how many households are on the different steps in the Ladder of Resilience (or write how many households are on different steps in the Ladder)
- The community should then place stones in the **10 years ago** column to show how many households were on the different steps in the Ladder of Resilience (or write how many households are on different steps in the Ladder).

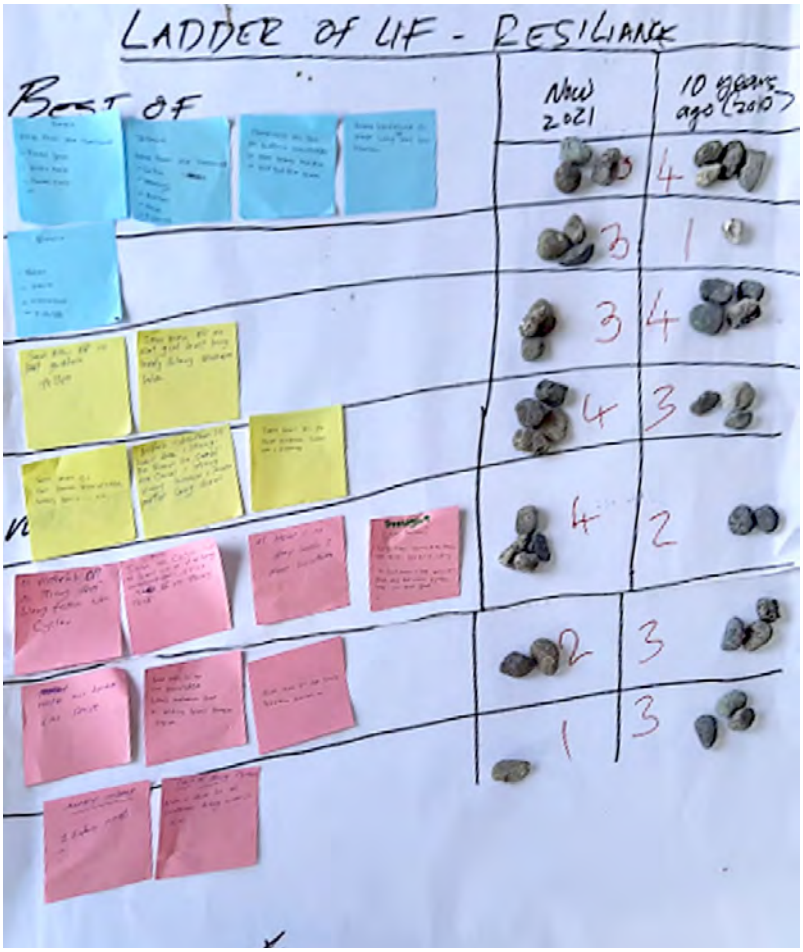
Once the ladder is complete, ask the participants to identify the cut-off or boundary line where any household beyond this line is not considered resilient. Tell them that their cut-off line should fall on one of the steps in their Ladder of Resilience.[28]

28 This activity is adapted from https://gennovate.org

Allow time for participants to discuss among themselves so that you have a true picture of the resilience line in their community.



Example from other community:



Take a **clear photograph** of the completed Ladder of Resilience diagram.

Discuss:

Ask the participants to share a general summary of each column (NOW & 10YRS AGO). To further stimulate the discussion about the distribution of the stones, ask questions such as:

- What could be possible reasons why there had been changes in the distribution over the past 10 years and now?
- What causes some households to move up? What causes some others to fall down the ladder? What causes others to remain on the same step? How have poorer families attempted to make their way up the ladder?
- Where can people turn to avoid falling down the ladder?
- Are households more resilient now than the ancestors? Why or why not?

Write:

Ask the participants to write three headings on a big piece of paper.

Knowledge **Physical Security** **Connections**

Under each heading get the group to write a list of at least 3 things discussed that makes the community members secure and happy. These things can be strengths that the community have now AND/OR used to have. These are the community "Resilience Indicators" and will be used in their Community Resilience Profile.

IMPORTANT: The Community Resilience Indicators developed in this activity must be things that already exist in some way in the community or there is commitment to establish/restore them.

Example:

Knowledge

- Practical skills to diversify livelihood options
- More resilient families have members with strong traditional knowledge
- Know the natural signs for cyclones and storms

Physical Security

- Strong, well-built houses
- Ability to meet food needs from gardens, agriculture and small business

Connections

- Active farmers group that has worked together to create a central market for the area
- The community conservation area is a collaboration of five different communities that use and care for the reef.

ACTIVITY 8:

Web of Life (Local Ecosystem Connections)

OBJECTIVE

This activity must follow all the previous activities, as it brings together information that has been discussed since Activity 2. This activity looks at parts and connections in systems important to the community. The activity maps through drawing webs how these parts and connections interact, and local knowledge about challenges or strengths of important systems for community resilience and wellbeing.

PARTICIPANTS

This activity should be completed by the those who have participated in the previous activities, along with any other interested community members or community members who hold relevant knowledge.

MATERIALS

- Pens, pencils or markers
- Large pieces of paper
- Post-it notes or sticky notes, or small cards and tape
- Large ball of yarn or string

TIMING 2 hours

PROCESS:

Instructions:

The group will play a game called 'The Web'.[29]

The game is for fifteen to twenty people. If you have more than twenty, split into two groups.

- Have everyone in a group stand in a circle facing inwards.
- Everyone will need to think of a plant or animal that can be found in the community. It is okay if two people pick the same animal or plant.
- Give the big ball of string or yarn to one person and ask them to name their animal or plant.

29 Adapted from The Climate Change Playbook, 22 Systems Thinking Games for More Effective Communication about Climate Change, Dennis Meadows, Linda Booth Sweeny and Gillian Martin Mehers, Chelsea Green Publishing, 2016

- Next, ask if anyone else in the group can call out the name of their animal or plant and how it is connected to the first one. (You can offer an example. Tell the group that if the first person says 'chicken', someone might want to call out 'grain' and explain that the chicken is fed with grains. If members have chosen the same animal or plant, they can talk about how it might be connected to members of the same species.)
- The first person needs to throw or pass the yarn to the second person while holding on to the end of the yarn. The game continues as people call out their animal or plant and how they are connected, when they think of it.
- The aim is to get a big web of yarn going all across the circle, showing how many connections there are.
- The game can stop when there is a big enough web or when the group has run out of ideas.
- Take note of what was said about the connections as the yarn is passed around. Did anyone think of a human? If not, ask them, why not? You may get a laugh by asking if they think that humans are not living beings in the community.

Discuss: Each point where the string is held by a hand in a circle demonstrates a connection in an ecosystem.

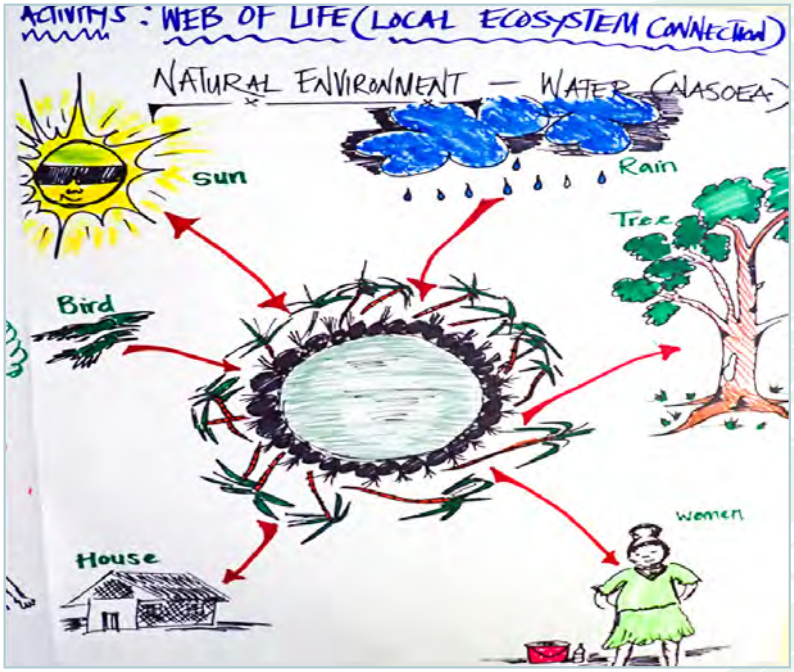
- An ecosystem is a web of individual systems that connects all living things – plants, animals, people, soil, rocks, water, weather, etc.
- An ecosystem can be large, like a whole forest or a coral reef, or small, like a pond or garden. The community is integral to ecosystems.
- An ecosystem is made of parts and connections. These can be livestock, plantations, gardens, the forest, waterways, and more. These ecosystem parts and connections have things they need, and things they produce. For example, a garden needs water and sun, and produces food.

Tell the group that **the knowledge about these connections in their community** is a huge strength of the community, just like how a web is strong because it has many connections.

Tell the group that now we are going to draw the community knowledge about ecosystem parts and connections. We will look at five areas – natural environment, food, livelihoods, health and kinship.

Groups: After the game is completed give the group 4 pieces of paper. On each piece of paper they will discuss and draw a specific system in their community – a natural environment system, a food production system, a livelihoods system, and a healthy life system. One piece of paper for each type of system web. Some examples are below:

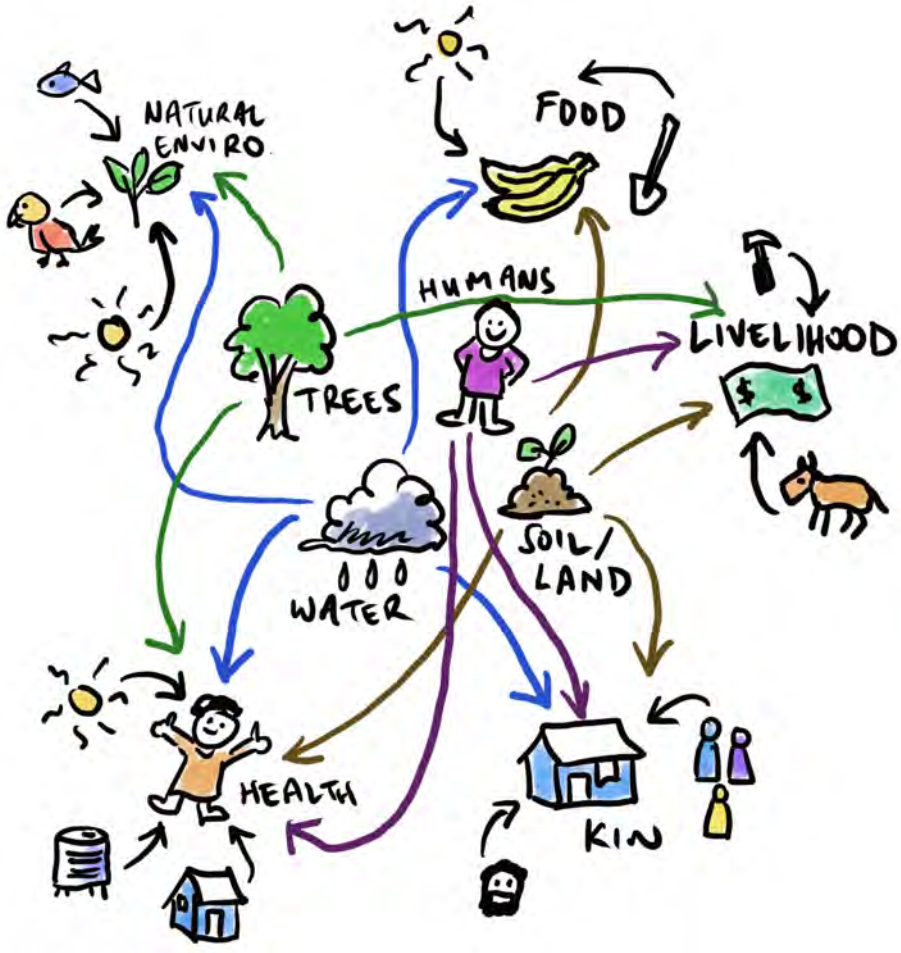
1. **Natural environment:** *for example, community forest or community reef areas (Zone 5 spaces)*
2. **Food production** – *for example, household vegetable gardens*
3. **Livelihoods** – *for example, crop production like root crop farming*
4. **Health** – *for example, clean drinking water supply in the community*



- The group should discuss each of these systems one at a time, and remember to talk about how humans are involved in each system.
- For each system draw on pieces of card all the important parts for this system to be healthy or work well. Write one thing per card (for example, soil, farm workers, sunshine). If cards are not available, the important parts can just be drawn directly in a circle onto a big piece of flip chart paper.
- Discuss the connections between the different parts on the cards and draw in links. A web of links between the parts should form showing how they are all connected in different ways.
- Once the group mentions certain parts in the system, you may have to prompt them further by asking about what the part is connected to. (For example, if the group mentions forest trees, you can ask them to think about what helps the trees grow and what products the trees provide.)

- When all 4 system webs have been drawn the group should **discuss any parts that appear in the webs for all 4 systems, or at least 2 systems. These things are very important parts as they are needed for many connections in the system.**

On another piece of paper get the groups to draw how the system webs are connected to each other for this community. *There is an example below that shows different systems, and the most important parts of each system that are connectors to other systems. Can you see what they are? Trees, land/soil, sunlight, water and humans!*



- When the group has identified at least 5 most important parts of their system web they should discuss the following things:
    - How is this ecosystem part connected to other parts of the systems?
- In thinking about strength discuss the **physical, knowledge and cultural** aspects of each element. See the example in the box below.

- Write down on flip chart paper all the information about each important element from the discussion in a table like the example on the next page.

- Spend as much time as needed on this activity, as it is important for the community resilience planning later.

TREES

Physically secure:
Soil is good, trees are healthy, and plantations provide steady income.

Knowledge secure:
Families know how to use the fruit, nuts, seeds, or wood from the tree.

Culturally secure:
Caring for and sharing of resources is strong in the community.

Ecosystem Part	Important in which system web?	How is this ecosystem part connected to other parts of the system?	Why is this ecosystem part important in the systems? (include local knowledge)
	• Natural environment • Growing food • Livelihoods • Health		

ACTIVITY 9:
Keeping us Strong
(Community Strengths and Hazard Assessment)

OBJECTIVE

This activity links the work done in Activity 7 (resilience indicators) and Activity 8 (ecosystems webs and elements) and then develops a strength and hazard assessment of priorities for community climate change resilience.[30]

MATERIALS:

- Record of work done in Activities 7 and 8
- Flip chart paper, chalk and blackboard, or pointed stick to draw in the sand (with labels written on cards or paper if needed)
- Markers or sticky notes and pens
- It may be helpful to draw up ahead of time a blank matrix for the community to complete

PARTICIPANTS

If possible, continue to work with the participants from Activities 6, 7 and 8 - In this activity we build on the table started in Activity 8.

TIMING

This process requires discussion so allow at least 2 hours. Be guided by your participants in what works best for them and their schedule.

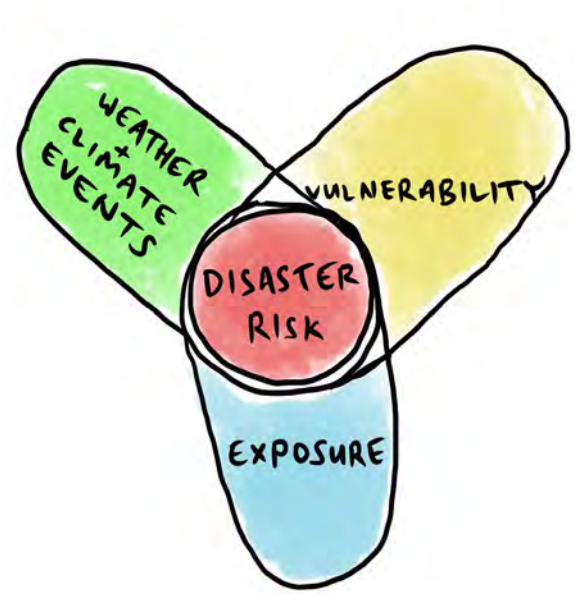
PROCESS:

Explain: Weather disasters have always happened, and climate change is increasing the frequency of these disasters. Sometimes we think that we need to restore everything to how it was before the disaster. But sometimes the systems we have and the way we live can be vulnerable to disasters and should be different to be stronger. So, an important step in thinking about practical resilience for the community is to talk about which things are the **most important** to protect from disaster impact or restore after a disaster. These things can be called assets or strengths. Like discussed in earlier activities, they can be physical things, knowledge and connections.

30 This activity is adapted from: Deborah O'Connell, Russell Wise, Veronica Doerr, Nicky Grigg, Rachel Williams, Seona Meharg, Michael Dunlop, Jacqui Meyers, Jill Edwards, Monica Osuchowski, Mark Crosweller (2018). Approach, methods and results for co-producing a systems understanding of disaster. Technical Report Supporting the Development of the Australian Vulnerability Profile. CSIRO, Australia.

Groups: Look at the table from Activity 8. We have written down the ecosystem parts and connections that are very important to the community. Are there any other assets or strengths that are very important to the community that you would like to add to this table? Add extra rows now.

Explain: Draw the Disaster Risk picture on a blackboard, whiteboard, large piece of paper. Clearly label each of the three sections: *Weather and climate events*, *Vulnerability* and *Exposure*. Explain what each section means:



Vulnerability = Things that makes a family more likely to have something bad happen to them if there is a disaster. *For example, only one livelihood source, having to care for sick or elderly family members, less money than other families.*

Exposure = Things about where the community lives (or part of the community) that makes the impact of weather or climate events worse. *For example, houses located at base of logged hillsides can be affected by landslide, or the community is based on the coast where cyclone winds are stronger.*

Weather and climate events impact = Storms, cyclones, droughts, floods, landslide, fire.

The highest RISK is in the area where the three ovals combine – which are the areas where there is the most vulnerability and exposure to strong weather and climate events.

If a hazard, such as a storm, is affecting something with high exposure and high vulnerability, that would be a high risk, and a threat to wellbeing, resilience, food security or livelihoods, etc

Group: Ask the participants to look at the table they made in Activity 8 and for each ecosystem part or asset they should discuss and note down the strength, vulnerability, exposure and possible weather/climate event impact.

» Example: If a community had only one vegetable garden (vulnerability) in a low-lying area near the coast (exposure) and there was a storm surge from a cyclone coming (hazard), that would mean a high risk to that asset (the vegetable garden) and therefore the community's food security.

