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Midline Review of the Strengthening Capacities in the Use of Geospatial Information for Improved Resilience in Asia-Pacific and Africa Project

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Planning, Performance Monitoring and Evaluation Unit

This report is a product of the Planning, Performance Monitoring and Evaluation Unit of UNITAR (PPME). The findings, conclusions and recommendations expressed therein do not necessarily reflect the opinion of the partners of the Strengthening Capacities in the Use of Geospatial Information for Improved Resilience in Asia-Pacific and Africa project (Reference: C2021.TARSA076.NORAD). The midline review was conducted by Mr. Antonio Cabo with support from PPME. The report is issued without formal copy editing.

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Foreword

The “Strengthening Capacities in the Use of Geospatial Information for Improved Resilience in Asia-Pacific and Africa project (Reference: C2021.TARSA076.NORAD)” project aims to develop GIT capacities of beneficiary organizations in eight countries in Africa (Nigeria and Uganda), Asia (Bhutan, Bangladesh and Lao PDR) and the Pacific (Fiji, Solomon Islands and Vanuatu) to improve the national response to climate risk. It targets relevant government organizations responsible for disaster risk, natural resource management and/or climate finance.

The midline review assessed the project’s progress and reflected upon opportunities and challenges during the first one and a half to two years of the project, both during the scoping phase and the early implementation phase. The review focused on the effectiveness, efficiency and early indication on impact of the OECD DAC evaluation criteria.

Overall, the review found the project’s theory of change to be robust with clear links between project activities, outputs, and intermediate and institutional outcomes. It was also found that the project has made significant progress in delivering its outputs, which have contributed to attaining some intermediate outcomes such as trained technical stakeholders confirming application of knowledge and skills. However, progress across target countries has been uneven, influenced by variations in the initial capacities and prior experience in implementing projects with UNOSAT. In terms of efficiency, it was found that project stakeholders followed project implementation procedures, communications and reporting but experienced some delays in disbursements of project funds. The review found evidence of the project starting to cause a transformational change towards improving resilience by making disaster preparedness and response more efficient, as well as by setting the basis for a systematic climate change adaptation response by governments and individuals.

The review issued a set of seven recommendations of which three were accepted and four were partially accepted.

The review was managed by the UNITAR Planning, Performance Monitoring and Evaluation (PPME) Unit and was undertaken by Antonio Cabo. The PPME Unit is grateful to the evaluator, UNOSAT’s project team and partners, as well as other project stakeholders for providing important input into this review.

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Acronyms and abbreviations

AI	Artificial Intelligence
CERN	European Organization for Nuclear Research
CFA	Climate Finance Advisers
COP	Conference of the Parties
DEM	Digital Elevation Model
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
FGD	Focus Group Discussion
GCF	Green Climate Fund
GDP	Gross Domestic Product
GIS	Geographical Information Systems
GIT	Geospatial Information Technologies
MCDA	Multi-Criteria Decision Analysis
NOK	Norwegian Krone
NORAD	Norwegian Agency for Development Cooperation
ODA	Official Development Assistance
OECD-DAC	Organisation for Economic Co-operation and Development - Development Assistance Committee
PPME	Planning, Performance Monitoring and Evaluation Unit
SDG	Sustainable Development Goals
SIDS	Small Island Developing States
ToC	Theory of Change
UAV	Unmanned aerial vehicle
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNITAR	United Nations Institute for Training and Research
UNOSAT	United Nations Satellite Centre
USD	United States Dollar
WP	Work package

Executive summary

The project Strengthening Capacities in the Use of Geospatial Information for Improved Resilience in Asia-Pacific and Africa is implemented by the United Nations Satellite Centre (UNOSAT), part of the United Nations Institute for Training and Research (UNITAR), with funding from the Norwegian Ministry of Foreign Affairs and the Norwegian Agency for Development Cooperation (NORAD).

The project, implemented between August 2021 and July 2024, aims to develop GIT capacities of beneficiary organizations in eight countries in Africa (Nigeria and Uganda), Asia (Bhutan, Bangladesh and Lao PDR) and the Pacific (Fiji, Solomon Islands and Vanuatu) to improve the national response to climate risk. Project beneficiaries are relevant government organizations responsible for disaster risk, natural resource management and/or climate finance. The partner Commonwealth Climate Finance Access Hub supports the project's climate finance component in the Pacific countries.

In March 2023, it was agreed by PPME and the project implementation team that the midline evaluation should take the format of an interactive in-person review workshop instead of an in-depth evaluation. The midline workshop aimed to enable participants to reflect upon opportunities and challenges in implementing the project. It enabled collective learning by the project team and focal points of the partner organizations. The midline review used a mixed methods approach (qualitative and quantitative) with rigorous triangulation of information, mainstreaming gender, human rights and environmental considerations into all possible aspects. Data collection comprised various instruments: i) a document review; ii) an online survey of participants of technical training, backstopping requests and awareness-raising events; iii) informal consultations with the project management during the midline event; iv) a focus group discussion; v) an outcome harvesting exercise during the midline review workshop; and vi) scorecard completion.

The midline review found that:

1. The project's theory of change is robust with clear links between project activities, outputs and outcomes linked to the intended resilience impacts, as confirmed by workshop participants.

2. While the project has made significant progress in delivering its outputs, progress across target countries has been uneven, influenced by variations in the initial capacities and prior experience in implementing projects with UNOSAT.

3. Countries have varied perceptions and actions to ensure gender equity independent from the project. However, the project has enabled equal participation and engagement of female university students where possible.

4. Project focal point organizations have increased their capacity and use of GIT in their thematic areas. Moreover, those organizations are confident in maintaining their enhanced abilities if they can maintain the in-country experts and have access to technical backstopping and the knowledge platform beyond the project's implementation period. The project's beneficiary organizations' technical profile entails dependency on allocating sufficient resources from their governments to fully integrate the acquired capacities.

5. Despite said limitations, there is strong evidence that the project is starting to cause a transformational change towards improving resilience by making disaster preparedness and response more efficient and by setting the basis for a systematic climate change adaptation response by governments and private individuals. Moreover, the project has catalysed the development of synergies with other government organizations, contributing to expanding the reach of GIT applications.

6. Project stakeholders shared their satisfaction with the project implementation but suggested a more frequent sharing of relevant information on procedures and budgets.

Therefore, the midline review recommends:

1. Ensuring project sustainability through deployment and consolidation of resources in a knowledge platform and a functioning community of practice, in addition to the implementation of the developed web apps, ensuring sufficient resources for future backstopping requests beyond the project's implementation period. At the same time, the focal point organizations should ensure sufficient funding to maintain the position of the project's national GIS experts.

2. The project should make the web application solution finalization a priority in order to allow for accompanied use of the app by August 2024.

