

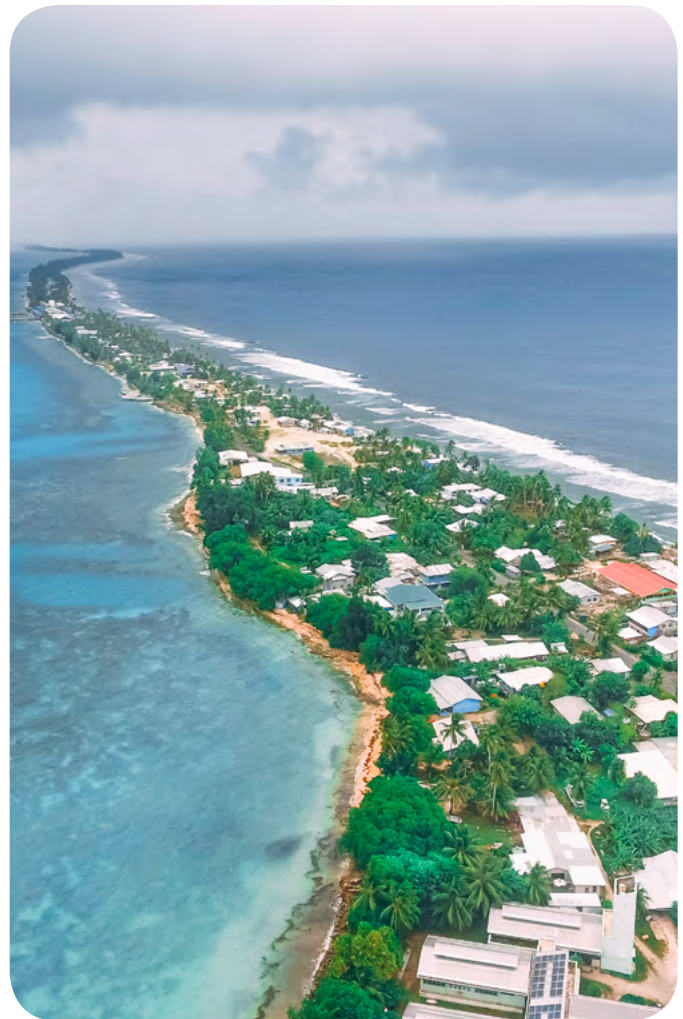
How Integrated Vulnerability Assessments Support NAP Processes in the Pacific Region

Introduction

Pacific Islanders are among the world's most at risk to climate change, while at the same time being among those least responsible for its cause. More intense cyclones, droughts, coastal inundation and rising sea levels are contributing to land loss and having a negative impact on the livelihoods, food and water security of communities living in low-lying coastal areas. These changes threaten the overall habitability of countries like Kiribati and Tuvalu, among others.

To adapt to these challenges, many Pacific island countries are engaged in NAP processes. These processes seek to integrate climate change adaptation into development planning and budgeting at national, sectoral and subnational levels. Responding to and incorporating local communities' perceptions and experienced hardships into these NAP processes are vital to ensuring meaningful and timely responses to experienced and anticipated climate risks.

Several Pacific island countries have chosen to use integrated (multisector) vulnerability assessments (IVAs) to capture and incorporate community-level vulnerability information into their NAP processes. The IVA Framework was developed in 2016 by Pacific organizations in response to a perceived need to support a standardized, coordinated and integrated approach to assessing climate vulnerability in the region. It was





also designed to respond to high-level calls by Pacific island governments for an expanded concept of regional security that includes “human security, humanitarian assistance, prioritizing environmental security and regional cooperation in building resilience to disasters and climate change” (Pacific Islands Forum, 2018).

The IVA Framework systematically examines how environmental and developmental changes affect local communities and the subsequent impacts of these changes on their abilities to meet their basic needs. As it provides baseline data about communities' vulnerability through a standardized approach that can be periodically replicated, IVA can be a valuable tool to inform the development, implementation, and monitoring and evaluation of NAP processes. The assessment of vulnerability is also a priority for developing and revising Nationally Determined Contributions to international efforts to address climate change.

This briefing note will highlight the significance of the IVA Framework to the NAP processes underway in three Pacific island states: Kiribati, Tuvalu and the Solomon Islands. After briefly summarizing the background and purpose of the IVA Framework, this note will outline how it was applied, identify key lessons learned and make recommendations for future iterations of this work.