Once this discussion is completed the community should rate the priority to them of each ecosystem part or asset in the table. Remember that priority means something that is very important for community resilience, and needs to be protected or be able to recover quickly.

Use this rating:

1 – Highest priority

2 – Medium priority

3 – Lower priority (but still important!)

Get the groups to write this work down in the table template below.

Asset/ Ecosystem part of value to community	How is this strong? (working well?)	How is this vulnerable?	How is this exposed?	Impact of climate or weather events?	What is the community priority? 1 = Highest 2 = Medium 3 = Lower
Example *Soil*	Example *Soil is healthy in some zones due to use of animal dung and composting.*	Example *Population is growing and running out of food garden space with fertile soil*	Example *Food gardens are on steep hillside.*	Example *Cyclones and heavy rain cause landslides that destroy gardens*	1

ACTIVITY 10:
Working Together

OBJECTIVE

This activity documents the community understanding of the groups and organisations that are active and important in the community, especially linked to ecosystems and resilience.[31]

MATERIALS:

- Flip chart paper, chalk and blackboard, or pointed stick to draw in the sand (with labels written on cards or paper if needed)
- Markers or sticky notes and pens
- Scrap paper (if needed)

PARTICIPANTS

Form four groups of 4-6 people (two groups of men and two groups of women) who have a good, combined knowledge of the range of groups in the community, and have participated in the earlier activities about the resilience indicators, resilience picture, story and vision, and strength/hazard assessment.

TIMING

This process requires talking and drawing, so allocate enough time for all needed activities. Allow at least 1-2 hours. Be guided by your participants in what works best for them and their schedule.

PART A PROCESS:

Ask:

Ask participants to brainstorm the different groups and organisations (social, religious or other groups) in their community. They may wish to note these or have a facilitator assist with this. Remember that in some communities groups like 'ancestors' are also culturally important to consider.

Ask them to draw a big circle covering almost all the paper/area. This represents the community.

They then need to draw or make circles to represent each group. A big circle represents an important or influential group, and a smaller circle shows a less important or influential group.

After they have made circles that are the right size for each group, they need to place the circles in the community. Circles that are placed near to each other show a close relationship or significant influence. Circles that are placed further away or alone show a less close relationship or minor influence.

31 This activity is adapted from Participatory Capacity and Vulnerability Analysis – A Practitioners Guide, Oxfam

Explain that the circles may overlap if the members of the group or other parts of the group have something in common with another group.

Discuss

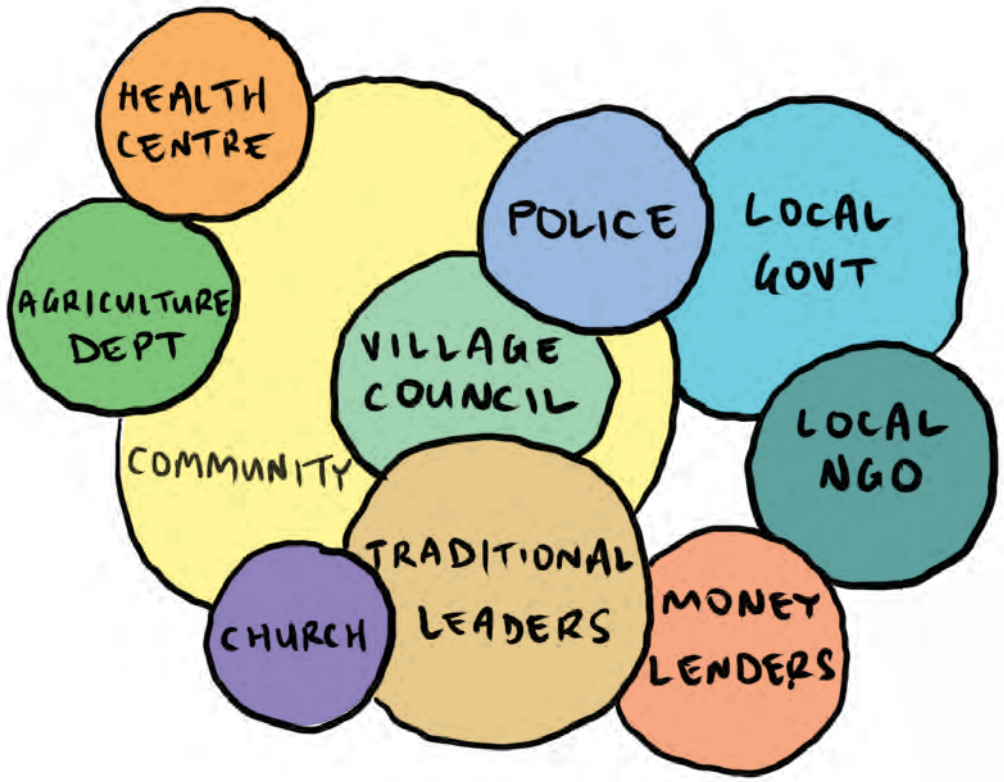
When participants have finished their diagrams, bring them together and ask for volunteers to present and explain their charts to the whole group. Ask probing questions about each circle, its size and relationship to the other circles. If the diagrams are similar, produce a combined one. If the diagrams are very different and there is no agreement on a common one, keep all of them.

What is a circle diagram?

A circle diagram is a type of diagram in which participants draw a number of circles to represent different groups in their community, or with whom their community interacts. The size of each circle indicates its relative importance or influence. The position of each circle indicates its relationship to the other circles.

Option A: If the circle diagram is being used to show the relationship between different actors within a community, each actor is usually shown as a smaller circle within the largest circle, which represents the whole community.

Option B: If the circle diagram is being used to show the relationship between external actors and the community, a medium-sized circle is usually drawn in the middle to represent the community, and a number of circles or relative proportions are drawn at appropriate distances around it to represent the external actors.



PART B PROCESS:

Discuss: The community does many things to look after ecosystems, by helping them along, rather than working against them. In the various zones in the community some or all of the following elements in ecosystems might be looked after by humans:

- water supplies
- soil
- marine resources
- mangroves
- forests
- livestock
- plants in gardens and plantations
- wild animals and plants.

In some cases, an ecosystem element may be managed by one householder. With other elements, the whole community may manage them, or a special group.

Groups: Using the information from Activities 8 and 9 about the resilience indicators and the ecosystem parts and connections that need to be strong, draw a table on flipchart paper that lists all of the ecosystems management work that is done in the community for each part or connection listed as important in Activity 9, and who or what groups looks after them.

Consider these questions to help you fill out the table:

- Do people have different responsibilities (men, women, children)?
- Who makes the decisions about who has responsibility?
- How do people outside the community help or not help?
- What can be improved by working together?
- When climate events disrupt connections, how does the community remake connections?

Asset/Ecosystem part of value to community	How is this managed by the community?	Strengths of this management?	Challenge of this management?
Example *Soil*	Example • Farmers Association • Some households do composting	Example • All households general participate in the Farmers Association	Example • Lack enough knowledge on how to address problems with pests and soil fertility. • Young women are not confident to join the Farmers Association

Formal Committees and Disaster Planning

- For any formal committees listed during this activity make sure that we record information on the name of the committee, who the members are, and any formal information on its purpose (guidelines, etc).
- Is there a disaster management committee? If yes, who are the members? Is it working well?
- Is there a disaster plan in place? Is it useful?
- Is there a government body that works with the community on disaster preparation?
- Has a disaster plan been used in recent cyclones, etc?
- What happens when a disaster strikes?

ACTIVITY 11:
Baseline Data Collection

BASELINE DATA COLLECTION

1. FAO Food Insecurity Experience Scale (Baseline for MT02) - mWater
2. Percentage (%) of food produced from household gardens (Baseline for STO 2.2) – mWater
3. Livelihoods / income – households with more than 1 income stream (Baseline for STO2.1) – mWater

The baseline survey is to be done using **mWater application**. This application is available on a tablet or a smart phone. You must have an mWater ID to access the survey, and you must download the application and access the survey when connected to Wifi to ensure that the survey is available offline on your device when you are in the community. Live & Learn Australia will help you create your mWater ID if you do not have one already.

SAMPLE SIZE:

The baseline survey is to be done with 20% of the community population – 10% male and 10% female.

HOUSEHOLD SELECTION

Households are to be selected randomly. Start at a central point in the community (such as the church, shop or health centre) and each person taking the surveys should walk in a different direction. Randomly select every third household to interview.

» See Appendix 1 for paper-version of baseline data collection form. This form is only for reference – the finalized survey is in mWater. If tablets with mWater are not functioning please talk with CRI management on process for using paper forms.

PART 4

Resilience Profile Template

Report Template

Activities 1-10

Note for the reader:

Live & Learn provides support to our network offices implementing the CRI approach that includes assistance collecting baseline data about food insecurity, and in writing the community resilience profile based on all the activities. Part 4 is the template teams use to write up the Part 3 activities, and then analysis and writing support is provided by the Live & Learn Knowledge & Learning department to produce the community resilience profiles. The example profile provided in Appendix 1 shows the result of this collaboration. Live & Learn wanted to provide additional value for the community so that they have a resilience profile that is a professional report they can use in advocacy with government and other donors.

NOTES ON REPORTING

It is recommended to start fill in the report sections as you complete each activity, or in the evenings while working in the community – as the information will be fresh in your memory, and you can consult with community that the notes are correct.

NOTES ON PHOTOS

Full resolution of all photographs taken during facilitation need to be uploaded to the CRI PNG Google Drive folders – see Mat or Jai for further information

Please name all photos uploaded so we know what they are.

» For example: *Kerepua_EcosystemAnalysisMap*

COMMUNITY DETAILS

Community Name:

LLG:

District:

Province:

COMMUNITY GPS LOCATION

Either get from Google Maps/Google Earth, or take GPS reading using mWater at central part of community, like a market, church or other community meeting place

{INSERT HERE}

COMMUNITY RESILIENCE WORKING GROUP

1.1 Record the names and contact details for the members of the Community Resilience Working Group

ACTIVITY 2 - The Big Picture (Systems and Resilience)

2.1 Write here any important notes from the discussion about what the community thinks about the various systems within the community, common parts to systems and connections between systems, and challenges to systems. the systems, their elements and challenges

ACTIVITY 3 - Talking about the land (Ecosystems Map)

3.1 Insert photograph of completed Ecosystem Map

{INSERT HERE}

3.2 Put notes from this activity into the table below:

Area/Sector	Community knowledge, comments, and gaps/questions
 WATER AVAILABILITY	
 HUMAN ACCESS	
 SUN EXPOSURE	
 WATER FLOW AND LAND SLOPES	
 FLOODING	
 WIND	
 FIRE	
 SOIL	
 SACRED OR TABU PLACES	
OTHER COMMENTS	

ACTIVITY 4 - How we live with the land (Ecosystem zone map & seasonal calendar)

PART A

4.1 Insert photograph of completed Zone Map

{INSERT HERE}

4.2 Write comments on:

- Important connections between the zones
- Community knowledge about these connections
- Any formal community system for managing different zones
- Are there zones that were used differently in the past? Have elements been shifted to new zones?
- Is what is happening in one zone harming another zone?
- What did ancestors do with ecosystems? Did they look after them? If so, how?
- Were there farming techniques that the ancestors do that we no longer do?

PART B

4.3 Insert photograph of completed Seasonal Calendar drawing

{INSERT HERE}

4.4 Write important comments on Seasonal Calendar from discussion:

- Ask about any community stories about the seasons that they are allowed to share. Are there times in the calendar when life is harder than other times?
- What changes to the seasons, including weather patterns, animal movements and harvesting times, has the community observed? Write these down.
- We want to record the changes throughout the year so that we can think about the knowledge we have for managing ecosystems.

ACTIVITY 5 - Our story with the land (elders circle & timeline)

PART A

5.1 If you have permission, write notes here from the elders/knowledge keepers activity about:

- The story of place
- How ancestors were resilient in their ways of living
- Stories of living with nature
- How the ancestors prepared for disaster
- Does the community still do the things the ancestors did that made them resilient?

PART B

5.2 Insert photograph of completed Timeline drawing, and type up the labels of the dates/ events in the table below (add rows as needed).

{INSERT HERE}

Date	Event	Importance Rating

5.3 Write here the notes on significant things discussed when the community was making the Timeline:

- Can the group spot trends or shifts in climate?
- Are women listing different events to men?
- Are younger people listing different events?
- What events are very important to this community?
- Have changes been made to deal with impact of some events? How well are these changes working?

ACTIVITY 6 - Community Resilience Picture & Story

6.1 Insert photograph of Resilience picture drawing or photograph.

{INSERT HERE}

6.2 Write here the story or explanation of the resilience picture.

6.3 Write here the Community Resilience Vision

ACTIVITY 7 - Ladder of Resilience

7.1 Insert photograph of Ladder of Resilience

{INSERT HERE}

7.2 Write here notes on the things the community identified as what makes a household the most resilient.

7.3 Write here notes on the things the community identified as what makes a household the least resilient

7.4 Write notes here on the trend in resilience of households over time – how many households are better off now than before? Or are more households worse off than before?

7.5 Write notes here on the discussion:

- What could be possible reasons why there had been changes in the distribution over the past 10 years and now?
- What causes some households to move up? What causes some others to fall down the ladder? What causes others to remain on the same step? How have poorer families attempted to make their way up the ladder?
- Where can people turn to avoid falling down the ladder?
- Are households more resilient now than the ancestors? Why or why not?

7.6 Write here the Resilience Indicators that were developed by the community in this activity.

These things can be strengths that the community have now AND/OR used to have. At least 3 things discussed:

Knowledge Resilience

- What is the key knowledge the community discussed? *Cultural knowledge, natural world, professional knowledge, practical knowledge, etc.*

Physical Security Resilience

- What are the key physical security things the community discussed (things they need to live) important for resilience? *Like water supply, clean air, land, shelter, food supply and ability to earn income. Includes both natural things (like forest plants), and human things (like an outboard boat and motor).*

Connections Resilience

- What are the key connections the community discussed? *Things like cultural ceremony, kinship, social groups, family, connections to special animals or plants or natural places, etc.*

ACTIVITY 8 - Web of Life (Local Ecosystem Connections)

8.1 Insert photographs of the completed local web drawings for each of the focus areas:

1. Natural environment
2. Growing food
3. Livelihoods
4. Health

{INSERT HERE}

8.2 Insert photograph of the drawing that shows how the system webs are connected to each other.

{INSERT HERE}

8.3 Write here the notes from the discussion about each of these important ecosystem parts that are part of many system webs in this community. How are they connected to other parts of the system? Why are they important in the system? Use the table format below.

Ecosystem Part	Important in which system web?	How is this ecosystem part connected to other parts of the system?	Why is this ecosystem part important in the systems? (include local knowledge)
	• Natural environment • Growing food • Livelihoods • Health		

ACTIVITY 9 - Keeping us strong (Community strengths and hazard assessment)

9.1 Insert photo of the completed table.

{INSERT HERE}

9.2 Type up the completed table in the template below. If you type it up in the local language, please also give English translation *(add rows as needed for each asset or ecosystem part).*

Asset/ Ecosystem part of value to community	How is this strong?	How is this vulnerable?	How is this exposed?	Impact of climate or weather events?	What is the community priority? 1 = Highest 2 = Medium 3 = Lower
Example *Soil*	Example *Soil is healthy in some zones due to use of animal dung and composting.*	Example *Population is growing and running out of food garden space with fertile soil*	Example *Food gardens are on steep hillside.*	Example *Cyclones and heavy rain cause landslides that destroy gardens*	1

» Add more rows to table as needed!! One row for each asset or ecosystem part!

9.3 Team reflection on community resilience points

As a team, talk and reflect on all the information and discussions done during the community resilience profile activities. Consider what the community listed as their resilience indicators as part of Activity 7. Consider what you saw, heard and learned about the ecosystem connections, and the strengths and challenges the ecosystem and people face in this community. Based on this reflection write a short list of additional points that you think are important for climate resilience in this community. These points are complimentary to the points the community developed and can form part of the community resilience profile.

How is this community resilient?

1 –

2 –

3 –

4 –

5 -

9.4 Team reflection on vulnerability, exposure and impact of climate or weather events in this community

As a team talk and reflect on all the information and discussions done during the community resilience profile activities. Consider what you think about vulnerability, exposure and impact of climate or weather events in this community. Based on this reflection write a short list of additional points that you think are important under the following headings:

Vulnerability

Exposure

Impact climate or weather events

ACTIVITY 10 - Working Together

10.1 Insert a photo here of the "People Connections Circles" drawing done during the activity.

{INSERT HERE}

10.2 Record here any notes from the discussions about the groups in the community

Do people have different responsibilities (men, women, children)?

Who makes the decisions about who has responsibility?

How do people outside the community help or not help?

What can be improved by working together?

When climate events disrupt connections, how does the community remake connections?

10.3 Type up the table developed by the community during this session that shows all the ecosystems management work that is done in the community for each resilience indicator and related ecosystem element (add rows as needed).

Asset/ Ecosystem part of value to community	How is this managed by the community?	Strengths of this management?	Challenge of this management?
Example *Soil*	Example • *Farmers Association* • *Some households do composting*	Example • *All households general participate in the Farmers Association*	Example • *Lack enough knowledge on how to address problems with pests and soil fertility.* • *Young women are not confident to join the Farmers Association*

» Add more rows to table as needed!! One row for each asset or ecosystem part!

1.4 Record information about the community disaster response and planning activities (Do they have a formal committee and plan? Are they involved in government disaster response planning support? Etc)

1.5 Record information on any formal committees listed during this activity (committee name, who members are, and any information on committee purpose, guidelines, etc)

ACTIVITY 11 - Baseline

Finalise all baseline surveys in the mWater app and be sure to select **Submit** each one.

Delete any incomplete draft surveys after the baseline is completed

REPORT SUBMISSION

» Each Community report must be completed and submitted with photos within one week of returning to the office.

Please upload your completed report to the appropriate folder in the Live & Learn Google Drive. If you are unsure get as your CRI support coordinator or Nick at Live & Learn Australia.

PART 5

Review of Community Resilience Profile

Activities 12 - 14

> ACTIVITY 12: Review of Draft Profile

> Draft Community Resilience Profile Review Template

> ACTIVITY 13: Climate Forecast Briefing

> ACTIVITY 14: Most Important Resilience Indicators

Note for the reader:

After Part 4 is written up as a draft community profile Live & Learn staff return to the community to review the profile, check the information included is correct, add in any additional information that the community wants included, and get approval by the community to finalise and print the resilience profile.