3. Considering the significant evidence of transformational change in matters as critical as disaster risk preparedness and response, UNOSAT and the focal point organization should, in consultation with the donor, design a strategy to mobilize funding for a subsequent phase and consolidate results, especially in those countries where the project implementation is delayed, as well as consider extending support to further countries.

4. The project should ensure clear and frequent communication of administrative procedures to national focal agencies, sharing project resource estimates by country.

5. The project should put additional emphasis on regular communication products that can be shared with national focal points and should include impact stories, and monitoring and evaluation results so that focal points can better report and present to their national authorities and other ministries.

6. Project management should continue its gender efforts to expand avenues to address women's needs in GIS, aligning with national gender equality strategies and following up on the active engagement of female university students.

7. Project management should align backstopping requests to project outcomes, including unplanned outcomes, and develop a monitoring survey that is sent to requesters to better understand the potential results obtained following the request completion.

Introduction

Project description and objectives

1. The United Nations Satellite Centre (UNOSAT) is part of the United Nations Institute for Training and Research (UNITAR). As a United Nations-based knowledge centre, UNOSAT is dedicated to providing UN funds, programmes and specialized agencies with satellite analysis, training and capacity development, at their request, as well as supporting Member States with satellite imagery analysis over their respective territories and providing training and capacity development in the use of geospatial information technologies. UNOSAT has spearheaded the use of these technologies in various fields of application, namely for emergency response, disaster risk reduction, peace and security, but also for the protection of cultural heritage, and monitoring and evaluation of development projects.

2. Since 2011, through the financial support of the Norwegian Ministry of Foreign Affairs and the Norwegian Agency for Development Cooperation (NORAD), UNOSAT has been implementing training and capacity development activities in Asia, with technical support from its office in Bangkok, and in East Africa, with support from its Nairobi office.

3. The Strengthening Capacities in the Use of Geospatial Information for Improved Resilience in Asia-Pacific and Africa project, implemented between August 2021 and July 2024, aims to improve resilience to climate risks in Africa and the Asia-Pacific region, developing GIT capacities through training delivered in various modalities, solutions tailored to beneficiaries' needs and resources, and establishing a community of practice and a knowledge platform that includes UNOSAT technical backstopping and support from peers.

4. The project aims to develop GIT capacities of beneficiary organizations in eight countries in Africa (Nigeria and Uganda), Asia (Bhutan, Bangladesh and Lao PDR) and the Pacific (Fiji, Solomon Islands and Vanuatu) to improve the national response to climate risk. Project beneficiaries are relevant government organizations responsible for disaster risk or natural resource management and/or climate finance (Table 1). The Commonwealth Climate Finance Access Hub supports the project's climate finance component in the Pacific countries. NORAD supports the project with NOK 60,000,000 (approximately USD 5.8 million).

Table 1 - Project focal point and beneficiary organizations

Country	Primary beneficiary organization	Other beneficiary organizations
Bangladesh	Department of Disaster Management of the Ministry of Disaster Management and Relief	Not applicable
Bhutan	National Land Commission Secretariat	Department of Forest and Park Services
Fiji	Climate Change and International Cooperation Division of the Ministry of Environment	Ministry of Lands and Mineral Resources, Ministry of Agriculture, Ministry of Rural and Maritime Development and Disaster Management, Ministry of

		Waterways and the Fiji Meteorological Services
Lao PDR	Disaster Prevention Division of the Social Welfare Department, Ministry of Labour and Social Welfare	Ministry of Agriculture and Forestry
Nigeria	Federal Ministry of Environment	Not applicable
Solomon Islands	Ministry of Environment, Climate Change, Disaster Management and Meteorology	Ministry of Finance & Treasury, Ministry of Lands, Housing and Survey, National Geographic Information Centre, Ministry of Infrastructure Development, Ministry of Mines, Energy and Rural Electrification, Solomon Islands National University
Uganda	Department of Relief, Disaster Preparedness and Management of the Office of the Prime Minister	Not applicable
Vanuatu	Ministry of Climate Change Adaptation	Department of Water Resources, Public Works Department, Department of Environmental Protection and Conservation, Vanuatu Meteorology & Geo-hazards Department

5. The project proposal was approved in July 2021 and the project officially started implementation in August 2021. During 2021 and most of 2022, the project conducted a needs assessment rescoping exercise and a baseline evaluation. Capacity development activities started in November 2022 in the Pacific. The initial implementation timeline of four years from November 2020 until October 2023 was adjusted following the emergence of the COVID-19 pandemic resulting in a revised schedule of August 2021 to July 2024.

6. While the official end-of-project date is 31 July 2024, the agreements between UNOSAT and its national partner organizations in the eight countries have been signed in different years, and have, therefore, different termination dates and even project implementation periods. In seven of the eight project target countries, the project was implemented under memoranda of understanding (MoU) between UNITAR and the national focal point organizations. In Bangladesh, the project operated under a project document signed by UNITAR and the project focal point organization. At the time of the midline review, Uganda and Fiji's MoUs were still pending signatures, but were signed for the other six countries between 2022 and 2023 (Table 2).

Table 2 - Project's implementation agreements

Country	Instrument	Signature	Valid until
Bangladesh	Project document	9 April 2022	31 July 2024
Bhutan	MoU	7 October 2022	31 July 2024
Fiji	MoU	Pending	Pending
Lao PDR	MoU	1 September 2022	31 July 2024
Nigeria	MoU	30 September 2022	30 September 2025
Solomon Islands	MoU	19 October 2022	19 October 2025
Uganda	MoU	Pending	Pending
Vanuatu	MoU	18 January 2022	18 January 2025

Purpose of the midline workshop review

7. The purpose of the midline workshop was to reflect upon opportunities and challenges (what went well, what did not) during the first one and a half to two years of the project, both during the scoping time and the implementation. Progress was discussed and compared to the baseline evaluation situation and revised Theory of Change (ToC).

8. The project document included plans for independent baseline, midline and endline evaluations. An independent consultant completed the baseline evaluation in 2022, simultaneously with the project's rescoping. Following the baseline evaluation and project rescoping, it was determined that each of the eight countries required distinct approaches and solutions. Bangladesh, Lao PDR and Uganda sought to improve their GIT capacities to enhance disaster risk assessment and response, while Bhutan and Nigeria aimed to develop capacities for GIT and unmanned aerial vehicles (UAV) to improve the management of natural resources and pollution control. In the Pacific Small Island Developing States (SIDS) of Fiji, Solomon Islands and Vanuatu, the project's beneficiary organizations are developing GIT-based solutions to assess risk and implement national climate change strategies, as well as supporting proposals for climate risk assessment and capacities to tap into international climate finance.

9. The baseline evaluation also recommended modifications to the project's logical framework (log frame) and ToC to enable better tracking of the project's outcomes and contribution to the intended impact.