The IVA Framework

Local communities require a combination of *livelihood assets* to meet their basic needs. For the purpose of an IVA, these livelihood assets can be placed in five categories: natural resources, infrastructure and services, finance, human resources, and institutions and governance. The IVA process systematically collects and collates vulnerability data from multiple perspectives, sectors and scales related to each of these categories. This data is then used to determine the impacts of climate change on livelihood assets and how they affect the ability of communities to address human security needs over time. These human security needs, or *human security objectives*, include: security of place, community health, ecosystem health, water security, food security, income security and energy security at a particular point in time (see Box 1).

The IVA process helps answer questions such as:

- What human security hardships are local communities facing and experiencing?
- What causes those hardships?
- What has and is being done to address these hardships?
- How effective have past response interventions been?
- How can these interventions be improved?
- How will climate change affect these human security challenges in the future?

These questions are answered from the perspective of local women, men and youth via the use of participatory field tools. Technical and scientific perspectives are also provided via sector stakeholder consultations and the review of existing secondary data sources from multiple disciplines, scales and sector-based analyses.

Box 1. The 35 components of the IVA Framework

The IVA Framework is comprised of 35 intersecting components—five livelihood assets cross-referenced with seven human security objectives—that collectively represent a community's ability to meet their human security needs at various times. Table 1 provides some examples of these intersections.

Table 1. Intersecting components of the IVA Framework

Human Security Objectives	Livelihood Assets				
	Natural Resources (n)	Infrastructure and Services (i)	Finance (f)	Human Resources (h)	Institutions and Governance (g)
Ecosystem Health (E)	En: Natural resources for ecosystem health security	Ei	Ef	Eh	Eg
Community Health (H)	Hn	Hi: Infrastructure & services for community health security	Hf	Hh	Hg
Security of Place (P)	Pn	Pi	Pf: Finance for security of place	Ph	Pg
Water Security (W)	Wn	Wi	Wf	Wh: Knowledge & skills for water security	Wg
Food Security (F)	Fn	Fi	Ff	Fh	Fg: Institutions & governance of food security
Income Security (I)	In	Ii	If	Ih: Knowledge & skills for income security	Ig
Energy Security (N)	Nn	Ni	Nf: Finance for energy security	Nh	Ng



The IVA process is distinctive from other vulnerability assessments because it brings together two key elements for informing adaptation planning: (i) a common overarching national framework for analyzing and developing vulnerability baselines and (ii) a means of monitoring and evaluating adaptation outcomes that can be used as a common point of reference for communities, policy-makers, implementers and researchers. It is also advantageous because it incorporates the use of multiple sources of existing and relevant data with varied methodologies (qualitative, quantitative, subjective, objective) and methods (surveys, geographic information systems [GIS] and satellite imagery, documentation review). The IVA process is also sourced from multiple sectors (agriculture, health, coastal management) at multiple scales (community, island, national) and times. IVA is designed to be a simple process that creates a common point of reference of analysis for communities, adaptation practitioners and researchers.

Application of the IVA Framework is enabled by the use of participatory field tools through which data is collected regarding communities' perceptions of livelihood challenges in changing local environments. The tools gather community views about how changing livelihood asset conditions are contributing to human security objective issues¹ and the effectiveness of past response interventions in addressing those issues. Data collection in the field involves gender- and age-disaggregated consultations. They are applied as a rapid assessment that can be conducted in a standardized and systematic manner at the community, island or district, and national levels. An IVA database can be established to provide a repository for the primary field evidence and secondary multi-sourced vulnerability data.

¹ According to the 35 components of the IVA Framework presented in Box 1.

Applying the IVA in Three Pacific Countries

The NAP Global Network has delivered technical assistance on the NAP process in more than 30 countries. In 2017/18, the NAP Global Network worked with four Pacific countries—Kiribati, Tuvalu, Fiji and the Solomon Islands—to support their respective NAP processes with financial support from the Government of Canada.

In Kiribati, the NAP Global Network supported the development and application of participatory field tools for Kiribati's IVA (KIVA) process, the development of a KIVA database and the review of the country's 2014 NAP, the *Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management* (KJIP).

Tuvalu and the Solomon Islands, which are in the development stages of their NAP processes, both identified the advancement of a national vulnerability framework and assessment methodology as key preparatory priorities for their respective NAP processes. The NAP Global Network supported the development and application of participatory field tools and national databases to support IVA processes in both of these countries.

In each of the three cases, the community-level participatory field tools were tailored to suit the countries' contexts. As a result, while comparative vulnerability analyses can be supported within countries, comparisons between countries are not possible.