Part 5 contains a report template that indicates a community has reviewed and accepted each section of the community resilience profile. This template also includes a space for recording the information from the facilitation of Activity 14.

Activity 14 is a bridging activity between the community resilience profile and the community resilience plan – which is developed in Part 6. In Activity 14 the community uses their draft resilience plan to identify the most important resilience indicators that they want to consider first in their resilience plan.

» Note: Organisations not providing additional technical writing and graphic design support could combine Parts 4 and 5.

ACTIVITY 12: Review of Draft Profile

OBJECTIVE

Review and acceptance of draft community resilience profile by community resilience committee/group

MATERIALS:

- Printed copies of the draft profile to share with the Community Resilience Committee members
- Printed copy of the Profile Review Report Template

PARTICIPANTS

Community Resilience Committee, plus any other interested community members

TIMING

2 hours, with a short break halfway through

PROCESS:

Discuss:

Sit with the Community Resilience Committee (ensure women and minority groups are represented). Present the draft Community Resilience Profile.

Explain to them that the profile is a summary of the information the community has developed through the activities done together with Live & Learn facilitators.

Explain that the profile belongs to the community, and they can use it for other projects too.

Explain that we need to confirm that the information in the draft profile is correct and that there may be some small gaps or information that the community would like to correct.

Explain to the committee that when we return from the office, we will finalise the profile with the updated information. We will also make more pictures and diagrams so that the profile is easier for everyone to read. Once this is done, we will provide the community with copies of the profile.

EITHER read each section of the profile to the committee **OR** get the committee members to read the profile together.

Use the report template below to record any changes or comments to the different sections in the profile, or record community confirmation that the information is correct.

Draft Community Resilience Profile Review Template

COMMUNITY NAME: DATE:

RESILIENCE PICTURE & RESILIENCE VISION

Record here any changes or comments on the resilience picture and resilience information in the draft community profile

☐ Tick box if draft information is accepted by community

LOCAL INDIGENOUS RESILIENCE KNOWLEDGE & STORIES

Record here any changes or comments on the local Indigenous resilience knowledge and stories information in the draft community profile.

☐ Tick box if draft information is accepted by community

COMMUNITY ECOSYSTEMS AND CLIMATE INFORMATION

Record here any changes or comments on the two pages of community information and satellite maps in the draft community profile.

☐ Tick box if draft information is accepted by community

ECOSYSTEMS SECTOR INFORMATION

Record here any changes or comments on the two pages of community ecosystem sector information in the draft community profile.

☐ Tick box if draft information is accepted by community

ECOSYSTEMS ZONES & ELEMENTS INFORMATION

Record here any changes or comments on the local ecosystem zones and elements information in the draft community profile.

☐ Tick box if draft information is accepted by community

CONNECTIONS BETWEEN ELEMENTS INFORMATION

Record here any changes or comments on the connections between elements information in the draft community profile.

☐ Tick box if draft information is accepted by community

TIMELINE INFORMATION

Record here any changes or comments on the timeline information in the draft community profile.

☐ Tick box if draft information is accepted by community

SEASONAL CALENDAR INFORMATION

Record here any changes or comments on the seasonal calendar information in the draft community profile.

☐ Tick box if draft information is accepted by community

LIVELIHOOD & EXPENSES INFORMATION

Record here any changes or comments on the livelihood information in the draft community profile.

☐ Tick box if draft information is accepted by community

FOOD SECURITY EXPERIENCE

Record here any changes or comments on the food security experience information in the draft community profile *(note that this information was made through the household baseline survey, not through discussion group work).*

☐ Tick box if draft information is accepted by community

COMMUNITY RESILIENCE INDICATORS

Record here any changes or comments on the community resilience indicators information in the draft community profile.

☐ Tick box if draft information is accepted by community

COMMUNITY RISK SUMMARY

Record here any changes or comments on the community risk summary information in the draft community profile.

☐ Tick box if draft information is accepted by community

KEEPING US STRONG - COMMUNITY PRIORITY VALUES & ASSETS

Record here any changes or comments on the community priority values and assets information in the draft community profile. Check there is agreement with the risk number given (1, 2 or 3)

☐ Tick box if draft information is accepted by community

WORKING TOGETHER - COMMUNITY MANAGEMENT GROUPS

Record here any changes or comments on the community management groups information in the draft community profile.

☐ Tick box if draft information is accepted by community

» This is the end of the draft profile review. Below is where you report on the work done by the community in Activity 14

MOST IMPORTANT RESILIENCE INDICATORS

Record here the Resilience Indicator strengths and threats table produced by the community in Part 5, Activity 14.

Resilience Indicator 1: Households get enough food from gardens and the sea	
Ecosystem parts that need to be strong to achieve or maintain the resilience indicator	• Soil - lots of good soil life and organic matter) • Healthy plants – strong growth, not affected by pests • Healthy reef - with plenty of fish nurseries • Healthy mangroves – protecting from storm surges and providing habitat for fish and seafood
Things that strengthen the resilience indicator	Composting and adding organic fertilisers to soil Practicing regenerative farming methods (agroforestry, intercropping, companion planting) Maintaining community traditional rules for fishing on the reef to ensure fish supply Planting and maintaining more mangroves
Things that threaten the resilience indicator	Logging of hills above gardens leading to landslides in heavy rain that washes away soil Using chemicals on the soil that wash into the reef and kill the reef and fish Over-fishing, using non-traditional fishing practices (like dynamite) Clearing mangroves, so losing protection from storm surges
Resilience Indicator 2: XXX	
Ecosystem parts that need to be strong to achieve or maintain the resilience indicator	XXX
Things that strengthen the resilience indicator	XXX
Things that threaten the resilience indicator	XXX

» Add more rows to table as needed!! One row for each resilience indicator!

Record here **the three most important Resilience Indicators** that the community wants to work in their Community Resilience Plan (developed in Activity 14).

1 –

2 –

3 -

ACTIVITY 13: Climate Forecast Briefing

OBJECTIVE

The Community Resilience Committee is briefed on climate forecast information for their area.

MATERIALS:

- Draft community resilience profile
- A pre-prepared climate forecast briefing presentation. There is a summary in each resilience profile, but you should be able to get more up-to-date information from government climate authorities.
- Any PowerPoint slides or videos that might be helpful – depending on ability to share in the community

PARTICIPANTS

Community Resilience Committee, plus any other interested community members

TIMING

1 hour

PROCESS:

Explain: Use your pre-prepared climate change forecast briefing, and the ecosystems and climate overview information from the draft Community Resilience Profile to present the important information on climate forecasts and emergency management for the area where the community is located.

This information can be presented as a simple talk, or can be illustrated with slides or video if available. *The examples on the following pages are from a final designed community resilience profile from Vanuatu.*

Ecosystems and Climate – Vanuatu Overview

Vanuatu consists of more than 80 islands. The predominant ecosystem is tropical forests, which cover 76% of the land area, with lowland forests up to around 600m in elevation and montane cloud forests above that. Important coastal ecosystems include mangroves, seagrass and coral reefs. Approximately 80% of Vanuatu's population live in rural areas, and many work in subsistence agriculture. Agriculture is significant to Vanuatu's economy – food is more than 80% of the country's exports.

TEMPERATURES AND RAINFALL:

Dry season:
May – October

Wet season:
November – April

Average temperatures are between 21-27C. Recently temperatures have been 0.5-0.6C above average.

Rainfall can vary up to 1800mm between wet seasons. Average annual rainfall is also much higher in the north (4000mm per year) compared to the south (1500mm per year).

Vanuatu is highly susceptible to tropical cyclones, with 20-30 passing over per decade.

OCEANS:

Coastal ecosystems are the second largest ecosystems, around 14% of the country. Coastal mangroves, seagrass and coral provide valuable food services, now threatened by human impacts. Vanuatu has recorded 6mm of sea level rise per year, above the global average.

HABITAT DIVERSITY:

Forests are the major ecosystem, 75% of land area. Other important ecosystems include mangrove forests, swamp forests and kauri pine stands.

Vanuatu has habitat for diverse animals, birds and plants. Coastal finfish and tuna are the most important seafood resources. Ecosystems have been heavily modified by human activities, particularly tropical forests, grasslands and coral.

FRESHWATER:

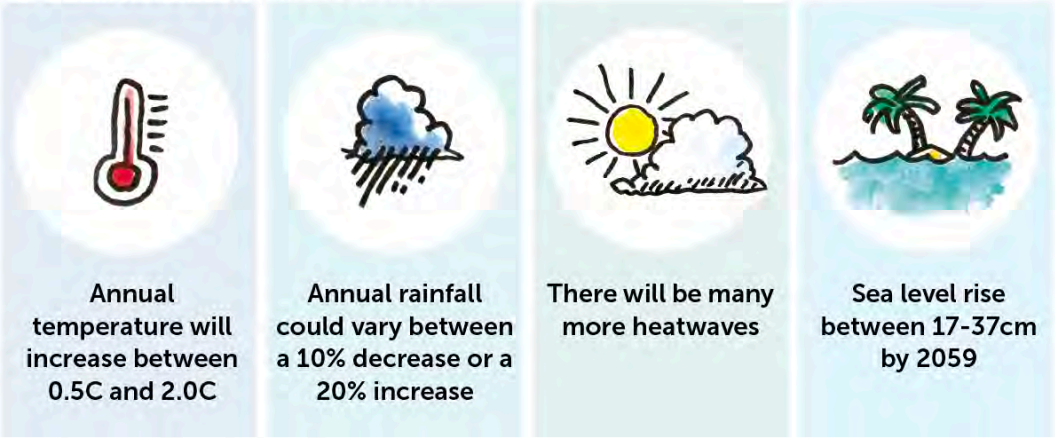
Vanuatu has very little freshwater, with the majority of people relying on rainwater and rivers.

Regional and national climate change impact and forecasts

Vanuatu is considered extremely vulnerable to climate change. Natural hazards already cost Vanuatu an estimated 6% of annual GDP. Climate change impacts are already being felt. Rising sea levels and erosion are threatening communities and community structures like schools, churches, airports and roads. Increasing temperature and decreasing rainfall are straining freshwater resources, with land use change, population increase, urbanisation and cyclones adding to the problem.

Climate change forecasts vary significantly based on both the low- and high-emissions scenarios.

Depending on the specific scenario:



Annual temperature will increase between 0.5C and 2.0C

Annual rainfall could vary between a 10% decrease or a 20% increase

There will be many more heatwaves

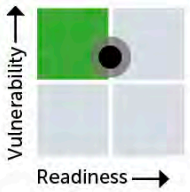
Sea level rise between 17-37cm by 2059

ND-GAIN[2] Resilience Ranking:

ND-GAIN Country Index rank

132

SCORE: 41.1



Vulnerability 0.541

Readiness 0.362

The high vulnerability score and low readiness score of Vanuatu places it in the upper-left quadrant of the ND-GAIN Matrix. It has both a great need for investment and innovations to improve readiness and a great urgency for action. Vanuatu is the 27th most vulnerable country and the 76th least ready country.

2 A country's ND-GAIN index score is composed of a Vulnerability score and a Readiness score. Vulnerability measures a country's exposure, sensitivity and ability to adapt to the negative impact of climate change. ND-GAIN measures the overall vulnerability by considering vulnerability in six life-supporting sectors – food, water, health, ecosystem service, human habitat and infrastructure. https://gain.nd.edu/our-work/country-index/rankings/

Vanuatu National Climate Change Adaptation and Disaster Governance

Due to Vanuatu's high exposure to hazards and risk of disaster, disaster management governance of disasters and climate change is fully integrated. Key governing bodies function under the **Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management (MoCC)** and include the following[3]:

- The **National Advisory Board on Climate Change and Disaster Risk Reduction (NAB)** develops all DRR and climate change policies and guidelines, and is a focal point for information – including coordination and national climate finance processes.
- The **Department of Climate Change (DoCC)** coordinates and implements all climate change adaptation, mitigation and DRR activities. The DoCC and NAB have complementary roles and work together to ensure Vanuatu's policy on climate change and DRR is mainstreamed.
- The **National Disaster Committee (NDC)** advises government agencies on disaster risk management. The body also oversees implementation of disaster risk management policies implemented by the NDMO, government agencies, partner agencies, civil society and the private sector.
- The **National Disaster Management Office (NDMO)** works closely with the NDC. The NDMO is responsible for the coordination of responses to emergencies and disasters across Vanuatu. The NDMO also plays an important role in preparedness.
- **Provincial Disaster and Climate Change Committees (PDCCCs)** have been established to coordinate DRR and CCA activities, develop plans, and disseminate information to communities. Additionally, the NDMO, in partnership with NGOs and the Red Cross has supported the establishment of Community Disaster and Climate Change Committees (CDCCCs) across the country to further support communities to be actively engaged in recognising, assessing and mitigating risks.

Community Disaster and Climate Change Committees (CDCCCs)

Since 2008 communities across Vanuatu have been supported to establish CDCCCs for community-based disaster risk reduction. CDCCCs coordinate local activities and support communities' participation and leadership in disaster preparedness and response. CDCCCs can also conduct vulnerability assessments, create community action plans, provide training and share information with community members, as well as assist the community during times of disaster with evacuations, data collection and early response. Members of CDCCCs are mainly volunteers from the community, which has raised challenges for sustainability and resourcing of the committees.

All communities have had some preparation for disasters. CDCCCs have been set up in most communities. No community operates without a committee, but two communities have other committees that oversee disaster response, namely, the water committee and the development committee.

While committees exist, disaster plans rarely exist. Disasters are responded to as needs arise.

Communities respond to warnings and evacuation orders from local government. Communities also reply on weather and other natural indicators of imminent disasters, especially cyclones.

In most communities evacuation centres are inadequate or non-existent. In one community, two churches are used as evacuation centres, but in other communities evacuation centres are in need of repair after previous cyclones. Increased risk of flooding means that evacuation centres must be reassessed for suitability. In times of disaster, water availability will be a priority.

3 Source: Beyond Barriers – Vanuatu Case Study, 2022, Australian Humanitarian Partnership

ACTIVITY 14: Most Important Resilience Indicators

OBJECTIVE

The Community Resilience Committee identifies key elements and changes that affect their resilience, and align their resilience indicators with their priorities. This work will be the focus for later community resilience planning.

MATERIALS:

- Draft community resilience profile
- Handout or slide with completed example
- Flip chart paper, chalk and blackboard or whiteboard
- Markers or sticky notes and pens/pencils
- Scrap paper (if needed)
- List of indicators given in Community Resilience Indicators and Community Risks Summary pages of the community resilience profile (generated through the Ladder of Life)
- Connections webs drawings from draft community resilience profile

PARTICIPANTS

Community Resilience Committee, plus any other interested community members

TIMING

2 hours

PROCESS:

Explain: Remind the group of three things:

1. **The webs of life** drawings they did in Activity 8, and the combined web of life drawing that shows the ecosystem parts that appear in more than one system. These drawings are included in the draft Community Resilience Profile and will have been reviewed in the previous activity.
2. The list of **community resilience indicators** from the draft resilience profile (reviewed in the previous activity).
3. The **Community Priority Values & Assets** table (done in *Activity 9: Keeping us Strong - Community Strengths and Hazard Assessment*). The table is in the draft resilience profile, and was reviewed in the previous activity.

» If you think it is useful you can get the group to redraw their combined web of life drawing, to refresh their thinking about the connections in the different systems in the community.

Knowledge

Physical Security

Connections

Groups:

Get the group to discuss each Asset/Strength of value to the community that has a priority rating of 1, (highest priority) Do these things align with the list of resilience indicators?

Thinking about their resilience indicators and combined web of life drawing - *and remembering that everything is connected/related in the community* - the groups should talk about things that cause change to their local ecosystem, and what needs to be strong/healthy for their resilience.

Natural events or human actions can cause a change in community resilience[32] and the ability to achieve their community resilience vision. These changes can be natural resources, political and social relationships, work and income, technology or infrastructure, and (of course) climate change.

Food, water, shelter, education and belief systems/culture is usually high priority for the community. You might need to prompt them to also consider nature or land management systems too (for specific nature-based activities later)

The group should list the ecosystem parts that need to be strong to achieve or maintain each resilience indicator.

Then they should discuss the things (actions, events) that strengthen or threaten achieving each resilience indicator (both human actions and natural events like disasters).

32 Drivers of change are "any natural or human-induced factor that directly or indirectly causes a change in the system of interest." For our planning the 'system of interest' are the systems related to the community resilience vision and resilience indicators.

» Use a table like the example given below.

Resilience Indicator 1: Households get enough food from gardens and the sea	
Ecosystem parts that need to be strong to achieve or maintain the resilience indicator	• Soil - lots of good soil life and organic matter) • Healthy plants – strong growth, not affected by pests • Healthy reef - with plenty of fish nurseries • Healthy mangroves – protecting from storm surges and providing habitat for fish and seafood
Things that strengthen the resilience indicator	Composting and adding organic fertilisers to soil Practicing regenerative farming methods (agroforestry, intercropping, companion planting) Maintaining community traditional rules for fishing on the reef to ensure fish supply Planting and maintaining more mangroves
Things that threaten the resilience indicator	Logging of hills above gardens leading to landslides in heavy rain that washes away soil Using chemicals on the soil that wash into the reef and kill the reef and fish Over-fishing, using non-traditional fishing practices (like dynamite) Clearing mangroves, so losing protection from storm surges
Resilience Indicator 2: XXX	
Ecosystem parts that need to be strong to achieve or maintain the resilience indicator	XXX
Things that strengthen the resilience indicator	XXX
Things that threaten the resilience indicator	XXX

Discussion: Once the group has finished their table they need to agree on the **three most important resilience indicators that the community want to focus on for their Community Resilience Action Pathways Plan.** This can be done by discussion or voting.

If the group decides to vote, then give each participant three sticky dots (or stones or something similar) to place their vote for the three most important resilience indicators that they want to work on as part of achieving the community resilience vision.

Record these three things in the section at the end of the **Part 5 Draft Community Resilience Profile Review Report.**

PART 6

Community Resilience Planning

Activities 15 - 20

> ACTIVITY 15: Present Community Resilience Profiles

> ACTIVITY 16: Best Future Scenario

> ACTIVITY 17: Absorb, Adapt, Transform Introduction

> ACTIVITY 18: Strengths & Strategies Framework

> ACTIVITY 19: Resilience Action Pathways planning

> ACTIVITY 20: Resilience Profiles/Plans Launch

> Community Resilience Plan Report Template

Note for the reader:

Part 6 is where the final Community Resilience Plan is presented to the community. The community resilience profile is then used by the community to develop their Community Resilience Plan (Activities 16-19). Once the Community Resilience Profile and Plan are completed then a launch event is prepared to share these with the government and other stakeholders. This is also an opportunity for the community to seek support from diverse sources for implementing actions in their resilience plans.