10. In March 2023, it was agreed that the midline evaluation should take the format of an interactive in-person review workshop in lieu of an in-depth evaluation. The midline workshop enabled a collective reflection by the project team and focal points of the partner organizations about opportunities and challenges during the first year and a half of project implementation. During the workshop, the UNITAR Planning, Performance Monitoring and Evaluation Unit (PPME), with the support of an independent consultant, deployed different participatory methods (see Methodology section) that enabled incorporating the vision, experiences and perspective of the project's implementing partners. The in-person workshop was complemented by two online pre-workshops (one for Pacific countries and another for Asian and African countries) and the deployment of a survey of technical training participants, backstopping support requesters and awareness-raising event participants.

Methodology

11. The midline review used a mixed methods approach (qualitative and quantitative) with rigorous triangulation of information, mainstreaming gender, human rights and environmental considerations into all possible aspects. Data collection comprised various instruments: i) a document review; ii) an online survey of participants of technical training, backstopping requests and awareness-raising events; iii) informal consultations with the

project management during the midline event; iv) a focus group discussion; v) an outcome harvesting exercise during the midline review workshop; and vi) scorecard completion.

12. The document review considered a range of project-related documents, including, but not limited to, the project document, log frame, country progress update reports and project monitoring dashboard. Primary data was collected through a 26-question online survey administered to 157[1] people who had participated in the project's capacity development (technical training), awareness-raising or backstopping activities. This survey was designed by the midline review consultant with support from the UNITAR PPME and the UNOSAT project team. The survey received 63 responses, reflecting a 40 per cent response rate. Among these, 31 respondents were male, 14 female and 18 did not disclose their gender (see Table 3). Responses by country also show unequal responses, with the majority of respondents coming from Bhutan, Solomon Islands and Fiji, followed by Uganda, Lao PDR, Vanuatu and Bangladesh (see Table 4).

Table 3 – Gender disaggregation of survey participants

Gender	Survey Participants
Female	14
Male	31
Undisclosed	18
Total	63

Table 4 – Geographical disaggregation of survey participants

Country	Survey Participants
Bangladesh	1
Bhutan	20
Fiji	12
Lao PDR	4
Solomon Islands	14
Uganda	8
Vanuatu	4
Total	63

13. Meanwhile, a midline workshop was held in Bangkok on 20 and 21 June 2023, with one day fully dedicated to the midline review. It was attended by the project's focal points or delegates from the project's primary national focal agency organizations and in-country GIT experts deployed by the project from seven of the eight project countries.[2] On the first day, the project team and national focal agencies and in-country experts presented and discussed project developments for each of the eight countries and presented web platforms and solutions co-developed by UNOSAT for user feedback. During the second day, UNITAR PPME and the review consultant held a series of exercises to prompt

[1] From a list of 166 workshop participants, nine email addresses were not valid.
[2] Uganda's in-country focal point participated partially online, due to logistical constraints.

reflection on the project's progress and the validity of the assumptions and risks initially identified (impact evaluation) and review the understanding of the project's limitations and implementation challenges (process evaluation). The intent was to gather and analyse on-the-ground information and outcomes since project inception, involving active participation from the attendees. During the workshop, participants engaged in the discussion of their respective experiences and lessons learned, emphasizing the significance of country ownership, collaboration, coordination, country exchanges, open-source software and effective communication as crucial factors for the project's success.

14. A total of 16 representatives from both the project's national focal agencies and in-country experts participated in the workshop. Among them, eight were physically present while eight joined online (Table 5).

Table 5 – Workshop participants

Country/institution	Project focal point organization	Number of participants[3]	
Bangladesh	Department of Disaster Management of the Ministry of Disaster Management and Relief, and in-country expert	2	(M=2; F=0)
Bhutan	National Land Commission Secretariat and in-country expert	2	(M=2; F=0)
Fiji	Climate Change and International Cooperation Division of the Ministry of Environment and in-country expert	2	(M=1; F=1)
Lao PDR	Disaster Prevention Division of the Social Welfare Department, Ministry of Labour and Social Welfare, and in-country expert	2	(M=2; F=0)
Nigeria	Federal Ministry of Environment and in-country expert	2	(M=2; F=:0)
Solomon Islands	Ministry of Environment, Climate Change, Disaster Management and Meteorology, and in-country expert	2	(M=1; F=1)
Uganda	Department of Relief, Disaster Preparedness and Management of the Office of the Prime Minister	1	(M=1; F=0)
Vanuatu	Ministry of Climate Change Adaptation and in-country expert	2	(M=1; F=1)
Commonwealth Secretariat	Climate Change Section	1	(M=1)
UNITAR-UNOSAT		6	(M=4; F=2)
UNITAR PPME		1	(F=1)
Independent evaluation consultant		1	(M=1)
	Total	**24**	**(M=18; F=6)**

[3] Including online participants who, due to time differences, did not participate in all sessions of the workshop.

Impact Evaluation

15. The following questions guided the outcome harvesting exercise:

    - What changes do we expect in using GIT and other project components in the midterm (5-10 years)?
    - What needs to happen to achieve those changes?
    - How will the project's technical training, backstopping and awareness-raising activities, app solutions and knowledge platform contribute to those changes?
    - What do we need to have in place for those changes to happen (conditions) and what risks exist?
    - What changes have we observed using GIT and other components of the project?
    - If changes have been observed, how do they link back to the project?

16. The project's outcomes are linked to global commitments as reflected in the Sustainable Development Goal (SDG) targets and the Sendai Framework for Disaster Risk Reduction. However, the project's short implementation period and the stochastic nature of natural hazards and natural systems responses (e.g. reduction of loss and damage or improvement in forest surface thanks to the improvement of GIT capacities delivered by this project) make such targets unfit to measure the project's progress and contribution to capacity development. To this end, the midline review used two instruments, a survey designed to capture progress against the project's outputs and intended intermediate outcomes and a scorecard to measure progress from the baseline in attaining the project's institutional outcomes.[4]

17. Scorecards based on the capacity development framework of the United Nations Development Programme (UNDP) were outlined during the baseline evaluation and refined and administered to the participants in the Bangkok workshop (face-to-face and online). The scorecards reconstructed the baseline and established the midline capacity level by using ranked statements, as follows:

    - No evidence of relevant capacity – score 1
    - Some evidence of capacity – score 2
    - Partially developed capacity – score 3
    - Fully developed capacity – score 4

18. Scorecards measure progress at different times in the project's national implementation. Still, due to their inherent subjectivity and the diversity of national approaches and contexts, they cannot be used to compare the different national implementations.

19. While the project team actively participated in the outcome harvesting exercise and was present during the scorecard exercise, the scorecards were filled up by each national focal agency representative with the assistance of the project's in-country experts. The scorecard covered the project log frame's four institutional outcomes (see Findings section).

[4] Outcomes are actual or intended changes in development conditions that interventions are seeking to support. Outcomes may be both intermediate (short-term) and institutional (medium-term) in nature. Intermediate outcomes are the first-level effects of outputs.