Similar processes, however, were used in each country. First, national multisector stakeholder consultations were conducted to develop comprehensive lists of vulnerability issues relevant to the 35 components of the IVA Framework and translated into the local languages. National IVA teams, comprised of government and non-government personnel from various sectors, were then formed and trained on the theoretical and practical applications of the IVA Framework. Training was also provided on the use of tablets to collect and sort the data gathered through the participatory field consultation processes (see Box 2). Pilot applications of the IVA process were then undertaken and modifications made before surveys were completed in communities. Full IVA surveys were conducted in Kiribati's remote coral atoll community of Kiritimati and the Solomon Islands' volcanic and fragile island of Malaita. In Tuvalu, a larger national IVA team surveyed communities located on the country's eight outer islands.

The participatory field data gathering methods used in each of the community-level surveys included focus group discussions, household surveys, transect walks and photographic research. During the survey, groups of men, women and youth were separately asked about livelihood issues that were important to them in the context of the aforementioned human security objectives. The surveyors also asked focus group respondents how these issues had been addressed in the past and how they would like them to be dealt with in the future. Photographs of problematic issues in these places were taken using tablets and, in some cases, drones to support community narratives about their livelihood concerns.

Box 2. Tablet-supported IVA and databases

The application of the IVA processes in Kiribati, Tuvalu and the Solomon Islands was supported by the use of tablets to collect outcomes of the community surveys. Use of the tablets facilitated the centralization of all the data collected through the IVA process and enabled easier access to the data for adaptation planners, decision-makers and stakeholders. Introducing the use of this technology in the three countries was fundamental in changing the way that vulnerability was and will be assessed and is expected to influence adaptation planning at the local level.

While the use of tablets for IVA has its limitations (outlined in the Lessons Learned section on pp. 6–7), the introduced technology demonstrably improved the accuracy of data gathering, reduced data entry work and made climate vulnerability information more rapidly available to sector stakeholders, subnational administrators and extension personnel. A key advantage of such technological innovation is its potential to facilitate the upscaling of community-based adaptation from a shorter-term village-by-village project approach toward a longer-term island-by-island programmatic approach. This approach is linked to subnational and national adaptation investment decision making, planning, and monitoring and evaluation processes as well as, ultimately, the National Sustainable Development Plan.

Key Observations on IVA and the NAP Process

In each of the three cases, the IVA Framework became and continues to be a valuable tool in both informing and influencing national- and community-level adaptation planning, irrespective of the stage of the country's NAP process. A national IVA Framework that includes a system for primary and secondary data collection, systematized consolidation of information in a database for documentation and analysis, and standardized reporting forms can be instrumental in institutionalizing national-level vulnerability and adaptation knowledge management systems. An IVA knowledge management system of this type is essential to inform NAP prioritization, planning, and monitoring and evaluation processes in a sector-integrated, iterative and timely manner and at multiple levels of adaptation decision making. It helps to:

- Inform climate vulnerability baseline situations for various localities using a standardized, context-sensitive and comparable method.
- Develop baseline situations and influence how discussions about “shifting baselines” in changing environments could be approached.
- Identify which communities and individuals may be considered to be particularly vulnerable to climate change.
- Inform how adaptation planning can better incorporate gender equity and social inclusivity considerations.
- Identify sectoral-, subnational- and national-level adaptation priorities for NAP process planning, implementation, and monitoring and evaluation.
- Provide the evidence base to inform investment strategies.

Each of the countries in which the IVA surveys and database were supported by the NAP Global Network provides an example of the utility of this approach. In Kiribati, the KIVA data will be linked to the KJIP monitoring and evaluation framework in a way that effectively informs resilience investment decision making and planning. In the Solomon Islands, where the NAP process has a subnational focus, the IVA data will be used to inform resilient development planning on Malaita Island. Further use of the tablet-based IVA process is planned to support



planning in other island provinces. In Tuvalu, which is in the process of developing a Green Climate Fund proposal to support its NAP process, the IVA database will be factored into the proposed adaptation planning process and monitoring and evaluation systems. In all three countries, NAP Global Network regional experts are training national stakeholders on how to use the collated IVA data for project concept notes related to national policies and priorities. In addition, the stakeholders are trained on how the data from the IVA can be used to develop national and sectoral resilience monitoring and evaluation systems.