ACTIVITY 15: Present Community Resilience Profiles

Each team is encouraged to design a creative, culturally appropriate way to present the printed copies of the Community Resilience Profile to the community leaders and the community committee/group that will be doing the community resilience planning.

ACTIVITY 16: Best Future Scenario

OBJECTIVE

To create a visual future concept of what the community looks like when the community resilience vision is achieved.

MATERIALS:

- Community resilience profile
- Flipchart paper
- Colour markers/pencils for participants to write

PARTICIPANTS

Community Resilience Committee, plus any other interested community members

TIMING

1 hour

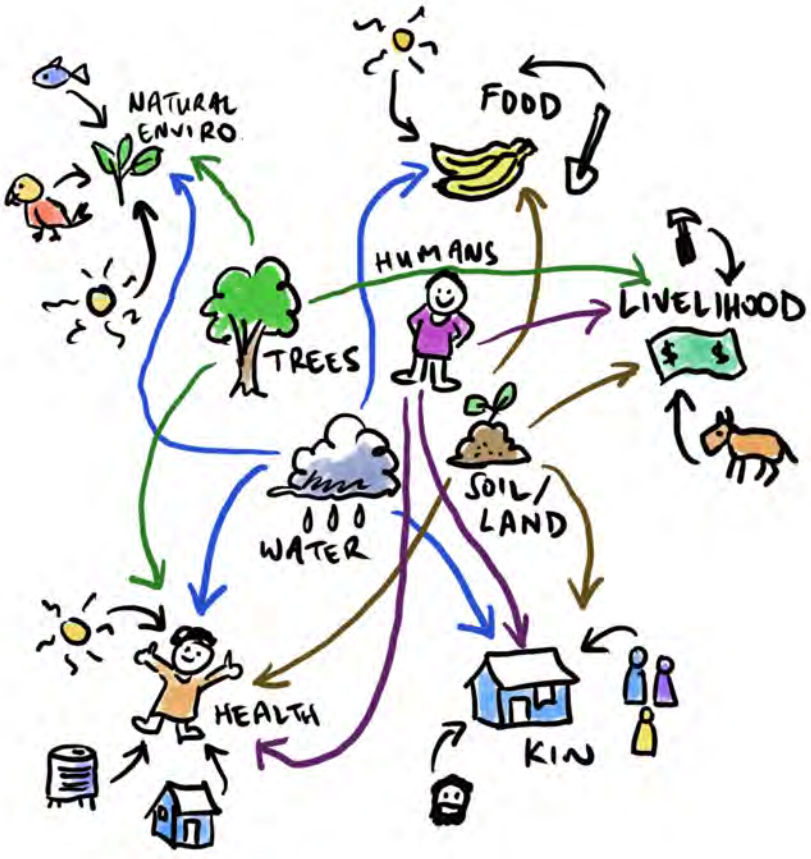
PROCESS:

Explain: Remind the group about their community resilience vision.

Remind the group about the web of life drawings they did as part of the review of the draft community resilience profile, and the combined web of life drawing that shows the elements that appear in more than one system. These drawings are included in the printed community resilience profile.

Also remind the participants about the **three most important Resilience Indicators** that affect achieving the community resilience vision.

Draw: Get the group draw what their community looks like when the community resilience vision is achieved. This is what we call "Best Future Scenario." We want one picture for the community.



- Use the information in the community resilience profile and the group knowledge,
- Include the things most important to them from Assets/Strengths listed in the resilience profile.
- Include things from the web of life drawings.
- Include things that affect the "three most important things."
- Use LOTS of detail! Some examples are given below. Make sure the description notes are clear – either on the picture or written down as extra notes.


PANGPANG


A FUTURE VISION OF HIMALI VILLAGE
Toilet
MARKET
SUNRISE

ACTIVITY 17: Absorb, Adapt, Transform Introduction

OBJECTIVE

Engagement and practical understanding of the key concepts used in the community resilience planning – Absorb, Adapt and Transform

MATERIALS:

- Community resilience profile
- Three most important Resilience Indicators (identified in Activity 14)
- Handouts of Absorb, Adapt, Transform - or materials to draw them (refer to CRI Toolkit Part 1, Metaphor – Story)
- Whiteboard, blackboard or wall for flipchart paper
- Markers/pencils for participants to write
- Absorb/Adapt/Transform video from Vitina in Fiji (if have power etc at community)

PARTICIPANTS

Community Resilience Committee, plus any other interested community members

TIMING

1 hour (timing is flexible, community can take the time needed, but shouldn't be longer than a few hours)

PROCESS:

Preparation Before doing Activity 17 with the community the facilitators should closely review the Community Resilience Profile and take notes on information on community strengths and assets that will be helpful in the group discussions about Absorb, Adapt and Transform.

Video **Vitina, FIJI- Absorb, Adapt and Transform** Show video to introduce those concepts (CRI team member to have video on their laptop). *Make sure have data projector and good speaker. If not, then don't use the video.*

Present: In the final pages of the printed community resilience profile there is a page that explains the **Absorb, Adapt, Transform** concepts. Use these pages (or the summary below) and either print-outs of the drawings, or draw them on the blackboard or flip chart paper.

Explain each concept – using the text in the community resilience profile or from Part 1, Metaphor – Story. *Note –CRI team to have prepared these practical examples earlier).*

During the discussion get the community to identify how they describe these concepts in their own language.

Absorb capacity (coconut)

What is already there (like assets, people, organisations, natural features, Indigenous knowledge) that helps a community quickly recover from a bad event.

Adapt capacity (crab)

How a community or natural system can use opportunities and adjust or change the way it is or how it works to respond better to expected bad events.

Transform capacity (butterfly)

Parts of a community or a natural system that can be completely changed to be able to reduce impact of climate disasters and other bad events.

ACTIVITY 18: Strengths & Strategies Framework

OBJECTIVE

Community completes the Strengths & Strategies framework for each of the three selected most important resilience indicators. This framework develops the strategies that will be the basis for the community resilience action plan.

MATERIALS:

- Community resilience profile
- Whiteboard, blackboard or wall for flipchart paper
- Markers/pencils for participants to write

PARTICIPANTS

Community Resilience Committee, plus any other interested community members. It is very important to have participation by some of the same people from Part 3 and Part 5 for continuity of thinking and priorities.

TIMING

1-2 hours (timing is flexible, community can take the time needed, but shouldn't be longer than a few hours)

Group

1. Get the community to draw the Community Strengths and Strategies template on a large piece of flipchart paper (or give them pre-prepared templates).

2. Take the **three most important Resilience Indicators** that impact the community resilience vision (identified in Activity 14). Write each one at the top of its own column in the framework.

3. Starting with the first Resilience Indicator the group should use the Community Resilience Profile, and the best future scenario picture and community knowledge, and discuss the Absorb, Adapt and Transform **strengths the community already has** to help achieve the resilience indicator. Write these strengths down in the framework for the first resilience indicator. Remember that strengths include people, groups, skills, and assets.

4. Based on these strengths, the group should now discuss the Absorb, Adapt and Transform strategies. The **strategies are things that they think are positive and realistic** to achieve the resilience indicator. Once all the potential strategies have been discussed and written down the group should chose **at least one strategy for each resilience indicator** that they want to write up in an action pathway plan.

5. Repeat this process for the second and third resilience indicators, until the framework is completed.

Remember:

- Not every box in the framework has to have something written in it.
- Each strategy will need its own resilience action plan, so to be realistic with the number of strategies that the group chooses to take through to the action planning stage.

» To help you with confidence in facilitating this process a full example is provided below. Don't copy this example, just use it to help your understanding.

TEMPLATE: Community Strengths and strategies framework

Most Important Resilience Indicators				
	**Absorb Strengths**			
	Absorb Strategies			
	**Adapt Strengths**			
	Adapt Strategies			
	**Transform Strengths**			
	Transform Strategies			

COMPLETED EXAMPLE FOR REFERENCE

An example community resilience profile lists the following resilience vision and resilience indicators:

RESILIENCE VISION:

We believe preserving our traditional knowledge and our spirit of working together gives us strength to strive forward. In the future we want to be resilient with buildings that resist strong cyclones and sea walls that protect the community from strong waves. Our water system and health facilities will be upgraded. Households will have an good life with income from livelihoods and enough food.

RESILIENCE INDICATORS

- More resilient families have more than one livelihood source
- More resilience families have homes located in safe places that are protected from flooding and cyclone damage
- More resilient families have members with strong traditional knowledge of agriculture and knowledge of farming in drought
- Community has knowledge of traditional weather warnings for cyclones.
- Households with high resilience have secure water supply and are able to meet their food needs from gardening and hunting.
- The community has healthy relationships with each other and joint commitment to a community conservation area.

MOST IMPORTANT RESILIENCE INDICATORS

The community selected the following three most important resilience indicators to focus on for their first resilience plan:

1. Prepare and act to minimize cyclone damage to houses and food gardens.
2. Strengthen food growing to cope better with drought.
3. Strengthen the community conservation area

The three most important resilience indicators are placed at the top of each column in the framework. Then the community discuss and document their strengths and strategies, shown in the example below. The final strategies to be put into Action Pathway plans are in bold text. There are 5 strategies of them.

Most Important Resilience Indicators		1. Prepare and act to minimize cyclone damage to houses and food gardens.	2. Strengthen food growing to cope better with drought.	3. Strengthen the community conservation area
	**Absorb Strengths**	Community Disaster and climate change committee in place. Traditional knowledge on gardening, building houses available.	Availability of planting materials, knowledge of plants to grow in dry season	Conservation Area Committee working well, and forest rangers in place.
	Absorb Strategies	Replant trees, use more root crops, pass on traditional knowledge, strengthen CDCCC	Traditional knowledge for site selection and crops for resilient ag during dry season	Create CCA management plan Program of invasive species removal
	**Adapt Strengths**	CDCCC and community can receive further training on DRR	Agriculture field assistance Water committee	CCA committee can do replanting and removal of species
	Adapt Strategies	Stronger houses and more resilient crops **Strategy – get training on DRR and SLM**	Put in place agricultural practice for dry such as drip irrigation, water management training from committee **Strategy – training and establish SLM practices for dry season farming, training on water management**	Training on conservation Program of invasive species removal Tree planting program **Strategy – training on conservation – planting and removal**
	**Transform Strengths**		Available land	Conservation Area Committee working well, and good relationship with partners like Live & Learn and Nakau.
	Transform strategies		Bigger agroforestry plot Better market access **Strategy – revive traditional knowledge for agriculture**	Forest carbon (REDD+) project Biodiversity credit project Improve ecotourism pathway Establish nursery for trees to be replanted in CCA **Strategy – establishment of project for biodiversity credits.**

ACTIVITY 19: Resilience Action Pathways planning

OBJECTIVE

Community develop action pathways for each of their resilience indicator strategies.

MATERIALS:

- Completed Strengths & Strategies framework from Activities 18
- Presentation on potential for CRI assistance to strategies
- Copy of CRI programme MELF (for reference if needed)
- Whiteboard, blackboard or wall for flipchart paper
- Markers/pencils for participants to write

PARTICIPANTS

Same participants as for Activity 18. The Community Resilience Committee, plus any other interested community members

TIMING

1 hour (timing is flexible, community can take the time needed, but shouldn't be longer than a few hours)

PROCESS:

Game:

ARMS CROSSED GAME (OPTIONAL)

After the busy thinking work of the Activity 18 it can be good to have a break with a short game. This game takes about 10 minutes and is useful for resetting thinking in a fun way. The scripts are suggestions – don't read them out, but practice them so you can lead the activity naturally in local language because you know what you are doing.

Step 1:

- Say *"Now I am going to lead you through a brief activity. I need everyone holding something to put it down so your hands are free."* Pause *"Now, everyone please fold your arms."* As you say this, fold your own arms. *"Now, look down and make a mental note about which wrist is on top and remember if it is your left wrist or right wrist. Now drop your arms."* Drop your own arms to your sides and pause again.

- Say *"Now cross your arms again. Look down and remember which wrist is on top."* Pause again, *"Now drop your arms."*

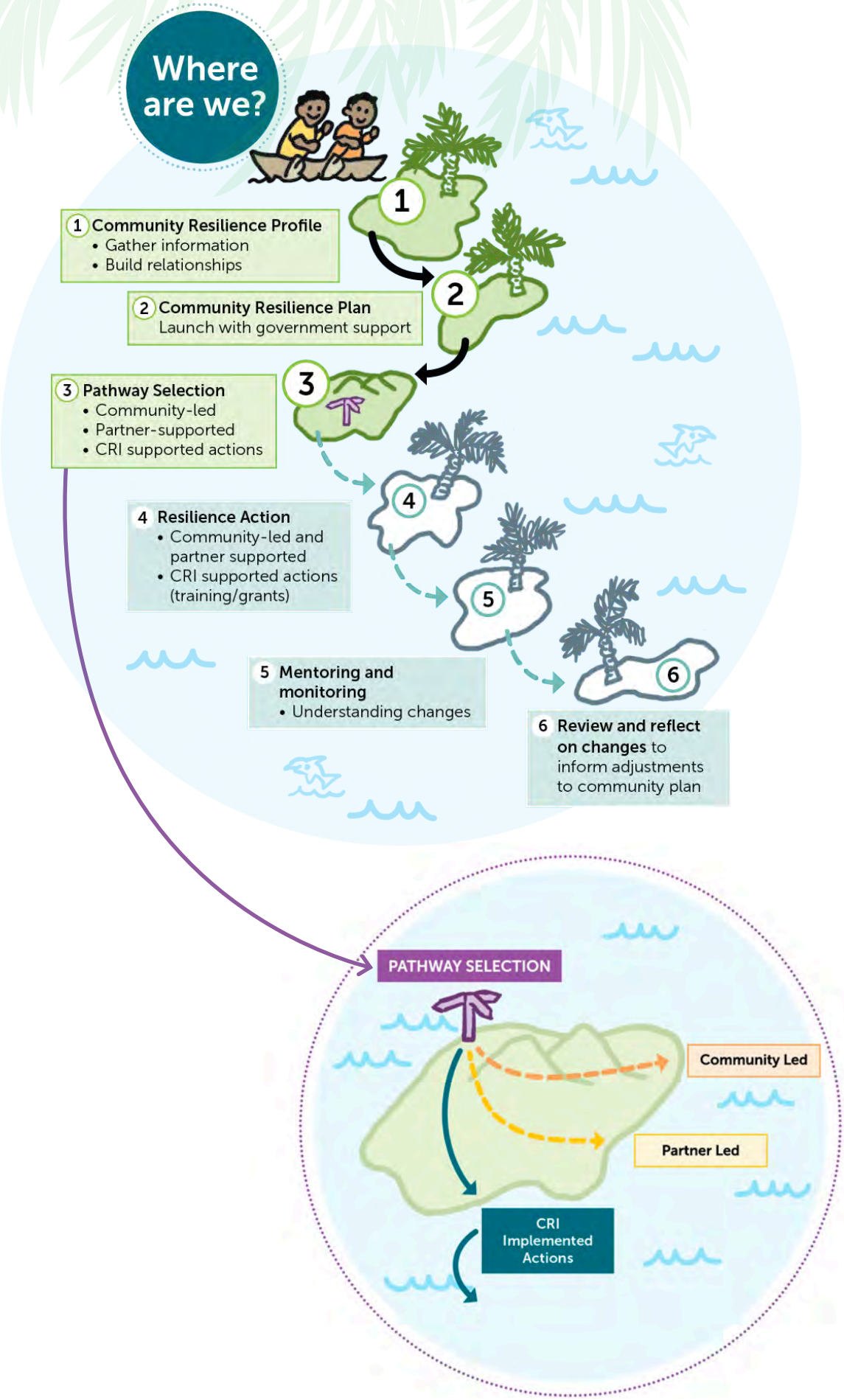
Step 2:

- Say *"Now we will conduct a little survey. Everyone who had the same wrist on the top both times, raise your hand."* You should raise your hand also. Look around and there should be a majority of people with their hand up.
- Say *"Almost everyone had the same wrist on top when they fold their arms. This is normal, as we fold our arms when we want to focus our attention on something that does not need our arms. Once you find an action that is comfortable your body remembers and uses it every time."*

Step 3:

- Say *"How many of you fold your arms with the left wrist on top? How many of you fold your arms with the right wrist on top? Almost half of you do it one way and half of you do it the other way. So there is no correct way, just the way that feels correct for you because it is a habit."*
- Say *"Habits are helpful because they save time and we don't have to think about them. But sometimes conditions change, and then a habit that was effective is not useful and must be changed. It can feel hard to change a habit and it is good to practice."*
- Say *"Everyone cross their arms so the opposite wrist to your usual way is on top."* Pause and give everyone time to do this, showing an example yourself that is exaggerated to show that you have to think hard to do it. Wait for 10 seconds, often there is some laughter in the group as people figure out how to fold their arms differently than they usually do it.
- Say *"Congratulations! You practiced changing a habit! There are three things that are always true when we change our habits."*
    1. First – it is possible to change with some effort!
    2. Second – It is not easy to change and at first you might make some mistakes
    3. Third – It feels uncomfortable and a bit strange at first.

Debrief: In the planning activities that follow think about the habits in your community and how it might be important for community resilience to change some of these habits.


Where are we?
1
1 Community Resilience Profile
• Gather information
• Build relationships
2
2 Community Resilience Plan
Launch with government support
3
3 Pathway Selection
• Community-led
• Partner-supported
• CRI supported actions
4
4 Resilience Action
• Community-led and partner supported
• CRI supported actions (training/grants)
5
5 Mentoring and monitoring
• Understanding changes
6
6 Review and reflect on changes to inform adjustments to community plan
PATHWAY SELECTION
Community Led
Partner Led
CRI Implemented Actions

Present: Show the participants the CRI Islands diagram. Explain that:

1. Island 1 is their Community Resilience Profile – that they now have.
2. Island 2 is their Community Resilience Strengths and Strategies Framework **AND** the Resilience Action Pathways Plan.
3. The Resilience Action Pathways Plan starts us on the journey to Island 3 – Pathway Selection.