Process evaluation

20. To better understand implementation challenges and bottlenecks, a separate closed session, without the presence of the project team, was conducted, ensuring objectivity of the exercise. The review consultant moderated the focus group discussions (FGD) with representatives from the project implementing partners. However, only those present physically were able to participate. The following questions guided the FGD:

    - Evaluate communication, monitoring and reporting procedures; are they clear, consistent and transparent? Is this the only project my organization is implementing? If we implement other projects, how "costly" are this project's procedures regarding time and resources?
    - What has gone well in the first half of the project implementation and which factors have enabled the implementation of the project as planned?
    - What could have gone better in the project's first half and which factors have contributed to those challenges?
    - Have any deviations been present from the proposed ToC and implementation plan, and why?
    - How have these been addressed?
    - To what extent is the project on track to be delivered according to the project document and implementation plan?
    - In which areas is it advanced or delayed?

21. A lessons learned brainstorming exercise with national focal agency representatives, in-country experts and the UNOSAT project team was organized to collect lessons learned from project implementation.

Limitations

22. As with all exercises, this review has identified several limitations.

23. Progress in countries differs and has been influenced by a project implemented previously (the CommonSensing project) where relationships and trust were already built, and project activities could therefore start much more quickly. Results from the CommonSensing project may also sometimes have been mentioned by national focal agency representatives as they do not differentiate between project names. This review has nevertheless tried to isolate results from the CommonSensing project whenever possible. Moreover, project activities in Nigeria have not yet been initiated and have therefore not been considered for this report. Nevertheless, the review made use of this exercise to collect baseline evaluation data for Nigeria.

24. The scope of the midline review exercise was reduced to mainly focus on a one-day workshop, a document review and a survey for data collection. It was nevertheless possible to collect a considerable amount of data. However, it should not be compared with a fully-fledged evaluation exercise looking at the full set of OECD-DAC evaluation criteria.

25. Overall, this review looks at eight countries with different needs and implementation challenges. When possible, the review provided country-specific examples or overall findings applying to the entire project or region. However, some findings may not apply to

all countries. While the survey received a good response rate, responses by country were uneven and statements can hence not be generalized for all eight countries. Nigeria was not included in the survey given that project activities had not started.

26. Scorecards were filled in by seven countries present at the midline event workshop in Bangkok. The eighth country, Uganda, was asked to fill in the scorecard electronically but the review has not yet obtained the input.

Structure of the Report

27. The findings section of this review is structured in correspondence with the intent of answering the OECD-DAC's evaluation criteria of effectiveness and efficiency. The effectiveness section provides an elaborate discussion comparing the project progress towards achieving intermediate and institutional outcomes and impacts, vis-à-vis the baseline situation using a ToC approach. The efficiency section determined whether the project, halfway into its implementation, has been conducted in an effective and timely manner. The review likewise identified actions to improve the project's strategies and activities until project completion and these are reflected in the Conclusions and Recommendations section.

Findings

Effectiveness

Project logical framework

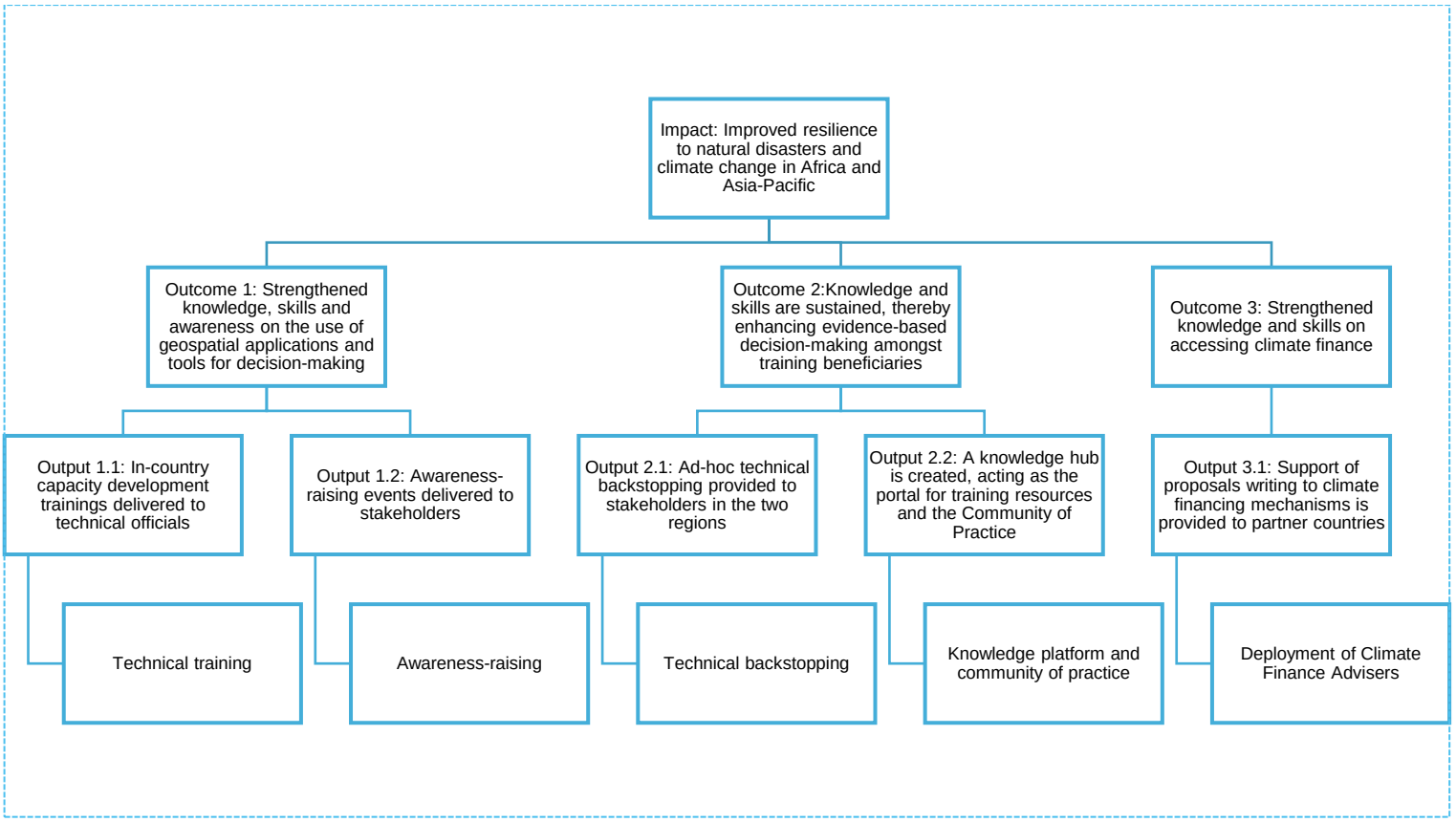
Finding 1. The project's theory of change is robust with clear links between project activities, outputs, and intermediate and institutional outcomes. However, links between outputs, and intermediate and institutional outcomes needs reformulation. Evaluation stakeholders confirmed links to the project's intended resilience impacts.