By providing a common vulnerability assessment framework that incorporates how men, women and youth from each island perceive their changing environment and climate risks, the IVA process can set the foundations for identifying the factors that enable a gender-sensitive and socially inclusive NAP process. Further, the participatory field methods are an effective tool for engaging local communities in the NAP process as well as capturing and communicating community perceptions about localized vulnerabilities to higher levels of adaptation decision making and planning. The incorporation of community perceptions and priorities in the NAP processes is particularly vital given that climate change impacts are experienced and responded to at the local level.



Lessons Learned

A common national vulnerability assessment framework and database that incorporates climate and disaster data from multiple sources of knowledge, methods and scales of analysis is necessary for a successful and comprehensive NAP process. Application of the IVA Framework and establishment of a national IVA database, as done in Kiribati, Tuvalu and the Solomon Islands, provides a means of meeting this need. Upon reflection and analysis, some key lessons pertinent to the NAP process emerge from the IVA experiences in these countries. These lessons fall into two main themes:

- Use of tablets to support the collection, consolidation and analysis of vulnerability data.
- Establishment of information and knowledge management (IKM) systems.

Tablet-based IVA. Given the necessary training and resourcing, the tablet-based IVA process and database are sufficiently user-friendly to be used by sector extension staff to gather gender-disaggregated data on climate vulnerability, impacts and adaptation at the community level. Moreover, the tool presents an opportunity for further exploration of how local community groups might be able to engage more effectively with the NAP process via the technologically enhanced IVA to better secure their livelihoods and to communicate and respond to human security risks in a changing climate.

However, it is also essential that the tablet-based tool and database be enhanced, both in the field and in their overall management. While tablets could be used offline in rural and remote parts of the Pacific islands states, national IVA teams still tended to favour paper-based questionnaires, flash cards and flipcharts to facilitate focus

group discussions and consensus on issue prioritization. Further, paper-based notes were perceived as safer to protect against cases of lost data. Facilitators also wanted to avoid typing open-ended qualitative responses into tablets during the discussions. The tablets were, however, perceived as extremely useful for capturing and managing images of group work outcomes (e.g., resource maps, flash cards), transect walks and the group discussion outcomes. In order to ensure the full effectiveness of the tablet-based tool and database, these discrepancies should be addressed and considered.

IKM Systems. While integral to NAP process success, the IVA process requires unprecedented levels of data generation, organization and sharing in the three countries and in the Pacific region as a whole. As such, more dialogue and agreements about IKM protocols are required between national stakeholders and international partners to facilitate the channelling of critical knowledge flows that will enable more systematic, robust and country-owned NAP processes.

An IKM system for climate and disaster vulnerability can enable formal linking and institutionalization of the IVA and NAP processes. This step will require further human resources, institutional capacity development, alignment between national planning and budgeting, and key sector and community support from service-oriented government ministries and non-governmental organizations. Linking the IVA to the NAP process in such a knowledge-based way has the potential to facilitate a paradigm shift toward climate-resilient sustainable development by:

- Identifying and responding proactively to people and places that are particularly vulnerable to climate change.
- Institutionalizing a gender-sensitive and socially inclusive approach to resilient development.
- Adaptively managing climate- and disaster-resilient interventions in accordance with evolving national sustainable development priorities.

Recommendations

Overall, the development of the national IVA participatory field tools and databases in Kiribati, Tuvalu and the Solomon Islands have proven beneficial to the countries' respective NAP processes. However, additional national capacity development activities are still required in order to more meaningfully connect knowledge flows between communities, scientists, policy-makers and implementers. The following activities are recommended to scale up effective IVA knowledge management systems to better support NAP processes in the Pacific region:

1. Strengthen the national databases by categorically incorporating secondary vulnerability-related resources (including existing reports and database) from key sectors according to subnational localities (e.g., island, district) and human security objectives.
2. Initiate the development of national IVA database protocols and agreements to facilitate trust and cooperation between stakeholders on climate vulnerability data sharing in addition to securing public access for effective adaptation and resilience building at local, national and regional levels.
3. Develop an accredited capacity-building program for IVA teams to enable a standardized and institutionalized IVA process that covers all localities nation-wide as well as regionally.
4. Develop national guides to support the institutionalization of the IVA database for informing climate adaptation planning, monitoring and evaluation across sectors as well as nationally and subnationally.
5. Compile national and regional climate change, gender and youth vulnerability information on a periodic basis in a reporting system that uses national IVA databases to outline progress, challenges and future actions to strengthen gender and youth considerations in subnational, national and regional adaptation processes.



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Recommended Reading for Further Information

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