Climate Information Services for Resilient Development for Vanuatu

Theory of Change

Van KIRAP seeks to increase the ability of decision makers, communities and individuals in Vanuatu to plan for and respond to the long and short-term impacts of climate variability and change. This report summarises the project's theory of change to achieving this goal.

Baseline & Barriers

Vanuatu is one of the most vulnerable countries in the Pacific region being exposed to a number of climate-related and geological hazards. Assessments of vulnerability to climate change undertaken over the last two decades have identified Vanuatu as being highly exposed to climate variability and change, and at risk of impacts, with the country ranked 9th globally under the Climate Risk Index for 1998–2017 (German Watch 2019).

Current capacity in Vanuatu is lacking in specific technical areas, communicating with sector end-users and communities, and in coordinating timely CIS delivery. There is no clear pathway for the flow of climate knowledge and information from the Vanuatu Meteorology and Geo-hazards Department (VMGD) to sectors and communities, which if not addressed, will increase the risk of maladaptation including environmental, economic, food security and livelihood costs.

Additionally, capability for VMGD is limited to a few isolated instruments on some islands and coverage in the southern part of the island chain from a radar operated in New Caledonia. This system is insufficient to meet existing and emerging needs for multi-hazard early warning systems across Vanuatu and does not cover the populated capital of Port Vila. Further to this the confidence in seasonal forecasts and longer-term climate change predictions is undermined by limitations with climate data capture, storage and management. Currently there is significant historic data that has not been digitized and does not comply with QMS accreditation, as well as inadequate IT systems to store, manage and backup data.

Despite capacity issues within VMGD there is a plethora of CIS available to people in Vanuatu. These range from web portals, apps and bulletins most of which were developed through regional projects by international organisations and some locally produced CIS in the form of climate bulletins, agro-met information and information available on VMGD's website.

The uptake and application of CIS however is minimal. At a broad level people in communities and working within sectors are generally unaware of existing CIS and where awareness has been raised the ability to interpret and apply CIS and/or explain it to another has been low. In outer lying communities' access to CIS is limited and there is also lack of trust in CIS, with greater reliance on Traditional Knowledge.

Enabling change

Van KIRAP's activities target key areas to effect improvements and change as outlined below:

1. VMGD as the national source of scientific climate and weather data and information will work closely with international delivery partners, who have experience and good understanding of the Pacific, to be mentored and trained to understand and know how to integrate climate processes and science, including Traditional Knowledge, into CIS tools and products. This will also involve updating and downscaling of data to improve research modelling and predictions and climate early warning systems (CLEWS) as well as revitalising and strengthening Vanuatu's Traditional Knowledge Network. New meteorological instruments and improved IT infrastructure will strengthen VMGD's system to improve its observations and monitoring system and provide quality downscaled data for CIS for Vanuatu.

2. Effective knowledge brokerage and improved communication between VMGD and the target sectors (Agriculture, Fisheries, Infrastructure, Tourism and Water) will customise and improve tools and products to overcome the minimal use and application of CIS in government and communities. As a first for the Pacific, the project will employ 5 sector coordinators who will champion CIS within their departments, and each will work with VMGD and delivery partners on a range of activities. One such will be a pilot/case-study for each sector where CIS is applied within a community/communities and/or sector. The pilots will also serve to test feedback from users to VMGD on applied CIS for continuous improvement of tools.

3. Raising community awareness of CIS and how to utilise CIS (linking traditional knowledge with climate science) will be undertaken through a targeted community engagement and outreach programme across the six Provinces. This will be achieved through integration of traditional knowledge, knowledge management, communication and outreach with the development of targeted CIS information and tools for communities. Furthermore, the Project will enable community-led actions on-ground demonstrating the value of CIS in community life through campaigns to raise awareness, information-sharing and teaching. Citizen science will also play a major role in developing communities' understanding of the importance of CIS in decision-making and enable the communities to contribute to the broader project effort through data collection and other citizen science projects.

   Lastly, the community engagement will be channeled through the establishment of 12 Climate Centres in selected areas across Vanuatu which will also serve as hubs for accessing and raising awareness of climate information and services. These will be coordinated by sectors working with VMGD on the development and dissemination of CIS and again linking in feedback from users in the community.

4. Sectors will work with VMGD and Delivery Partners to develop customised decision support system tools and processes as well as sector specific tools. These will be demand-led by Sectors and target Next and end users. The looping of feedback and linkage of CIS between user and developer is critical here to producing an interface platform for CIS that people in Vanuatu can and will use.