28. The original project proposal log frame included well-defined output levels based on UNOSAT project components (work packages):[5] 1. Technical training; 2. Awareness-raising; 3. Technical backstopping; 4. Web application solutions; and 5. Knowledge platform and community of practice. Taken together, along with the deployment of climate finance advisers in the three Pacific countries, these outputs would produce three outcomes (see Figure 1) and, eventually, the intended impact of contributing to *improved resilience to natural disasters and climate change in Africa and Asia-Pacific*, as indicated by a reduced number of deaths, missing persons and persons affected by disasters per 100,000 people (SDG indicator 11.5.1), and direct disaster economic loss in relation to

[5] The project proposal work packages (WP) were: WP 100, Overall project management and coordination; WP 200, Capacity development through training and technical backstopping (further divided into WP 220 and in-country technical training; WP 230, Regional awareness-raising; and WP 240, Technical backstopping); WP 300, Development of a Knowledge Platform (WP 310, Distance learning solutions; WP 320, Community of practice); and WP 400, Deployment of Climate Finance Advisers in Pacific target countries.

global GDP, including disaster damage to critical infrastructure and disruption of basic services (SDG indicator 11.5.2).

Figure 1 - Initial project proposal logical framework



29. During and after the baseline evaluation, the project adopted a refined ToC-based log frame that included intermediate outcomes (the three original outcomes and a fourth outcome on gender equality), adding a third output with a focus on geospatial platforms and leading to two levels of institutional outcomes expected to contribute to the expected overall objective of *improved resilience to natural disasters and climate change in Africa and Asia-Pacific*.

30. While the log frame kept the linkage to SDG indicators and the Sendai Framework, institutional outcomes and impact indicators were proposed, based on a scorecard instrument and surveys to be administered to representatives/focal points of project beneficiary/implementing partner organizations. The project team finalized the ToC and log frame in April 2023 (see Table 6), including national outcomes accounting for the diversity of the participant countries' needs and expectations. According to the new log frame, Bangladesh, Lao PDR and Uganda expected improvements in disaster risk management through the systematic incorporation of geographical information in risk-informed decision-making, while Bhutan and Nigeria needed improved monitoring of land/ecosystem monitoring. Pacific countries expected improvements in climate finance and national adaptation strategies, including relocation of vulnerable villages and climate

resilient agriculture, among others.[6] The main tool to attain these national outcomes would be the development of tailor-made web-applications[7] (refer to Table 7), co-developed by UNOSAT with the focal point organizations and hosted in the UNOSAT cloud.

Table 6 – Simplified 2023 project log frame

Output	Intermediate outcome	Institutional outcome (1)	Institutional outcome (2)	Impact
1.1. **In-country capacity development trainings delivered to technical officials**	Strengthened knowledge, skills and awareness on the use of geospatial applications and tools for decision-making.	Enhanced capacity to apply GIT and Earth Observation (EO) application in the thematic areas.	Stakeholders in member states and regional institutions using geospatial applications for decision-making related to improving resilience.	Improved resilience to natural hazards and climate change in Africa and Asia-Pacific, and improved access to climate funds.
1.2. **Awareness-raising events delivered to stakeholders**		Increased usage of GIT in trained stakeholder's respective home institutions/ organizations.		
1.3. **Outreach highlights accomplishments of the project**				
1.1. **Thematic geospatial platforms implemented to support decision-making**	Demonstrated benefits of UNOSAT's services on reducing disaster and climate impact. Long-term sustainability of technical capacities.	Knowledge and skills are sustained, thereby enhancing evidence-based decision-making amongst beneficiaries. Embedding of GIT in stakeholder's organizations.		
1.2. **Ad-hoc technical backstopping provided to stakeholders in the two regions**				
1.3. **A knowledge hub is created, acting as the portal for training resources and the Community of Practice**				
2.1. **Stakeholders in the Pacific are provided technical support in applying for climate funds**	Strengthened knowledge and skills on accessing climate finance.	Improved access to climate finance in the target countries in the Pacific.		
4.1. **Gender is mainstreamed in the project's activities**	Improved efforts toward attaining gender equity.			

Note: National outcomes and impacts were excluded from this table for simplicity of presentation

[6] The respective country-level ToC are presented in Annex II.
[7] Web-mapping and integrated dashboard solutions in the project proposal.

31. During the midline workshops, the project team and national focal points confirmed that the variety of solutions being developed and the synergies they were catalysing exceeded the number of "national outcomes" listed in the 2023 log frame and the national ToCs. While the overall intended impact in all countries is to increase resilience, including to climate shocks, this does not necessarily just come about through increased disaster risk reduction (DRR) capacities, but also through improved land, coastal or agricultural management, all of which include GIT solutions. Specific national outcomes can be inferred from the web apps being developed by the project (Table 9) and range from disaster assessment dashboards to suitability information of potential crops and improved sustainable land mapping.

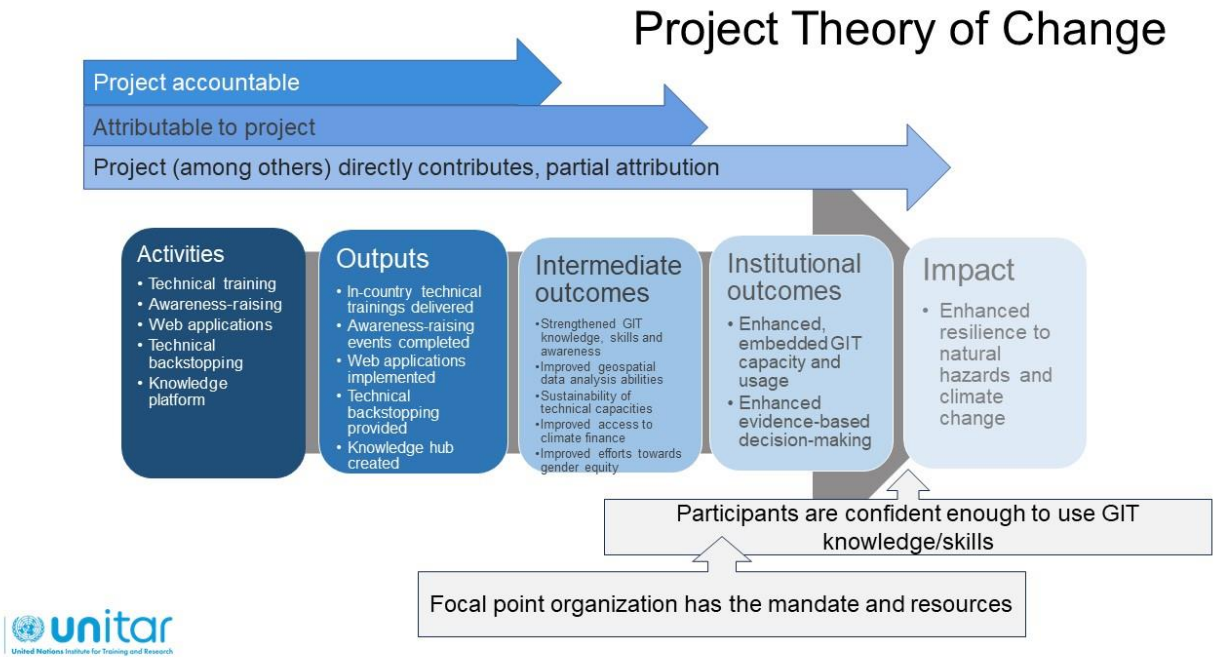
32. This review proposes a streamlined ToC (Figure 2) and log frame (Annex I) that includes all the participant countries' expectations, eliminating redundancies contained in the project's 2023 log frame and ToC.[8]