On Island 3 there is a signpost pointing to three different kinds of pathways. One pathway is community-led resilience actions, based on the Absorb, Adapt and Transform strengths written down in the framework done in Activity 18. Another pathway is where the community will get help from different partners to implement resilience actions – partners like different government offices, or other organisations. The third pathway is where the CRI programme can give support to certain types of resilience actions.

The community should keep all these three possible pathways in mind when writing their resilience action pathway plan. This is a community resilience plan that should be used by the community for many different types of resilience actions, not just things that the CRI programme can support.

» Remind the group that CRI is working with 65 communities across 6 countries, so there is limited money to spread around!

Present

WHAT CAN CRI SUPPORT?

Present a short summary of the areas where CRI can support parts of the community resilience action plan[33]. Don't go into a lot of detail, this is just a very short awareness session. Further discussion will be held after the Profiles and Plans are launched to government and other partners at a later event.

1. **Nature-based land management for ecological resilience:**
    - Increase the area of land/rivers/sea under restoration, management or protection
    - Align community ecosystem actions with Indigenous knowledge leadership development or strengthening Indigenous leaders ability to engage in ecosystem protection.

2. **Nature-based livelihoods and food security:**
    - Increase number of 'nature-based' income sources for households
    - Increase amount of food coming from gardens for households (in nature-friendly ways, not artificial fertilisers etc!)
    - New nature-based agricultural practices, crops or technology used by community and/or households

3. **Improved community preparedness and resilience to climate-related disasters:**
    - Increase Disaster Response knowledge and practices
    - Increase Disaster Response community capacity
    - Government involved in Disaster Risk Reduction training

Group:

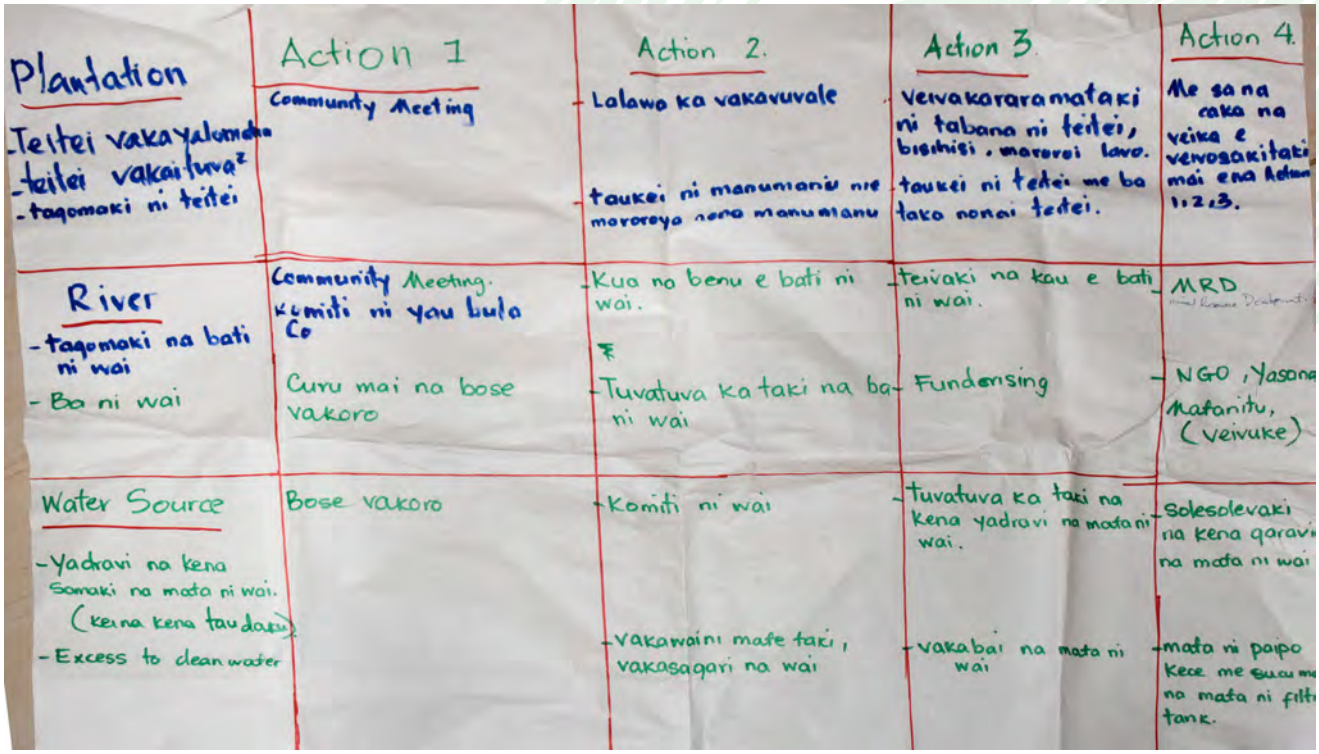
Action Pathways – are decisions and activities done over time to achieve the community resilience indicators.

1. Give each group blank flip chart paper and sticky notes (or note paper and tape).

2. Write each strategy from the Strengths & Strategies Framework into the Pathway Plan template. Each strategy identified in Activity 18 should have its own row in the resilience pathways plan.

3. Get each group to discuss and write their adaption pathway steps (What? Who?) for each strategy by asking over and over: *"What action is needed? Who will do this action?"* Words and drawings can be used, as long as there is enough detail so the meaning is clear for community members after the workshop is ended.

33 This section links to the resilience grants that Live & Learn had available through the CRI programme.



4. Tell the group that the actions they chose should be realistic and will bring increased community resilience, no matter whether climate change gets worse or not.

5. After the resilience pathway plan is completed, the group should review the draft actions and discuss the following questions to check that the planned resilience actions are positive:

   - Will any of these actions make life harder for any group in the community (such as youth, women, elderly, or another clan/tribe)?
   - Will any of these actions have a bad unplanned consequence for another important part of the ecosystem that supports the community (for example other living things such as animals, insects, soil microbes, fish, etc)?
   - Are these actions including all the different groups in the community who need to be involved in important resilience decisions?

The group should make any necessary changes after discussing these questions. Then the Pathway Plan is finished and ready to be presented to the entire community for final discussion.

» To help you with confidence in facilitating this process a full example is provided on the next page. This example follows on from the example in Activity 18. Don't copy this example, just use it to help your understanding.

TEMPLATE: COMMUNITY RESILIENCE PATHWAYS PLAN

Resilience Strategies	ACTION 1	ACTION 2	ACTION 3	ACTION 4
Strategy 1	*What?* *Who?*	*What?* *Who?*	*What?* *Who?*	*What?* *Who?*
Strategy 2	*What?* *Who?*	*What?* *Who?*	*What?* *Who?*	*What?* *Who?*
Add rows as needed				

EXAMPLE: COMMUNITY RESILIENCE PATHWAYS

Resilience Strategies	ACTION 1	ACTION 2	ACTION 3	ACTION 4
Training on Disaster Preparedness	Training sessions organised. *Who: Community Disaster Committee, NDMO, Live & Learn*	Training session to write community disaster plan, and training on using traditional and other knowledge for rebuilding houses after cyclones *Who: Community Disaster Committee, NDMO, Live & Learn*	Do feasibility study for community evacuation centre upgrade to be more inclusive for women and people with disabilities. *Who: Community Disaster Committee, NDMO.*	Get funding for upgrade of community evacuation centre. *Who: Community Disaster Committee, NDMO.*
Training and establish practices for dry season farming, and training on water management, that includes Indigenous knowledge	Organise and implement training on water management *Who: Community Water & Climate Change committee*	Organise and implement training on dry season farming, including female farmers. *Who: Dept Ag, Live & Learn*	Identify knowledge holders for Indigenous knowledge on agriculture and hold program to share knowledge with other farmers, and youth. *Who: Community Resilience Working Group, Live & Learn*	Procurement of drought-resistant plant species for gardens. *Who: Dept Ag*
Training on conservation – planting new trees.	Training for community on invasive species impact and improved tree planting in community conservation area. *Who: CCA committee, DEPC.*	Procurement of tree seedlings for replanting. *Who: CCA committee, DEPC.*	Set up plant nursery for future tree replanting needs. *Who: CCA committee, DEPC.*	
Establishment of project for biodiversity credit	Feasibility study, creating examples of handicrafts from bush products. *Who: CCA committee Nakau*	Training and skill building within community. *Who: Community, Vanuatu Skills Partnership.*	Assess/set up market access for handicrafts. *Who: CCA committee.*	Biodiversity credit process put in place. *Who: CCA committee Nakau*

ACTIVITY 20: Resilience Profiles/Plans Launch

OBJECTIVE

Resilience Profile/Plans launch to:

1. Connect communities with each other to share resilience plan focus and complementary activities
2. Connect communities with stakeholders for funding and supporting pathways

MATERIALS:

- Community Resilience Profiles and Resilience Plans
- Useful summaries of community resilience visions and pictures that can be displayed
- Any relevant government or NGO or other useful documents about opportunities to support resilience plans
- Group work facilitation materials (data projector, microphone, banner, markers, paper, etc)

PARTICIPANTS

Representatives from communities (ensure equitable representation, including women and youth), leaders (government, church, NGOs, business, etc), and CRI team members

TIMING

Do this as soon as possible after the community resilience planning workshop has been completed, to maintain momentum in allocating resilience grants based on the plans that can compliment other opportunities for community. Select dates that allow for participation of key government leaders, and give enough notice (and follow up) to facilitate their attendance.

PROCESS:

Launch Live & Learn CRI team and community representatives plan an appropriate launch of the community resilience profiles and plans.

Present Community representatives present brief summaries of their resilience plans.

Present Government representatives present brief summaries of their policies and programs that could support the community resilience plans.

Groups Facilitated "speed dating" type event where community representatives can have short discussions with government, NGO and private sector representatives on opportunities for further support and collaboration.

Community Resilience Plan Report Template

COMMUNITY NAME:
DATE:

TYPED UP COMMUNITY STRENGTHS & STRATEGIES FRAMEWORK

TEMPLATE: Community Strengths and strategies framework

Most Important Resilience Indicators				
	Absorb Strengths			
	Absorb Strategies			
	Adapt Strengths			
	Adapt Strategies			
	Transform Strengths			
	Transform Strategies			

TYPED UP COMMUNITY RESILIENCE ACTION PATHWAYS PLAN

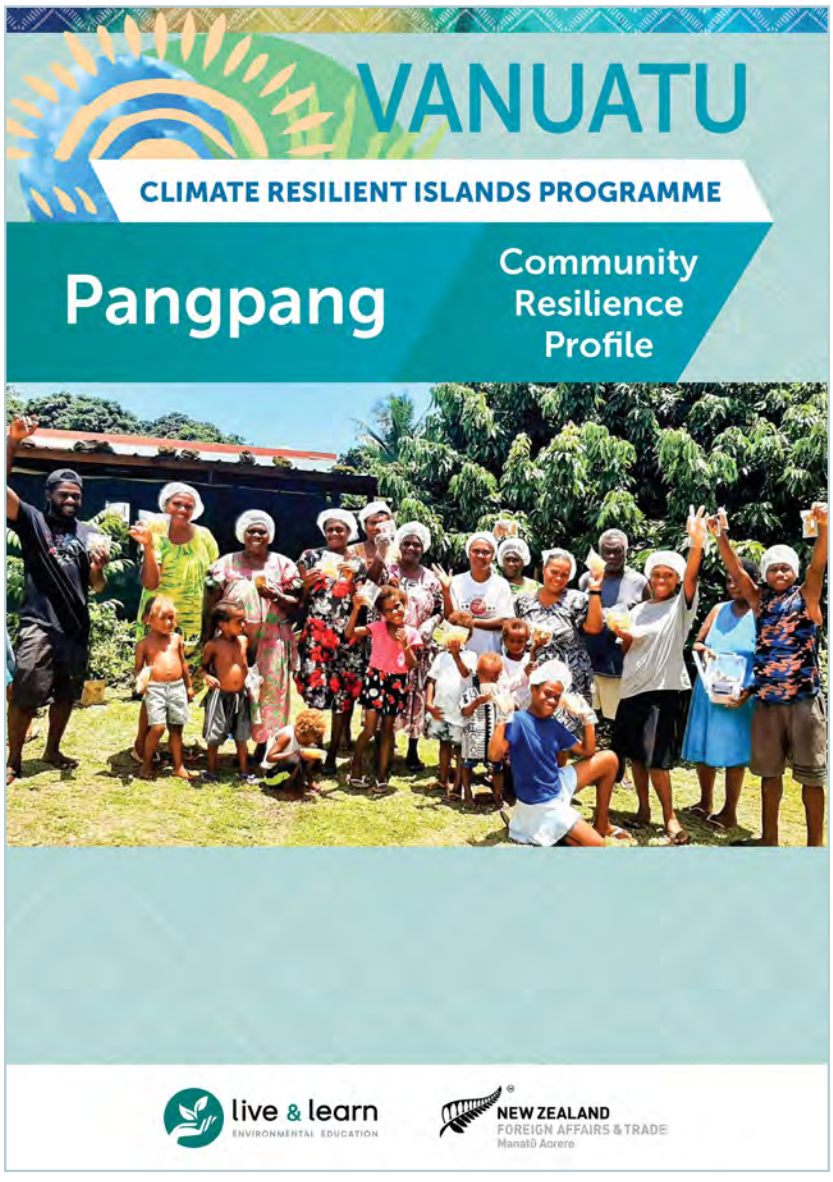
» Add in additional rows as needed.

Strategy	ACTION 1	ACTION 2	ACTION 3	ACTION 4

Appendix 1

Live & Learn acknowledges the generous contribution of the community of Pangpang in Vanuatu in giving permission for us to publicly share their community resilience profile and resilience plan as an example to help other communities and organisations see what a community resilience profile and plan looks like in the CRI programme. These two documents are now being used by Pangpang community to implement resilience actions together with Live & Learn, local government and other partners.

Example Community Resilience Profile



Example Community Resilience Profile

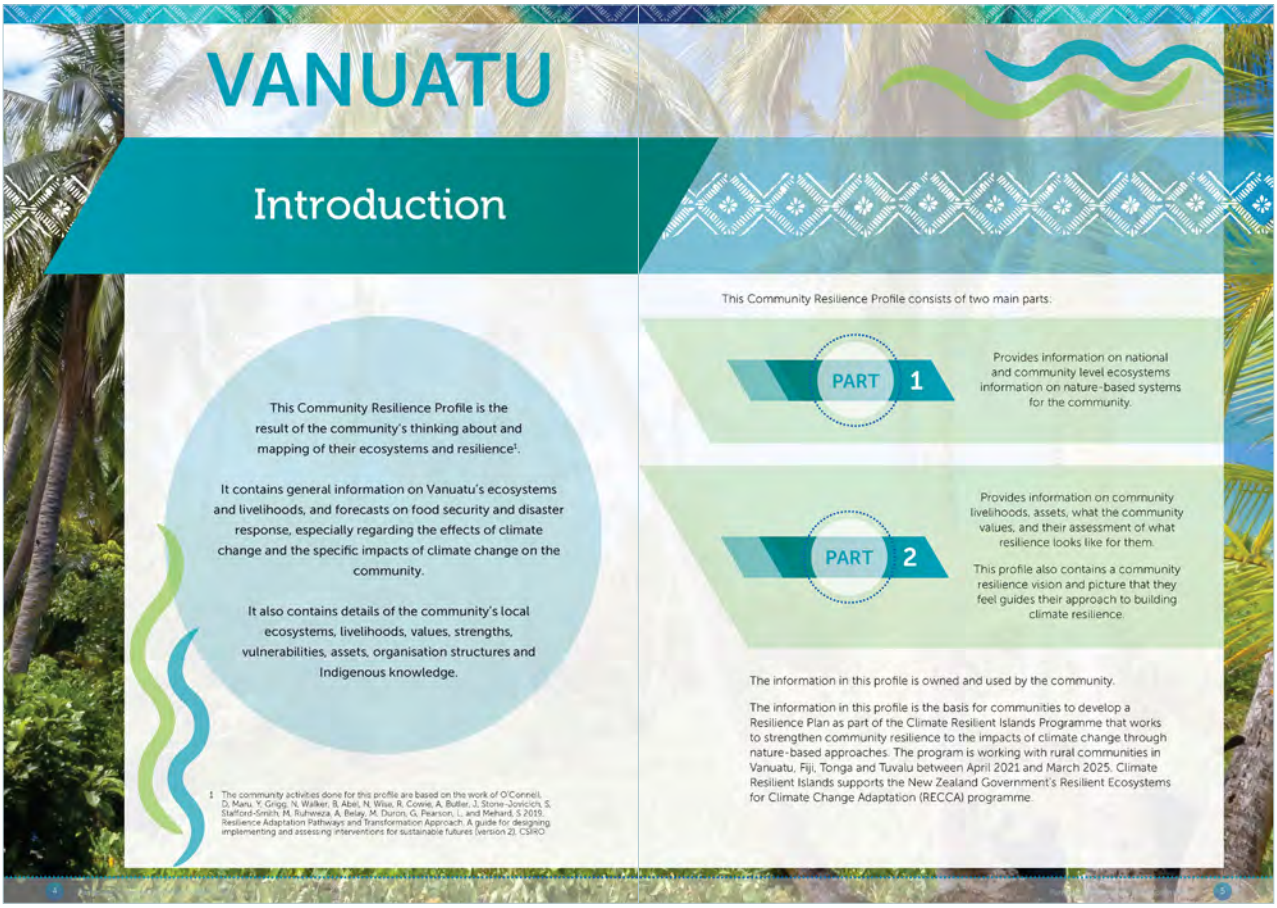
The information in this profile was generated in 2022 by the community in collaboration with Live & Learn Environmental Education as part of the Climate Resilient Islands programme, through the New Zealand Government Resilience Ecosystems for Climate Change Adaptation programme.

For more information go to:
www.livelearn.org/climate-resilient-islands

live & learn ENVIRONMENTAL EDUCATION

NEW ZEALAND FOREIGN AFFAIRS & TRADE Manatū Aorere

Contents



VANUATU

Introduction

This Community Resilience Profile is the result of the community's thinking about and mapping of their ecosystems and resilience[1].

It contains general information on Vanuatu's ecosystems and livelihoods, and forecasts on food security and disaster response, especially regarding the effects of climate change and the specific impacts of climate change on the community.