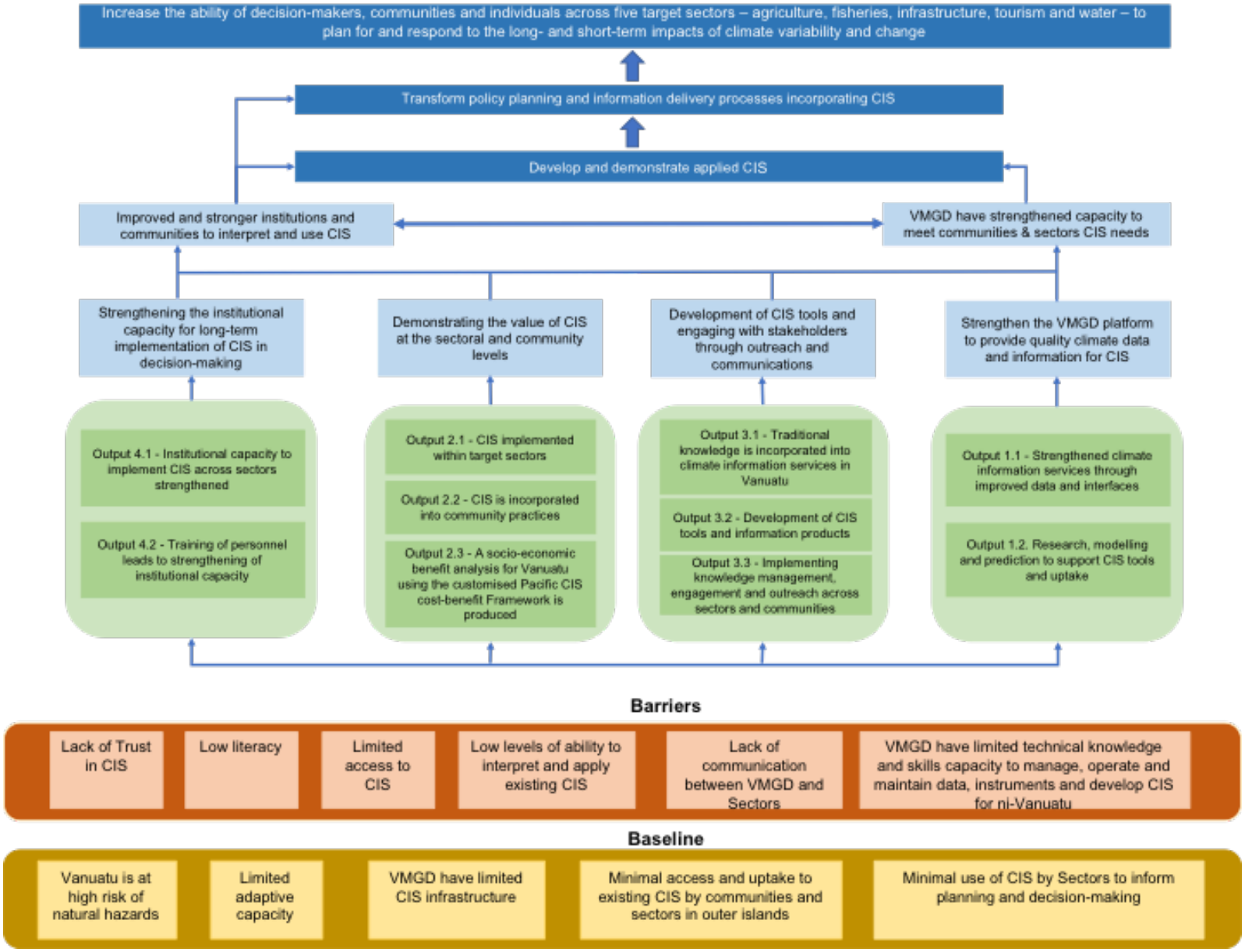
5. Intended users of CIS also need their capacity strengthened to understand how to access, interpret and apply CIS. Case studies and the Climate Centres offer opportunities for learning about CIS through demonstration, practice and community dialogues. Sector

workers will be trained not only on how to apply CIS but also to extend this knowledge to the community.

6. Climate Champion volunteers supported through the Vanuatu Volunteers Network, will support activities within the vicinity of the Climate Centres to support Sectors and VMGD with the on-ground activities to raise awareness and educate people on why and how to apply CIS in their daily routines. Leadership and demonstration will be important for encouraging people to trial and use CIS.

Resulting Change

Through these interventions the project anticipates VMGD will have strengthened capacity to develop CIS that meets communities and sectors' needs. Sectors will have strengthened capacity to use and interpret CIS and in turn to extend this knowledge to communities so that they can use and apply CIS as well as inform the development of CIS products. In demonstrating that sectors and communities can and are applying CIS to produce resilient outcomes, policy planning and information processes will incorporate more CIS. As a result, Vanuatu moves to a new resilient path and possesses improved adaptive capacity at government, industry and community levels where Ni-Vanuatu are planning for and responding to the long and short-term impacts of climate variability and change.



Assumptions

- Integrating Traditional Knowledge in CIS will address trust and literacy issues to increase access, uptake and application of CIS at community level.
- A physical hub (community climate center) with coordinated services and activities will address access issues to increase uptake and application of CIS at community level.
- Sector Case studies will strengthen and establish communication between VMGD and Sectors for the effective development, access and application of CIS at sector level.
- Successful demonstration of CIS through sector case studies will address trust and literacy issues and increase uptake and application of CIS at community level.
- VMGD and international delivery partners working closely together over life of the project will build VMGDs technical capacity, knowledge and skills to operate, develop and maintain climate information services.