Project theory of change

33. The project's deliverables will enhance the capacity of the focal points and national agencies to use GIT for more effective and efficient decision-making, if the focal point organization has the mandate and resources[9] to implement such measures and an enabling institutional environment,[10] resulting in improved preparedness and response to climate hazards, more transparent, sustainable land management, and external funding, which contributes to *improved resilience to natural disasters and climate change* in the project target countries.

Figure 2 - Project's ToC

[8] The project's 2023 log frame had the following overall impacts: improved resilience in Africa and Asia-Pacific; reduced impact of disasters and climate change; reduced human loss from natural hazards; and reduced economic damages from multi-hazards.
[9] Clear institutional mandate, and sufficient facilities, equipment and manpower.
[10] Existence of effective coordinating mechanisms with other government organizations and international partners, and trust between the participants of said coordination mechanisms.



Note: The figure above presents the ToC without the specific national outcomes. Fading shades of blue represent diminishing project attribution. Assumptions are in the grey boxes.

Progress towards project outputs and intermediate outcomes

Finding 2. The project has made significant progress in delivering its outputs, which have contributed to attaining some intermediate outcomes. However, progress across target countries has been uneven, influenced by variations in the initial capacities and prior experience in implementing projects with UNOSAT.

34. Table 7 shows the project's attainments against its outcome and output targets at the midline phase. A more detailed description is provided in the sections below. The project has implemented its activities as planned but is limited by its extended rescoping phase, slow institutional responses, or long project official approval processes. In all countries where the project has established firm links with the beneficiary organization, the project is on track to delivering training and backstopping solutions. However, the complex process of developing, testing and "marketing" the web apps, and establishing a functional community of practice may need more time than the one-year remaining implementation period.

Table 7 - Project progress against the outcome and output indicators at midline

Outcome/output indicators	Target at Year 2	Actual at midline review	Comments
Outcome 1.1: Strengthened knowledge, skills and awareness on the use of geospatial applications and tools for decision-making			
1.a Percentage of trained technical participants successfully meeting learning objectives	Male 75% Female 75%	Total: 87.19% Male: Not Defined (ND) Female: ND	Indicator is measured with objective assessment of learning. Since this was not made available to the consultant, subjective assessment of learning from 13 evaluation reports were used as inputs.[11] This preliminary figure serves as an indication only. Data was not disaggregated by gender. Given that the reports do not contain the number of participants who responded to the survey and not all of them contain the participants list, the evaluation team took the average of participants replying “mostly” or “fully” from the Likert scale of the 13 reports. Similarly, the training reports contain the results (not disaggregated by gender) of the self-assessments for measuring learning attainment. All 13 reports reviewed confirmed that the training has increased participants’ knowledge and skills on the topics covered by the technical training, going from low or some knowledge to moderate and high knowledge. However, these results should be read with caution due to their subjectivity.

[11] Results from training reports of the following technical training were used as inputs: Advanced Training on UAV Data Collection, Processing, and Mapping (Bhutan); Introductory Training on Landslide Susceptibility Mapping (Fiji); Advanced Training on Multi-Hazard INFORM Risk Index Development (Fiji); Introductory Training on Cloud GIS and Web Application Development (Fiji); Advanced Training on Web Application Development and Geodata Management Quality Improvement (Fiji); Introductory Course on Strengthening Capacities in the Use of Geospatial Information Technology (GIT) for Disaster Risk Management (Lao PDR); Training on Data Collection, Management, and Analysis for Disaster Risk Management and Climate Resilience (Solomon Islands); Advanced Training on UAV Data Collection, Processing, and Mapping (Solomon Islands); Training on Hydrological Modelling for Flood Susceptibility Mapping and Coastal Risk Assessment (Solomon Islands); Introductory Course on Strengthening Capacities in the Use of Geospatial Information Technology (GIT) for Disaster Risk Management (Uganda); Geospatial Decision Support for Climate Resilience (GDS4CR) (Vanuatu); Training on Remote Sensing and LiDAR Data processing for Climate Resilience in Vanuatu (Vanuatu); Training on Introduction of GIT and Road Network Digitization (Vanuatu).

1.b Percentage of trained technical stakeholders confirming application of knowledge and skills from the training	Male: 60% Female 60%	Total: 92% Female: 100% Male: 85%	
1.c Percentage of high-level stakeholders in member states and regional institutions surveyed agreeing or strongly agreeing to the benefit of geospatial applications solutions for decision-making	Male: 70% Female 70%	Not collected	Survey question asking about "increased awareness about the use of Earth Observation and Geographic Information Technology (GIT) in the fields of Disaster Risk Reduction/Climate Change Adaptation and Natural Resource Management than prior to attending the project's awareness-raising events" only received five responses, which are insufficient to base conclusions on them.
Outcome 1.2: Demonstrated benefits of UNOSAT's trainings on reducing disaster and climate impact			
1.d Number of "impact stories" published on UNOSAT's website highlighting a beneficiary from a technical training	Four (one per region)	One	One story developed for Vanuatu and published as an impact story.
Outcome 2.1: Knowledge and skills are sustained, thereby enhancing evidence-based decision-making amongst beneficiaries			
2.a Percentage of trained technical stakeholders "regularly "or "often" utilizing geospatial information technology in their respective home institutions/organizations	Male: 60% Female 60%	Total: 59% Male: 60% Female: 50%	Met for male stakeholders and unmet for female stakeholders
Outcome 2.2: Demonstrated benefits of UNOSAT's services on reducing disaster and climate impact			
2.b Number of "impact stories" published on UNOSAT's website highlighting the impact of technical backstopping activities and geospatial solutions and tools have had on partner agencies and member states' efforts	Four impact stories	One	