It also contains details of the community's local ecosystems, livelihoods, values, strengths, vulnerabilities, assets, organisation structures and Indigenous knowledge.

1 The community activities done for this profile are based on the work of O'Connell, D, Manu, Y, Grigg, N, Walker, B, Abel, N, Wise, R, Cowie, A, Butler, J, Stone-Jovicich, S, Stafford-Smith, M, Ruhweza, A, Belay, M, Duron, G, Pearson, L, and Mehard, S 2015. Resilience Adaptation Pathways and Transformation Approach. A guide for designing, implementing and assessing interventions for sustainable futures (version 2). CSIRO.

This Community Resilience Profile consists of two main parts:

PART 1 Provides information on national and community level ecosystems information on nature-based systems for the community.

PART 2 Provides information on community livelihoods, assets, what the community values, and their assessment of what resilience looks like for them.

This profile also contains a community resilience vision and picture that they feel guides their approach to building climate resilience.

The information in this profile is owned and used by the community.

The information in this profile is the basis for communities to develop a Resilience Plan as part of the Climate Resilient Islands Programme that works to strengthen community resilience to the impacts of climate change through nature-based approaches. The program is working with rural communities in Vanuatu, Fiji, Tonga and Tuvalu between April 2021 and March 2025. Climate Resilient Islands supports the New Zealand Government's Resilient Ecosystems for Climate Change Adaptation (RECCA) programme.

Pangpang

Pangpang community have developed their Resilience Vision, and a supporting Resilience Picture.

The words and picture are the voice of *Pangpang community*.

Community Resilience Vision

Resilience Picture

The men see resilience as a vehicle. 'The vehicle consists of different parts that enable it to move. In the community when we men work in a team, it inspires people to work harder. We have a cultural belief that by working together, we are motivating each other to be more productive.'

The women view resilience as laplap (traditional pudding). 'We need different items and ingredients to cook a delicious laplap - yam, firewood, leaves, stones, meat, slippery cabbage, and dry coconut. When you add the different ingredients it tastes sweeter, and when you eat it your body becomes stronger and healthier each day. We have different talents and when put together they produce a better result.

Resilience Vision

The Pangpang resilience vision is for all households to have improved infrastructures, health and energy services and restoration of degraded areas.

Local Indigenous Resilience Knowledge and Stories

In the past, because of the low population there was low consumption of natural resources. There was hardly any tabu on natural resources. The ancestors harvested resources for food, not for commercial purposes.

In the past, food was collected before the hurricane season and buried in the ground. Ripe breadfruits were collected and put in the sea for a month and then buried for two weeks to preserve them.

Breadfruits are wrapped in leaves, hung over a fireplace and heated over the fire that can last for a year. The preserved breadfruit still tastes fresh. Water was collected from a natural freshwater pool or the river and stored in bamboo.

Shelters were built from wild cane. These simple houses are quite low and reach the ground. These houses are built to withstand cyclones. On the rooftops are coconut leaves that are placed there to protect the roofs. Houses were built with local materials. Posts are tied together with ropes and not nails.

In the past, more people had knowledge of different planting seasons and the planting practices that can be used for different seasons.

Money was not used, but food was readily available. There were feral pigs that were hunted and there were plentiful fish. Seafood from the ocean was caught using spears.

Goods were traded between Ngunese and Mataso. The Ngunese people gave food and coconut to the Mataso community while the Mataso people exchange these vegetables with fruits.

Nowadays, when we complete a traditional marriage ceremony, we have to do a church wedding as well. It is now considered an important part of the wedding ceremony.

Example Community Resilience Profile

Ecosystems and Climate – Vanuatu Overview

Vanuatu consists of more than 80 islands. The predominant ecosystem is tropical forests, which cover 76% of the land area, with lowland forests up to around 600m in elevation and montane cloud forests above that. Important coastal ecosystems include mangroves, seagrass and coral reefs. Approximately 80% of Vanuatu's population live in rural areas, and many work in subsistence agriculture. Agriculture is significant to Vanuatu's economy – food is more than 80% of the country's exports.

TEMPERATURES AND RAINFALL:

Dry season:
May - October

Wet season:
November - April

Average temperatures are between 21-27C. Recently temperatures have been 0.5-0.6C above average.

Rainfall can vary up to 1800mm between wet seasons. Average annual rainfall is also much higher in the north (4000mm per year) compared to the south (1500mm per year).

Vanuatu is highly susceptible to tropical cyclones, with 20-30 passing over per decade.

OCEANS:

Coastal ecosystems are the second largest ecosystems, around 14% of the country. Coastal mangroves, seagrass and coral provide valuable food services, now threatened by human impacts. Vanuatu has recorded 6mm of sea level rise per year, above the global average.

HABITAT DIVERSITY:

Forests are the major ecosystem, 75% of land area. Other important ecosystems include mangrove forests, swamp forests and kauri pine stands.

Vanuatu has habitat for diverse animals, birds and plants. Coastal finfish and tuna are the most important seafood resources. Ecosystems have been heavily modified by human activities, particularly tropical forests, grasslands and coral.

FRESHWATER:

Vanuatu has very little freshwater, with the majority of people relying on rainwater and rivers.

Regional and national climate change impact and forecasts

Vanuatu is considered extremely vulnerable to climate change. Natural hazards already cost Vanuatu an estimated 6% of annual GDP. Climate change impacts are already being felt. Rising sea levels and erosion are threatening communities and community structures like schools, churches, airports and roads. Increasing temperature and decreasing rainfall are straining freshwater resources, with land use change, population increase, urbanisation and cyclones adding to the problem.

Climate change forecasts vary significantly based on both the low- and high-emissions scenarios.

Depending on the specific scenario:

- **Annual temperature will increase between 0.5C and 2.0C**
- **Annual rainfall could vary between a 10% decrease and a 20% increase**
- **There will be many more heatwaves**
- **Sea level will rise between 17-37cm by 2059**

ND-GAIN[2] Resilience Ranking:

ND-GAIN Country Index rank

132

SCORE: 41.1

Vulnerability 0.541
Readiness 0.362

The high vulnerability score and low readiness score of Vanuatu places it in the upper-left quadrant of the ND-GAIN Matrix. It has both a great need for investment and innovations to improve readiness and a great urgency for action. Vanuatu is the 27th most vulnerable country and the 76th least ready country.

2 A country's ND-GAIN Index score is composed of a Vulnerability score and a Readiness score. Vulnerability measures a country's exposure, sensitivity and ability to adapt to the negative impact of climate change. ND-GAIN measures the overall vulnerability by considering vulnerability in six life-supporting sectors – food, water, health, ecosystem service, human habitat and infrastructure. https://gain.nd.edu/our-work/country-index/rankings/

Vanuatu National Climate Change Adaptation and Disaster Governance

Due to Vanuatu's high exposure to hazards and risk of disaster, disaster management governance of disasters and climate change is fully integrated. Key governing bodies function under the **Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management (MoCC)** and include the following[3]:

- The **National Advisory Board on Climate Change and Disaster Risk Reduction (NAB)** develops all DRR and climate change policies and guidelines, and is a focal point for information – including coordination and national climate finance processes.
- The **Department of Climate Change (DoCC)** coordinates and implements all climate change adaptation, mitigation and DRR activities. The DoCC and NAB have complementary roles and work together to ensure Vanuatu's policy on climate change and DRR is mainstreamed.
- The **National Disaster Committee (NDC)** advises government agencies on disaster risk management. The body also oversees implementation of disaster risk management policies implemented by the NDMO, government agencies, partner agencies, civil society and the private sector.
- The **National Disaster Management Office (NDMO)** works closely with the NDC. The NDMO is responsible for the coordination of responses to emergencies and disasters across Vanuatu. The NDMO also plays an important role in preparedness.
- **Provincial Disaster and Climate Change Committees (PDCCCs)** have been established to coordinate DRR and CCA activities, develop plans, and disseminate information to communities. Additionally, the NDMO, in partnership with NGOs and the Red Cross has supported the establishment of Community Disaster and Climate Change Committees (CDCCCs) across the country to further support communities to be actively engaged in recognising, assessing and mitigating risks.

Community Disaster and Climate Change Committees (CDCCCs)

Since 2008 communities across Vanuatu have been supported to establish CDCCCs for community-based disaster risk reduction. CDCCCs coordinate local activities and support communities' participation and leadership in disaster preparedness and response. CDCCCs can also conduct vulnerability assessments, create community action plans, provide training and share information with community members, as well as assist the community during times of disaster with evacuations, data collection and early response. Members of CDCCCs are mainly volunteers from the community, which has raised challenges for sustainability and resourcing of the committees.

Pangpang has a disaster committee. There is no disaster plan, but the committee works well with the community.

The community has two Presbyterian church buildings and one Seventh Day Adventist church building. The church buildings are used as evacuation centres during cyclones.

3 Source: Report Partner 1 – Vanuatu Case Study, [ITC] Australian Humanitarian Partnership

Pangpang

Ecosystems and Climate

Pangpang Community
Efate
Shefa Province
Vanuatu

The community is located on the coastline 11 metres above sea level. GPS coordinates are 17°40'29"S and 168°32'41"E. Pangpang community consists of 65 households with an approximate population of 200 people. This includes men, women, children, youths, and elderly people. There are five people living with disabilities.

Images from www.gkgps.com

Pangpang community is a new settlement with people from different islands. When missionaries arrived on the shores, they moved people from their Nasaras (tribal land, mostly inland) down to the coast. In 1964, there were only four households in the current Pangpang community location. Around 1970, there was an influx of people to the current location due to good freshwater accessibility and access to the sea.

The community has two main church denominations – Seventh-day Adventists (who worship on Saturday) and Presbyterian (who worship on Sunday). There is also a small group with the new Covenant Church. A few minor organizations like the women's fellowship (PWMU), youth group and children's ministry (Sunday School) are also operational within the churches. There are two Presbyterian Church buildings and one Seventh Day Adventist church building. The church buildings are also used to accommodate people during cyclones. The community works well together, regardless of denominations. When there is work to be done, the community cooperates to complete the work.

The community comes together during traditional celebrations and events like marriages and death. The community also has a playground and sports oval that are important to them.

The community is governed by a chief, who sets up a council that helps him to implement community tasks and make and action decisions made by the chief. The term period for the council of chiefs is four years. The chief system follows bloodline. The current governance system works well within the community. After disasters, the chief's council helps communities rebuild their houses.

Pangpang still values traditional knowledge. Even migrants from another community have to follow the traditional practices of Pangpang. However, western culture and influence are already overriding traditional practices, with small changes happening within the community and the current younger generations. The participants believe there is no proper teaching of traditional practices at individual homes.

Community members can't remember seeing a cultural dance in Pangpang. Offshore islands have their custom dances, but within communities on Efate, people no longer perform cultural dances.

The local Indigenous people of Pangpang depend entirely on agriculture for food and income. The agricultural produce is transported to Port Vila and sold at the central and other local market outlets. Some households are running retail shops in the community while a few households have small woodlots that they harvest and sell to meet the cost of living. One household operates a Kava bar that sells kava juice. Many male community members are in Australia or New Zealand working on farms through the Recognised Seasonal Employer (RSE) programme.

Impacts of climate change can be seen across Efate. Efate tends to be somewhat drier than islands further north in Vanuatu, but it can see high variability in both rainfall and temperature. Long term projections suggest it will warm more moderately than further north, with warming estimates ranging from 0.45C–2.85C by the end of the century. Rainfall could see up to a 70mm decrease under moderate projections or an increase of up to 90mm under the most extreme projection.

Local Ecosystem Information

SECTOR	COMMUNITY KNOWLEDGE COMMENTS AND GAPS/QUESTIONS
WATER AVAILABILITY	• The community have three main sources of water for family use. They have a water supply system from a stream, connected with pipeline to the community, a solar pump connected with the water supply system, and individual household access to their own rainwater tanks. • The community also has access to an open river used for swimming. • The community received a solar pump and 10,000L storage tank, from UNICEF and Save the Children respectively. Now almost every household has access to clean and safe drinking water. The disaster committee ensures people have access to clean water. • The water supply is valued by the community. However, there are broken pipes in several places that need to be replaced. Damage is due to cyclones and accidental breakage when planting gardens.
HUMAN ACCESS	• The community is situated mostly on flat land area, all roads and paths in the community are on flat land. They have good access to roads to food garden areas and all food gardens are in flat land areas. • Food is transported manually or by wheelbarrow. • Heavy rains affect the paths, meaning that sometimes women selling produce have to arrange for a truck to collect the produce.
SUN EXPOSURE	• Due to being close to the equator the area receives approximately 12 hours of sunlight every day of the year. The community faces southeast.
WATER FLOW AND LAND SLOPES	• The community was located in flat areas, so during heavy rainfall running water moves down slopes only in the centre of the community.

Example Community Resilience Profile

SECTOR	COMMUNITY KNOWLEDGE COMMENTS AND GAPS/QUESTIONS
FLOODING	• In very heavy rain there is some flooding on the boundary of the community, which does not generally affect garden areas.
WIND	• During the dry season the wind comes from the south-east during the day. During wet season, the wind at night comes from the north-east and west. • South-east wind is the normal wind direction for the community. • When the wind direction changes to the north-east or west, this is a good indicator for bad weather, even cyclones. • Topography is flat, so wind damage occurs often.
FIRE	• There are no regular fires, so risk of wildfire is low.
SOIL	• The community has three types of soil: 1. Clay soil – red soils good for planting food crops. Red soils are mainly found further inland. 2. Loam soil – Black soil covers very rich soil good for planting agricultural crops and vegetable crops. Black soils are mainly found in the area used for food gardening. 3. Sandy loam soil – good soil to grow crops. Found in some areas around the community and near the coastal area.
SACRED AND TABU PLACES	• There is a cave for bats – linked to traditional/local tales. • The locals will use a special palm and hit a hole (considered a tabu site at Pangpang) with it for good luck when fishing for mangru (fish species). This palm species is no longer being planted/no longer exists in this community. • There is a singing stone – it usually sounds like someone is crying/ mourning. This is considered a bad omen in the community, as it usually forewarns a death in the community (Pangpang, Epau or Etoni). If the community hears a male voice crying, this means the person dying will be a man; a female voice indicates a woman.

Local Ecosystem Zones and Elements

Zone 1 consists of the village, which includes houses, church, nakamal and store.

Zone 2 includes fenced areas for pigs and chickens, and also some individual backyards.

Zone 3 includes livestock areas and plantations, and also food garden areas.

Zone 4 consists of the conservation area and also the zone where the community used to collect firewood and nuts from trees.

Zone 5 includes dark forest and the Community Conservation Area. This is where most wild animals live.

Connections between zones

- The 5 zones are like our hand with five fingers – we depend on every zone.
- All zones have connections, but natural hazards like cyclones can destroy every resource found in each zone. Therefore, cyclones are a threat to every zone.
- We live in the community, so if you have a house, you need firewood to cook your own food. So that means zone 1 depends on zone 3.
- Zone 1 depends on zone 2. People have backyards and this is where they collect vegetable crops.

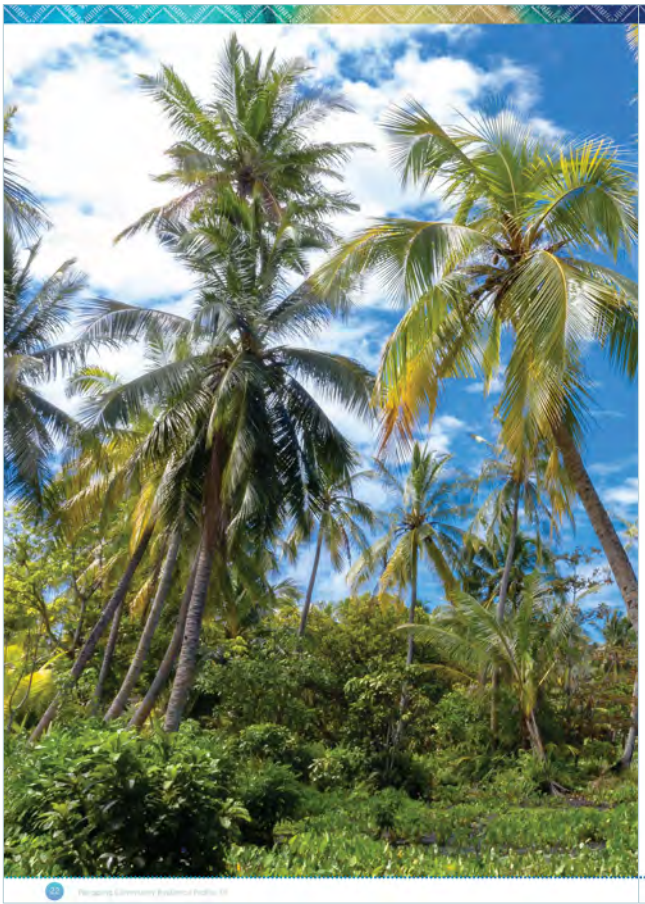
Formal community systems for managing different zones:

- Zones 1, 2, 3 and 4 are managed by individual owners.
- Zone 5 is the Community Conservation Area, which is managed by the Pangpang CCA Committee.