Outcome 3.1: Strengthened knowledge and skills on accessing climate finance			
3.a Percentage of national stakeholders in the partner countries who feel informed ("very informed" in surveys) about accessing climate funds	Male: 60% Female 60%	Not collected	
3.b Number of training workshops on development of climate proposals	Three (one per Pacific country)	Two (Solomon Islands and Fiji)	Write shop - Practical application of CommonSensing for project pipelines carried out but not included in the monitoring dashboard.
3.c. Production of technical research papers (solar and use of satellite data and innovative financing mechanisms targeted at private sector investment)	One	0	
3.d. Learning exchange among participating countries (climate finance)	Two (one Pacific and one global)	0	
Outcome 4.1: Improved efforts toward attaining gender equity			
4.a. All female participants achieve equal or more than their male counterparts in regard to the learning objectives to ensure no one is left behind	Binary: Yes	ND	Data not disaggregated by gender.
4.b Increase in knowledge on how to collect and apply gender disaggregated data	Binary: Yes	Not collected	
4.c Improved knowledge on how to include gender and human rights considerations in climate funding proposals	Binary: Yes	Not collected	
Output 1.1: In-country capacity development trainings delivered to technical officials			
1.1.a Number of in-country technical trainings delivered per year	16 (one introductory and one advanced	16 trainings delivered	Training per country: Fiji: Five (two advanced trainings) Solomon Islands: Three (one advanced training) Vanuatu: Three (one advanced training)

	training per country)		Bangladesh: 0 Bhutan: Two (one advanced training) Lao PDR: One introductory training Uganda: Two (one introductory training, one training in collaboration with FAO) Nigeria: 0
1.1.b Number of key national/regional institutions targeted as beneficiaries per training	Africa: Three Asia-Pacific: Six	Nine	
1.1.c Number of participants per training	16	19 on average	
Output 1.2: Awareness-raising events delivered to stakeholders			
1.2.a Number of awareness-raising events organized or attended by project management team per year	Eight (four per year per sub-regional hub)	11	
1.2.b Number of key national/regional agencies or institutions at each event	Africa: 10 Asia-Pacific: 10	76	
1.2.c Number of attendees at each event	30 per event: 15 female and 15 male	Total: 19 on average	Number of attendees per event not always collected. The attendees' list does not contain gender information.
Output 1.3: Outreach highlights accomplishments of the project			
1.3.a Number of articles published on the NORAD project	Six (three articles per year)	1	
1.3.b Total number of views of NORAD articles	100 views	Not collected	
1.3.c Average number of impressions of NORAD tweets	750 impressions	Not collected	
1.3.d Engagement rate on twitter	2% average engagement strategy	Not collected	

1.3.e Number of people reached on Facebook	350 impressions	Not collected	
1.3.f Average engagement on Facebook	2% engagement on Facebook	Not collected	
1.3.g Number of videos produced on the project	N/A	Not collected	
Output 1.4: Learning exchanges			
1.4.a Learning exchange among participating countries	One	0	The midline event could be counted as an informal learning exchange.
Output 2.1: Thematic geospatial platforms implemented to support decision-making			
2.1.a Number of geospatial platforms or solutions implemented	Eight (one per country)	Four	
2.1.b Number of views of the geospatial platforms	100 views	Fiji: 2,019 Solomon Islands: 1,399 Vanuatu: 1,330 Bangladesh: 1,993	Platform developed: Fiji: Geospatial application to support decision-making. Solomon Islands: DSS web application. Vanuatu: DSS web application. Bangladesh: FloodAI monitoring dashboard.
2.1.c Number of visitors to the geospatial platforms	50 visitors	Fiji: 1,017 Solomon Islands: 555 Vanuatu: 647 Bangladesh: 1,102	
Output 2.2: Ad-hoc technical backstopping provided to stakeholders in the two regions			
2.2.a Number of ad-hoc technical backstopping provided to national/regional key stakeholders per year	64 (eight per country)	120	120 requests, 109 completed, six in progress, four awaiting further details and one dropped.
Output 2.3: A knowledge hub is created, acting as the portal for training resources and the community of practice			
2.3.a Knowledge hub and community of practice are established for cross regional collaboration	N/A		
Output 3.1: Stakeholders in the Pacific are provided technical support in applying for climate funds			

3.1.a Number of proposals prepared with the support of climate finance advisors	Four	Eight	
Output 4.1: Gender is mainstreamed in the project's activities			
4.1.a Gender responsive approaches have been taken to ensure equity of the project's activities	Binary: Yes	No	30% of participants in technical training are women. Gender disaggregation for awareness-raising not available. Knowledge assessments not disaggregated by gender.

Project outputs

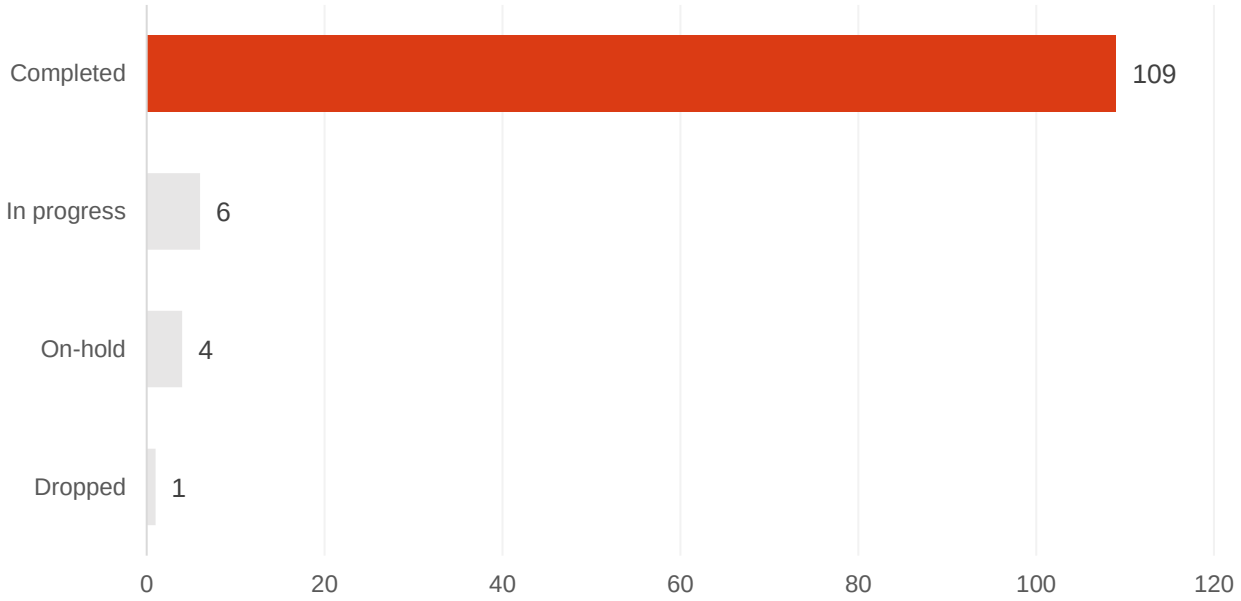
35. After placing a national GIS expert in each of the participating countries' beneficiary organizations[12] the project has started to deliver technical training, developing web solutions, organizing awareness-raising events and receiving backstopping requests. Sixteen technical trainings have been conducted which were attended by 169 participants, of which 26 per cent were women. However, delivery across the project's geographical landscape is uneven, depending on each country's different project implementation dynamics. Pacific countries, where UNOSAT implemented the CommonSensing project between 2019 and 2022, with related goals to this project, are more advanced than the African and Asian countries in this regard and, having established capacities, they are more focused on developing web app solutions (further described below) that started development under the CommonSensing project. In addition to the technical training, the project received 120 backstopping requests from various participating organizations which is way beyond the target set for the end of the project (see Table 8). Of the 120 requests, only one was dropped. Figure 3 shows the status of the backstopping requests received by UNOSAT.