Ecosystem element strengths and challenges table

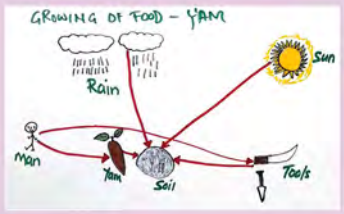
Ecosystem element	Important in which system web?	How this element is strong	How this element is vulnerable or threatened
FOREST	Natural Environment Livelihood Health	• Forest provides income • Home for wildlife animals • Gives oxygen • Gives local medicine	• Cyclone damage to trees • Small-scale logging from locals for housing • Some gardening in forest, requiring clearing • Boundary disputes with neighbouring village
RIVER	Growing food Natural Environment Health	• Provide water for crops • Water used for swimming	• Longer dry season means less water in the river • Cutting of trees along the river by locals, causing erosion • Locals are polluting the river by dumping rubbish into the river and piling up their rubbish along the side of the river
FOOD GARDENS	Growing food Natural Environment Livelihood Health Kinship	• Source of income for community members and food for families • Good soil	• Cyclone - destroys food gardens • Flooding - causes damage to food gardens • Dry Season - dries up the soil and causes the vegetables to dry up • Wild pigs damage the gardens • Sometimes food is stolen from the gardens
COCONUT PLANTATIONS	Growing food Natural Environment Livelihood	• Source of income for community members and food for families	• Cyclones destroy plantations • Large-scale replanting not done

Ecosystem element	Important in which system web?	How this element is strong	How this element is vulnerable or threatened
SOIL	Growing food Natural Environment Livelihood Health Kinship	• Good soil provides food and income • Community is involved	• Flooding impacts gardens infrequently • Land disputes for food garden sites
LIVESTOCK	Livelihood Health	• Provide meat for us to eat and income. • Can help clean the plantation • Promote community involvement	• Cyclones hurt or kill livestock • Have poor management of livestock and broken fences • In dry season it is hard to find water for them • Livestock suffer from disease
CHURCH	Kinship	• Takes care of our unity and spiritual affairs	• Lack of cooperation at times • Cyclone damages church buildings
ROADS	Livelihood	• Easy access to food garden areas • Easy access to capital to see vegetables at markets	• Road can be damaged by flooding and by cyclones
SPORTS GROUNDS	Health Kinship	• Important for our health and community unity	• The sports ground can be damaged by flooding and cyclone



Systems: Exploring connections between elements

GROWING FOOD SYSTEM: GARDEN YAM

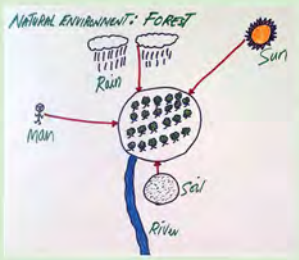


Some of the key elements needed for growing a yam garden are sun, rain, soil, yam tubers, spade, knife and the farmer.

The connections in this system:

- Yam needs sun and soil to grow healthy
- The yam also needs rain for watering
- A farmer needs additional materials like knife, spade and planting materials to plant a yam.

NATURAL ENVIRONMENT SYSTEM: FOREST



The forest gives us clean, running water. Some of the key elements needed for having a healthy forest are sunlight energy, rain, ground and people to look after the forest and help to plant more trees.

The connections in this system:

- Forest needs sunlight for the process of photosynthesis to grow healthy
- Forest needs good soil
- Forest needs rain
- Human beings are responsible for looking after the forest

LIVELIHOOD SYSTEM: MARKET

The key elements needed to sell vegetables at the market are sun, soil, food crop planting materials, tools and truck for transportation of local crops to the market.

The connections in this system:

- A farmer needs tools like knife and spade for clearing the food garden area.
- When all agricultural crops are planted, they need sunlight and rain to growth healthy.
- When all food crops are ready, a farmer harvests and uses a truck to transport food crops to the local market.
- Each famer can use the money to improve their livelihood.

HEALTH SYSTEM: HEALTHY FOOD

The key elements of having healthy food are soil to grow food crops, water and sunlight.

The connections in this system:

- Land for planting of crops.
- Some tools for land clearing.
- Food crops need sunlight and rain to grow healthy.

KINSHIP SYSTEM

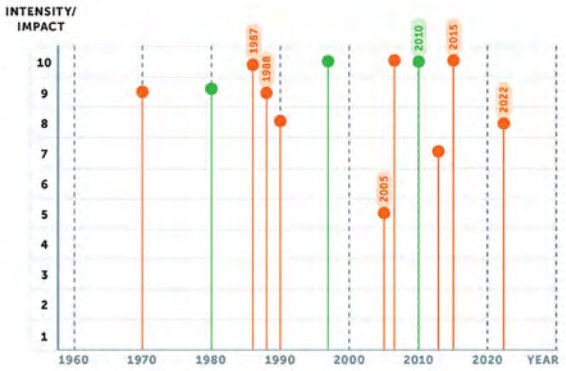
The key elements for kinship governance are chief, village council of chiefs, church and the community.

The connections in this system:

- The community lives under the authorization of the community chief.
- We also have different churches and different organisations.
- When issues arise then we have the community leaders and the chief to solve the issues.

Example Community Resilience Profile

Timeline of important events



2022 – Covid 19 : Spread of Covid 19. Economic crises, prices increase livelihood changes.

2015 – Cyclone Pam : Damage to garden, road, water supply system and forest.

Rural Seasonal Exchange (RSE) : More young people in the community involved in the RSE, which brought more income to the community but less labour. People in the community build stronger houses that withstand cyclones, but less human resources in the community.

2010 – Ring road constructed around Efate: Good infrastructure for easy access to gardens and markets.

Dry seasons: Damage to soil, low water availability for food gardens and livestock.

2005 – Flooding : Huge flooding in the community damages gardens and house.

First water supply instalment: Provides good water supply to the community.

People move to Pangpang due to sea level rise: Damage to livelihood and natural resources.

1988 – Cyclone Nigel : Damage to food gardens and road infrastructures.

1987 – Cyclone Uma: Damage to food garden, house and road infrastructures.

1980 – Independence Day: Free from colonialism.

1970 – Mining at Forari: Destruction of natural resources.

Pangpang Food Seasonal Calendar

Comments on Seasonal Calendar:

- Full moon is the right time for planting banana.
- January, February and March are the months with more expected rainfall.
- Chiefs' day is celebrated annually on the 5th of March.
- April to May – more low tides are expected, and this is the right time to collect shells in the reef.
- April – time to harvest yam planted the year before.
- Every 1st of May the community and its churches celebrate the arrival of the Gospel.
- June – a lot of pests destroy fruit tree leaves.
- June to July is the season for mangoes to flower.
- June is when most people in the community get flu because it is the dry and cold season.
- 30th July 1980 is the independence celebration day for Vanuatu.
- August is the planting season for yam.
- August to September is when yam gives out young shoots. This also indicates that the reef is growing, so we expect fish poisoning.
- October, November, December – most farmers or gardeners in the community plant the kumula in October and harvest in November.
- 29th November – celebration of the signing of the constitution.
- October and November are the months for yam staking, which helps the yam to produce good quality food at harvest time.
- The community expects more flies in the month of December.
- December is the breeding seasons for fish. Fish can be easily caught when you are diving because they don't swim very fast.
- December is a good time to harvest kumala.

Impact of climate change on time for growing food crops:

- Weather is changing due to climate change; traditionally the month of June begins the dry season, but now there is still some rain in this month.
- Climate change has influenced most of the planting systems for most our agricultural crops. A taro called suckers taro, normally planted as water taro and harvested just within 3 months, is now harvested after 4 months. This taro was normally planted in the month of March and is now harvested in July.
- In the past vegetable crops were planted following our normal seasonal calendar, but now planting is determined by the time requirements of the market.

Livelihood Information

- In Pangpang every household sources food from the garden. They plant yam, cassava, taro, banana, vegetables, and fruits in their family gardens. Recently it has been observed that young people eat a lot of imported food from the shops.
- Most households harvest timber from the forest to build their own houses. Lately, people started to build permanent houses that are safe during cyclones.
- There are a number of retail shops in the community that provide goods and services.
- Coconut plantations are a source of food at home. The community also sells coconut fruits at the local market in Port Vila.
- People rely heavily on agriculture for food and livelihood. Produce is sold at the market and the income they earn is mostly allocated for school fees and other essential needs.
- Two local individuals in Pangpang own the local transport business. People hire transport to travel to Port Vila and also to transport agricultural produce to the urban market.
- Four individual members of the community own fishing boats. They collect fish and sell it to the people in the community.

The resources that contribute to the physical and financial wellbeing of Pangpang are located in gardens, plantations and river. The community has livestock and relies on the road system for transport to markets. Yields are not sharply declining but the community is concerned about increased pests and increased temperatures for their effects on crops.

LIVELIHOOD	LIFE	WELLBEING
Retail shops, coconut plantations, food gardens, trucks, boats (fishing), kava bar, roadside markets, permanent bridge and road	River, water system, water tanks, food gardens, permanent houses	Churches, sports facilities and playground

How does your household get income?

All households predominantly gain income from selling vegetables. Three households surveyed had no other income source. The RSE (regional seasonal employee) system is important for supplementary income.

Number of family members	Income Source 1	Income Source 2	Income Source 3
7	Selling vegetables	Operating small shop	Money from relatives in the community
7	Selling vegetables	Selling processed food products	
6	Selling vegetables	Other	
6	Selling vegetables	Other	Wage work
5	Selling vegetables	Other	
5	Selling vegetables		
5	Selling vegetables		
5	Selling vegetables	Money from relatives in the community	
4	Selling vegetables	Other	
4	Selling vegetables	Other	

Number of family members	Income Source 1	Income Source 2	Income Source 3
4	Selling vegetables		
2	Selling vegetables	Other	

What does your household spend money on?

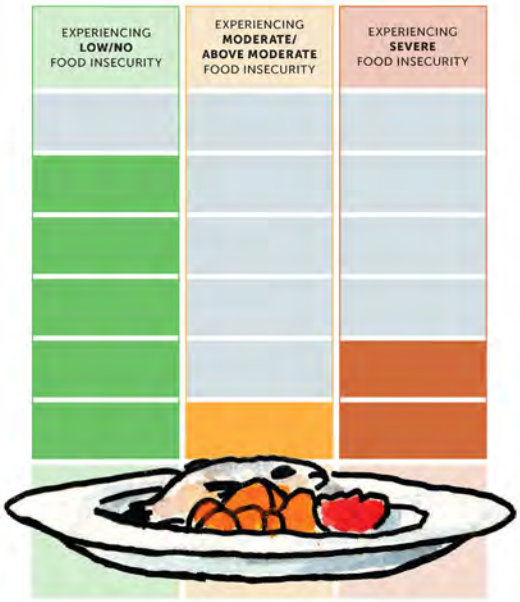
Households in Pangpang spend money on the items listed in the graph below. Households spend money across the variety of areas, with no single cost predominating. Education is the highest cost, with food and transport significant.

'Other' expenditure includes church and family commitments, building supplies and agricultural equipment expenses.

16% of households meet 80-100% of their food needs from gardens, farm and sea. 66% of households meet 60-80% of their food needs from gardens, farm and sea. The majority of the community grows crops. They raise chickens and pigs. A minority raise cattle. They collect timber, firewood, fruit and nuts from the forest. A minority collect resources for handicrafts. Above-ground pests and rising temperatures are seen as significant threats to agriculture.

Example Community Resilience Profile

Food Insecurity Experience



Across the eight households surveyed, Pangpang reported varying levels of food insecurity. While five were found to be experiencing low or no food insecurity, having responded Yes to three or fewer questions, one household was experiencing moderate food insecurity and two were in the severe category. Concerningly, these two households responded Yes to every indicator.

Unusually, the most commonly experienced indicators were the third, tagged FEWFOODS, asking *'Was there a time when you ate only a few kinds of foods because of a lack of money or other resources'*, the fifth, tagged ATELESS, asking *'Still thinking about the last 12 MONTHS, was there a time when you ate less than you thought you should because of a lack of money or other resources?'*, and the seventh, tagged HUNGRY, asking *'Was there a time when you were hungry but did not eat because there was not enough money or other resources for food?'*.

Each of these received four Yes responses. All other indicators received two Yes responses, except for the final one, tagged WHOLEDAY, asking *'During the last 1 MONTH, was there a time when you went without eating for a whole day because of a lack of money or other resources?'*, which had three.

This is a strange data distribution and suggests the data may not be entirely reliable. Typically, Yes responses should follow a roughly linear pattern, with decreasing affirmative responses through the questions. This may mean more analysis needs to be done to assess the true state of Pangpang's food insecurity.

Community Resilience Indicators

The following are indicators of how the community considers itself to be resilient.

Knowledge

- Good knowledge of farming practices
- Good knowledge of how to access markets

Physical Security

- More resilient families have more than one livelihood
- Secure, safe, water supply
- Strong, well-built houses
- Ability to meet food needs from gardens, small business and RSE program

Connections

- Pangpang is a growing community that works together in cooperative activities. They have strong connections to their churches, and work together on issues that concern the community.
- They also have international connections formed by people who work in Australia and New Zealand on the RSE programme.

Community Risk Summary [4]

Overall resilience indicators:

1. **Secure food gardens plus a second livelihood source**
2. **Safe location of well-built houses, and cyclone-proof construction**
3. **Access to markets for business activities**

There is a trend of increased resilience in some areas – with the community considering that more households are in the 'better off' categories now than 10 years ago. A trend is high participation by men in the New Zealand or Australian rural seasonal workers scheme. This is bringing more income to the families, but also means that family members (particularly men) are away from the community for a very long time. The increased income is often invested in improved housing that can better withstand cyclones, or in transport options to get vegetables to the market in Port Villa.

Risk a combination of three things - Vulnerability, Exposure and Weather/Climate Change.

The summary below shows the vulnerabilities reported by the Pangpang community, the physical exposure to hazards they are experiencing, and the climate change impact they are already experiencing.

Vulnerability	Exposure	Climate Change
• Two households suffering extreme food insecurity • Dependence on food gardens for income • Reduced population due to rural exchange programs with Australia and New Zealand	• Increased high winds and heavy rain • Increased soil erosion • Increased drought or flooding • Increased pests	• Increase in frequency and intensity of cyclones • Increase in frequency and intensity of droughts • Raised temperatures generally

4 Source: https://www.ipcc.ch/site/assets/uploads/2018/03/SREX_Full_Report-1.pdf

Community Priority Values & Assets

The table below is Pangpang's assessment of the things they wish to protect, and the risks to these assets and strengths. The assessment of risk considers each of the aspects of vulnerability, exposure and vulnerability to climate change events. The community considers their food gardens and forest to be most at risk, followed by infrastructure (homes and church building).

ASSET / STRENGTH OF VALUE TO COMMUNITY	HOW IS THIS VULNERABLE?	HOW IS THIS EXPOSED?	IMPACT OF CLIMATE OR WEATHER EVENTS?	WHAT IS THE RISK? (1, 2, 3)
Food gardens	• There is a steep slope near the mostly flat land	• Strong winds, flooding and wild animals	• Heavy rain • Cyclone • Drought	3
Marine environment	• Heavy rainfall muddies the sea	• Exposed to sea level rise	• Sea level rise • Cyclone	3
Forest	• Invasive species • Logging • Agricultural activities	• Strong winds • Human activities	• Heavy rain • Cyclone • Landslide • Drought	3
Homes	• Materials are not strong	• Strong winds	• Heavy Rain • Cyclone	3
Church Building	• Not built with strong materials	• Strong winds	• Cyclone	3
Road Infrastructure	• Affected by floods and erosion, one access road	• Regular heavy rains	• Heavy rain • Cyclone • Man-made Disaster	2
River	• Cutting of trees along the river • River pollution with rubbish	• Flooding	• Heavy rain • Drought	2

Disaster Risk Reduction participation

There is a disaster committee. There is no disaster plan, but the committee works well with the community.

The disaster committee has two committee members from each zone.

After a warning has been issued, each committee member has to visit all households to make sure preparation for the cyclone or natural disaster is underway. They are also tasked to carry out an assessment after the natural disaster. If there is any evacuation to be done, the committee will help out.

Assessment reports are submitted to the Area Secretary; subsequently they are communicated to SHEFA province central data system.

Churches are commonly used as evacuation centres.

50% of community households are permanent buildings, which the community considers to be cyclone proof houses. The rest are semi-permanent houses.

Community Management Groups

In Pangpang, the chief's council and the church are the major management groups in the community. There is also a number of minor organizations that play a significant role in community development. Some organizations are located outside of the community but are contributing to community development.

There are 17 organizations identified in Pangpang.

Chief's council is the key decision-making group. They develop community by-laws and oversee all associate groups in the community. NGOs and government departments must seek approval from the chief and the chief's council before executing a community project.

ELEMENT	HOW MANAGED?	STRENGTHS AND CHALLENGES
WATER	Water Committee oversees any issues regarding water supply in the community. Save the Children works with women and children on protection and safety of women and children including water, hygiene and sanitation. UNICEF works with Water Committee to install solar pump and water tank.	**Strength:** Committee knows their responsibilities **Challenges:** Impact of flooding and cyclones on the water system
DISASTERS/ CLIMATE CHANGE ISSUES	Community Disaster Committee – This committee is responsible for helping people through natural disasters and to manage disaster resilience projects in the community. Oxfam works with Disaster Committee on Water Sanitation and Hygiene.	**Strength**: This group works well together **Challenge**: No current disaster plan
FOOD GARDENS	Individual owners INAC is a farmer's association that supplies local food to Malapoa College and Lycee Antoine de Bougainville in Port Vila. This is the national government's program that buys fresh vegetables from farmers.	**Strength**: Each family/ household has their own food gardens which they maintain **Challenge**: Feral pigs are a big problem for the gardens, which need to have fences to keep the pigs out
FOREST	Conservation Committee is responsible to support the community to protect, restore, and to manage the natural ecosystem. They worked in partnership with environmental organizations like Live & Learn Vanuatu, and the Departments of Environment and Forestry.	**Strength**: Committee has been set up. **Challenges**: Only two active members on the committee thus far, activities have not begun.
MARINE RESOURCES	Fisheries works with Fishermen Association.	**Strengths**: One individual is doing mangrove rehabilitation planting. **Challenges**: No committee
HEALTH AND EDUCATION	Aid post has a committee that is working with the government health team to build an aid post to provide basic health services to the community. COVID -19 taskforce committee was elected to oversee issues regarding COVID 19. Red Cross works with Aid posts and they also assist during disasters A School committee was formed as well to discuss education development.	**Strengths**: A committee is in place **Challenges**: The committee is not effective now. The aid post has materials for strengthening the building, but the committee hasn't been able to get the work done. There is a kindergarten building that was valued by the whole community, but it is too old to be used and was damaged by cyclone and flooding, now the children have to walk an hour to the nearest pre-school.

Example Community Resilience Profile

Next Steps

Climate resilience can be defined as[5]:

The ability of social-ecological systems to absorb and recover from climatic shocks and stresses, while positively adapting and transforming their structures and means for living in the face of long-term change and uncertainty.

We think about how three different things are combined when working with climate resilience[6]:

Coconut palm - ABSORB

When storms hit, coconut palms bend and lose fronds, absorbing shocks but not breaking. After a storm, their fronds grow back, healthy. Their fruits have layers of protection, allowing them to survive long journeys.

Communities that absorb are informed about risks, and have layers of cooperation, various ways of working together to protect livelihoods and surrounding ecosystems, embedded in tradition. When hardships strike, they can use their resources and collective knowledge, and bounce back, as healthy as ever.

ABSORPTIVE CAPACITY

What is already there (like assets, people, organisations, natural features, Indigenous knowledge) that helps a community quickly recover from a bad event.

Examples include: Early warning systems, family savings, diverse sources of food and income, strong community groups and institutions, trained disaster risk reduction teams, healthy forests and water catchment, etc

5 Mitchell, A., 2013 Risk and Resilience: From Good Idea to Good Practice, OECD Development Co-operation Working Paper No.13

6 Adapted from *Assessing and Monitoring Climate Resilience: From Theoretical Considerations to Practically Applicable Tools – A Discussion Paper*, GIZ 2014

Crab - ADAPT

Crabs are adaptive creatures. They can survive and thrive at the bottom of the ocean, in rivers and mudflats, and in forests. They are resourceful at finding whatever food is nearby in these various environments.

Communities that adapt make adjustments to their ways of living and working due to changing circumstances that threaten livelihoods and ecosystems. They have strong but flexible networks, using new ideas to adapt housing, education and livelihoods to meet continual new challenges, and look to tradition to recover ways of adapting that their ancestors used.

ADAPTIVE CAPACITY

How a community or natural system can use opportunities and adjust or change the way it is or how it works in order to respond better to expected bad events.

Examples include: Changing how food is grown, diversifying food and income sources, improved natural resource management (planting trees, ecosystems services), expanding early warning systems, etc

Butterfly - TRANSFORM

The butterfly is a primary symbol of transformation because of its surprising change into what looks like a completely new creature. The caterpillar goes into a state that looks like death, but then it breaks out of the cocoon as something surprising and beautiful, able to fly. This transformation is not unprecedented, though – it is something butterflies have always done.

Communities that transform respond to a time of hardship, or the threat of hardship, by changing substantially rather than collapsing. This involves deep changes, at both individual and community levels, such as changing location, societal structures or ways of making a living, discarding ways of doing things that are not working, going back to traditional ways, to make a community completely different but better than what was before.

TRANSFORMATIVE CAPACITY

Parts of a community or a natural system that can be completely changed to be able to reduce impact of climate disasters and other bad events.

Examples include: Livelihood change (like from vegetable farming to fish farming), changing from fossil fuels (oil, petrol) to renewable energy (solar power), etc

This **Community Resilience Profile** will be used to develop a **Community Resilience Plan** of potential resilience actions based on the above 'absorb, adapt, transform' framework. This is part of the process being used in the Climate Resilience Islands Programme to build resilience to climate change impact. The process is shown in the picture below.

Climate Resilient Islands aims to strengthen community resilience and adaptive capacity to the impacts of climate change through nature-based solutions working with rural communities in Vanuatu, Fiji, Tonga, and Tuvalu.

The project is a New Zealand Ministry of Foreign Affairs and Trade initiative implemented by Live & Learn Environmental Education.

Example Community Resilience Plan

NEW ZEALAND FOREIGN AFFAIRS & TRADE

Climate Resilient Islands Programme

live & learn

Community Resilience Plan: Pangpang

Pangpang Capacity and Guaranteed Good Framework

DRIVERS		Driver 1 – sea level rise threat to community	Driver 2 – logging and loss of forest biodiversity	Driver 3 – cyclone threats to houses and livelihoods
	Absorb Capacity	Community disaster and climate change committee (CDCCC) can work together. Young people available for physical work, land available	CDCCC can advise. Forest land and knowledge available and can be strengthened.	Operating CDCCC. Church building can be used as an evacuation centre.
	Absorb Strategies	Develop/update disaster plan	Engagement with young people for strengthening traditional knowledge of forest and for forest rehabilitation.	Strengthen houses and evacuation centre. CDCCC update disaster plans.
	Adapt Capacity	Community can plant for rehabilitation.	Conservation area can be created and managed by traditional means. Forestry dept can assist with species.	Youth available for training.
	Adapt Strategies	Coastal and inland rehabilitation with tolerant species: Plant mangroves, tamanu tree and navel blong solwota **Strategy – coastal rehabilitation with mangrove and other planting**	Consult and begin registration process for conservation area. **Strategy – Register and create a plan for conservation area**	NDMO can provide training on disaster planning and recovery. Strengthen IK especially with youth on resilient agriculture and weather prediction. **Strategy – training on disaster management and IK**
	Transform Capacity	Available land for relocation	Area available and interest in creating a Tahitian lime farm	Land available, community has traditional knowledge holders. Other bodies can advise on ag.
	Transform strategies	Community can relocate	Extend agroforestry area to include lime farm, establish market for produce export	**Strategy – Use of climate resilient agricultural techniques including traditional**

Pangpang Resilience Action Plan February 2023

Strategy Pathways	ACTION 1	ACTION 2	ACTION 3	ACTION 4
Coastal rehabilitation with mangrove and other planting	Assessment of state of mangroves, consideration of inclusion in conservation area *Who: CDCCC, LLV, dept of ag*	Plant mangroves, tamanu tree and navel blong solwota *Who: community*	Continue coastal reafforestation 50m inland from the coast *Who: community, conservation committee, LLV*	
Register and create a plan for conservation area	Establish FPIC for community *Who: LLV, DEPC and Shefa Province*	Biodiversity assessment *Who: LLV, DEPC and forestry*	Community consultation and management plan *Who: LLV, Shefa province and DEPC*	
Training on disaster management and IK	Training on disaster management *Who: NDMO with CDCCC*	Identify traditional knowledge holders *Who: LLV and community*	Put in place program of IK transfer *Who: LLV and community*	
Use of climate resilient agricultural techniques including traditional	Organize training for sustainable agroforestry *Who: LLV, Forestry, trades, agriculture depts*	Develop business plan for agroforestry and value add products *Who: Trades, Forestry, Ag depts, LLV*	Identify and source suitable products including limes *Who: Conservation committee, forestry*	Upscale of agroplot and plant agricultural products *Who: community farmers*

CRI Internal Use - *for planning*

Proposed Pangpang Resilience Pathway Actions – Step 3 Training linked to MELF

Ecosystems Restoration	**Conservation area registration:** assessment and management plan **Coastal area rehabilitation**: assessment and training *STO1.2 Communities increasing their resilience through improved health of the ecosystems they manage* ***Indicator:*** *% of communities engaged in implementing Community Resilience action plans*
Food Security	**Resilient agriculture**: training on agroforestry *MTO2 - Resilient community food systems, including family food consumption and food system livelihoods* ***Indicator:*** *Community score on the FAO Food Security Experience Scale*
DRR	**Training on disaster management** with IK *Output 3.1.2 Communities are supported to develop Resilience Plans that are integrated with national strategies* ***Indicator:*** *No. of people trained to strengthen resilience (through Resilience Plans for disaster risk reduction)*
IK	**Training on disaster management** with IK *Output 1.1.2 Indigenous Knowledge Workshop*
PES/Forest carbon	**Conservation area registration:** assessment and management plan *STO1.3 Communities are able to uphold protected areas (either traditional tambu and/or legally protected areas)* ***Indicator:*** *Community has action plans in place for supporting protected areas (either traditional tambu and/or legal protected areas)*

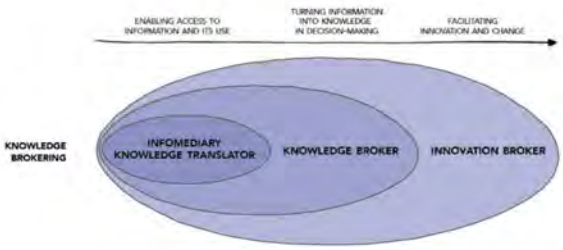
Proposed Pangpang Resilience Pathways for small grant funding – linked to MELF

Ecosystems Restoration	**Coastal area rehabilitation**: mangrove seedlings, other plants, equipment *MTO1 Ecosystems are managed to support nature-based solutions for resilience* ***Indicator:*** *Area (% of total) of terrestrial and/or marine ecosystems with improved resilience through actions based on community resilience profiles and plans.*
Food Security	**Resilient agriculture**: funds for agroforestry equipment and *MTO2 - Resilient community food systems, including family food consumption and food system livelihoods* ***Indicator:*** *Community score on the FAO Food Security Experience Scale*
Livelihoods/ Value adding	**Resilient agriculture**: funds for establishing lime farm or other agroforestry, value-adding machinery or products *STO 2.1 Communities are operating successful resilient food system enterprises* ***Indicator:*** *% of households with more than one income stream*
PES/Forest carbon	**Creation of conservation area:** equipment, seedlings *STO1.3 Communities are able to uphold protected areas (either traditional tambu and/or legally protected areas)* ***Indicator:*** *Community has action plans in place for supporting protected areas (either traditional tambu and/or legal protected areas)*

Resilience Pathway: LLEE Vanuatu Knowledge Broking capacity and needs assessment

Pangpang Resilience Action	Knowledge brokering type needed	Capacity Assessment – *Skills to be provided by LLEE*
Organize training for sustainable agro-forestry (new tree species) and value-adding	**KNOWLEDGE TRANSLATOR** *Enabling access to info and its use*	LLEEV are working with the Departments of Agriculture and Trades and Industry to develop the template and facilitate the workshop. Depts of Forestry and Agriculture will provide training and help to establish agro-forestry plots. After that the Dept of Trades will provide training for value-adding.

Documenting/passing on IK for DRR	**KNOWLEDGE TRANSLATOR** *Enabling access to info and its use*	Working with Vanuatu Cultural Center – providing tools and facilitating the workshop to document the TK.
Management plan for conservation area	**KNOWLEDGE TRANSLATOR** *Enabling access to info and its use*	LLEE has the templates, skills and knowledge in-house to develop the management plan. LLEE will help communities to fill in the template.
Biodiversity assessment for conservation area	**KNOWLEDGE BROKER** *Turning information into knowledge in decision-making*	LLEE will liaise with the department of Forestry and Environment to carry out the biodiversity assessment.
Develop business plan for Agro-forestry and value-add products	**KNOWLEDGE BROKER** *Turning information into knowledge in decision-making*	Working with the Departments of Agriculture and Trades and Industry to develop the template. LLEE will use the existing business plan template in-house and we will work with the Depts to develop and merge their business plan and ours.
Value-adding to agroforestry products and marketing	**INNOVATION BROKER** *Facilitating innovation and change*	Working with the Department of Trades and Industry to train the community on value-adding products. The Department of Agriculture will work on this action with LLEE, community and trades.
Documenting IK for DRR and any relevance for agroforestry	**INNOVATION BROKER** *Facilitating innovation and change*	LLEE will coordinate the documentation of IK and DRR.



Appendix 2

Food Security Baseline Template - used by Live & Learn

The baseline survey is done using **mWater application**. This application is available on a tablet or a smart phone. You must have an mWater ID to access the survey, and you must download the application and access the survey when connected to Wifi to ensure that the survey is available offline on your device when you are in the community. Copies of the survey template are available from Live & Learn.

SAMPLE SIZE:

The baseline survey is to be done with 20% of the community population – 10% male and 10% female.

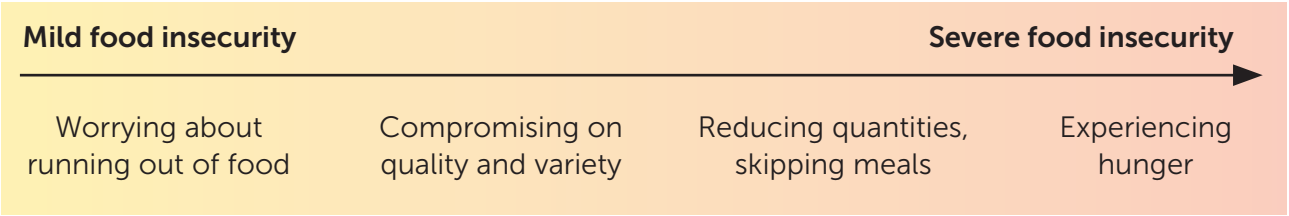
HOUSEHOLD SELECTION

Households are to be selected randomly. Start at a central point in the community (such as the church, shop or health centre) and each person taking the surveys should walk in a different direction. Randomly select every third household to interview.

FAO FOOD INSECURITY EXPERIENCE SCALE (BASELINE FOR MT02)

	Standard Label	Question wording
1	WORRIED	During the last 12 MONTHS, was there a time when you were worried you would not have enough food to eat because of a lack of money or other resources?
2	HEALTHY	Still thinking about the last 12 MONTHS, was there a time when you were unable to eat healthy and nutritious food because of a lack of money or other resources?
3	FEW FOODS	Was there a time when you ate only a few kinds of foods because of a lack of money or other resources?
4	SKIPPED	Was there a time when you had to skip a meal because there was not enough money or other resources to get food?
5	ATE LESS	Still thinking about the last 12 MONTHS, was there a time when you at less than you thought you should because of a lack of money or other resources?
6	RAN OUT	Was there a time when your household ran out of food because of a lack of money or other resources?
7	HUNGRY	Was there a time when you were hungry but did not eat because there was not enough money or other resources for food?
8	WHOLE DAY	During the past 12 MONTHS, was there a time when you went without eating for a whole day because of the lack of money or other resources?

Each FIES question refers to a different experience and is associated with a different level of severity of food insecurity. One of the unique contributions of the FIES and similar experienced-based food insecurity measures is that in addition to considering compromised diet quality and reduced food quantity, they also capture **psychosocial elements** associated with anxiety or uncertainty regarding the ability to procure enough food, a facet that other measures do not.



Food insecurity severity along a continuous scale of severity

A respondent's **raw score** (an integer number with a value between zero and eight) is the *sum of affirmative responses given to the eight FIES questions*. For data that pass the validation tests, the raw score in itself is already an *ordinal measure* of severity, with lower raw scores corresponding to less severe food insecurity.

NAME OF THE COUNTRY

○ Fiji ○ PNG ○ Tuvalu ○ Tonga ○ Vanuatu ○ Solomon Is

COMMUNITY NAME:

Is this a matrilineal or patrilineal community?

○ Matrilineal ○ Patrilineal ○ Don't Know

GENDER OF RESPONDENT

○ Female ○ Male ○ Other

How many family members live with you?

FOOD INSECURITY EXPERIENCE SCALE

During the last 12 MONTHS, was there a time when You were worried you would not have enough food to eat because of a lack of money or other resources?

○ Yes ○ No

Still thinking about the last 12 MONTHS, was there a time when you were unable to eat healthy and nutritious food because of a lack of money or other resources?

○ Yes ○ No

Was there a time when you ate only a few kinds of foods because of a lack of money or other resources?

○ Yes ○ No

Was there a time when you had to skip a meal because there was not enough money or other resources to get food?

○ Yes ○ No

Still thinking about the last 12 MONTHS, was there a time when you ate less than you thought you should because of a lack of money or other resources?

○ Yes ○ No

Was there a time when your household ran out of food because of a lack of money or other resources?

○ Yes ○ No

Was there a time when you were hungry but did not eat because there was not enough money or other resources for food?

○ Yes ○ No

During the last 12 MONTHS, was there a time when you went without eating for a whole day because of a lack of money or other resources?

○ Yes ○ No

FOOD PRODUCTION ACTIVITIES

What share of household food comes from gardens/farm/sea?

☐ Less than 20%

☐ Between 21% - 40%

☐ Between 41% - 60%

☐ Between 61% - 80%

☐ Between 81% - 100%

What activities do you do on current land block?

Select all that apply

☐ Crops

☐ Animals (including chickens)

☐ Water-based agriculture

☐ Plantation

☐ Collection of forest resources

If activities on current land block include 'Animals (including chickens)':

What types of Livestock activities are you engaged in?

☐ Chicken

☐ Pigs

☐ Cattle

☐ Honey bees

☐ Other (please specify)

☐ Don't Know

If activities on current land block include 'Water-based agriculture':

What types of water-based agriculture activities are you engaged in?

☐ Fish

☐ Shellfish

☐ Crabs

☐ Other (please specify)

☐ Aquaculture

☐ Water plants

☐ Freshwater fish

If activities on current land block include 'Plantation':

What types of plantation activities are you engaged in? (NOT native forest)

☐ Timber

☐ Copra

☐ Coffee

☐ Cacao

☐ Kava

☐ Noni

☐ Vanilla

☐ Other fruit

☐ Other nuts

☐ Other (please specify)

What types of forest resources are collected?

☐ Timber

☐ Firewood

☐ Fruits

☐ Nuts

☐ Wild honey

☐ Mushrooms

☐ Other plants

☐ Plants for thatch

☐ Handicraft

☐ Other (please specify)

What kinds of agriculture are you involved in for yourself or for cash?

	Is any sold?	What was the value of sold produce in a normal year? (Before COVID-19)
Crops		
Livestock		
Water-based agriculture		
Plantation		
Natural forest resources		

Tell us about food problems over the past 5 years.

Hint: If they say they have not had any problems producing food then tick 'not applicable'.

	How much of a problem were the following issues?	How does that compare to 5 years ago?	How effective are current solutions?
Not enough yield			
Soil fertility			
Flooding / too much rain			
Pests above ground / water			
Pests below ground / water			
Disease			
Drought			
Landslide			
Loss of topsoil and erosion			
Temperature (too hot, too cold)			
Other			

☐ Not Applicable

Comments:

LIVELIHOOD INFORMATION

How does your household get income?

(Check all that are mentioned)

☐ Selling vegetables

☐ Selling processed food products

☐ Selling fish or seafoods

☐ Operating small shop

☐ Money from relatives in the community

☐ Money from family in urban areas

☐ Wage work (labouring)

☐ Skilled services (carpentry, mechanics etc)

☐ Formal employment (teacher, health worker, government, pastor, etc) ☐ Other (please specify)

What does your household spend money on?

(Check all that are mentioned)

☐ School costs

☐ Health costs

☐ Buying food

☐ Transport

☐ Mobile phone or internet

☐ Clothing, household items

☐ Other (please specify)

What does your household spend the most money on?

What other types of livelihoods are you interested in learning about?

☐ Bee keeping

☐ Organic agriculture certification

☐ Growing and harvesting forest nuts, fruits

☐ Processing nuts and fruits for market

☐ Livestock - chickens

☐ Livestock - pigs

☐ Aquaculture

☐ Other foods

☐ Tourism

☐ Other forest products for market

☐ Timber production (e.g. teak, sandalwood)

☐ Commercial crop production

☐ Kava production

☐ Cocoa production

☐ Copra production

☐ Other

☐ Not interested

Comments:

Climate Resilient Islands aims to strengthen community resilience and adaptive capacity to the impacts of climate change through nature-based solutions working with rural communities in Fiji, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

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