Table 8 - Technical training participants

		Total participants				Unique participants			
Country	**Training workshops**	**Male**	**Female**	**Total**	**%Female**	**Male**	**Female**	**Total**	**%Female**
BGD	0	0	0	0	NA	0	0	0	NA
BTN	2	30	6	36	17%	28	5	33	15%
FJI	5	45	25	70	36%	33	15	48	31%
LAO	1	17	8	25	32%	17	8	25	32%
NGA	0	0	0	0	NA	0	0	0	NA
SLB	3	53	13	66	20%	32	8	40	20%
UGA	2	39	13	52	25%	39	11	50	22%
VUT	3	25	13	38	34%	20	10	30	33%
Total	16	209	78	287	27%	169	57	226	26%

[12] The last in-country expert placed was in Nigeria in July 2023. A national expert hired initially for Nigeria resigned in 2022.

Figure 3 - Status of backstopping requests



36. The project is developing or plans to develop 21 web app GIS solutions that use GIT to evaluate and identify sites at risk, enable better disaster response or land management decision-making, or support other climate change adaptation or mitigation projects (Table 9). As with the technical training, Pacific countries have witnessed more progress in this area.

Table 9 - Web apps being developed by the project

Country	Web app	Description	Status
Bangladesh	Bangladesh UNOSAT S-1 FloodAI Monitoring Dashboard	To provide flood impact information based on satellite images using Artificial Intelligence (AI) algorithm and present information that is needed by decision makers.	Developed in May 2022. The dashboard was tested once for the 2022 floodings.
	Bangladesh Hazard and Risk Map (DRM DSS)	To provide contextual analysis of variety of hazard, risk and vulnerability data, historical disaster losses and socio-economic information to support informed decision-making.	A beta version has been developed and needs to be updated with inputs from the demonstration.
Bhutan	UAV Image Processing Application	To adequately manage UAV data.	Testing phase. A beta version has been developed, hosted in the CERN server, but credentials have not yet been shared with the Office of National Land Commission.
	National Land Use Zoning	To integrate all datasets that will provide relevant information on land	Drafting of system and user requirement document. The system is in the formulation

	DSS (DSS on NLUZ)	and carry out sustainability analysis for allotment of land.	stage and has not started the development phase yet.
Fiji	Crop Suitability Decision Support	The open app is designed to provide farmers or communities with suitability information of potential crops in any location in Fiji. Also, if a farmer wants to know where they could grow a specific type of crop, the app can show suitability in simple colour codes.	
	Decision Support System. Geospatial application to support decision-making (DSS)	To provide contextual analysis of variety of hazard, risk and vulnerability data, historical disaster losses and socio-economic information to support informed decision-making.	Developed. Total views since project started: 2,019.
	Sea-Level Rise Impact Mapping	This interactive web app can measure impact of different sea level rise scenarios on housing and relevant infrastructure. It allows the decision makers to identify the location of high potential impact to assist with coastal mitigation planning.	A beta version for demo purposes has been developed.
	Rainfall Triggered Landslide Mapping	The web mapping application provides a simple weight-based rainfall-triggered landslide susceptibility model for M29 toposheet area.	
	Multi-Criteria Decision Analysis (MCDA)	The MCDA tool allows decision makers to find an optimal disaster risk reduction measure based on multiple factors.	
	Flood Susceptibility Application	The flood susceptibility maps using simplistic relative (DEMs) or Height Above Nearest Drainage Method.	A beta version developed.
Lao PDR	Lao PDR Flood AI	To provide flood impact information based on satellite image using AI algorithm and present information that is needed by decision makers.	Planned for the fourth quarter of 2023.
	DRM DSS	To provide contextual analysis of variety of hazard, risk and vulnerability data, historical disaster losses and socio-economic information to support informed decision-making.	Planned for the first quarter of 2024.
Nigeria	Nigeria Flood AI	To provide flood impact information based on satellite imagery using AI algorithm and present information that is needed by decision makers.	In-country activities have not started yet.
	Environmental Monitoring	To provide contextual analysis of flood hazard, risk and vulnerability data, historical losses and socio-	In-country activities have not started yet.

	DSS (FRM DSS)	economic information to support informed decision-making.	
Solomon Islands	Decision Support System for DRM	To provide contextual analysis of variety of hazard, risk and vulnerability data, historical disaster losses and socio-economic information to support informed decision-making, based on Subnational INFORM Risk Index.	Waiting for the 2019 census to be launched.
	Food systems dashboard	To display relevant food security data and information.	
	DSS web application	To provide contextual analysis of variety of hazard, risk and vulnerability data, historical disaster losses and socio-economic information to support informed decision-making.	Developed. Total views since project started: 1,399.
Uganda	Uganda Flood AI/landslide susceptibility dashboard	To provide flood impact information based on satellite image using AI algorithm and present information that is needed by decision makers.	Completed.
	(SoVI DSS)	To provide relevant information and data on the social vulnerability index to support decision-making.	Expected to be completed by July 2023.
	Uganda Geospatial Data Hub (Digital Atlas)	To use and share the available data from the National Risk Atlas.	
Vanuatu	(VUT DSS)	Decision Support System on Disaster Risk Management.	Developed. Total views since project started: 1,330.
	Emergency Response Dashboard	Dashboard to support emergency response operations.	

37. The project also conducted a total of 11 awareness-raising events, in which 214 people participated. Awareness-raising events lack a definitive description and include very diverse and different activities. The project lists participation in a UNFCCC COP26 side event and a meeting for the closure of the CommonSensing project as awareness-raising activities. The scope, participation and type of participants vary significantly among the listed awareness-raising events. Moreover, the project does not define for what and for whom awareness should be raised apart from a generic definition in the project document and inception reports. Yet, assumptions in the project document include: 1) awareness-raising targets correct audiences and 2) senior government officials attend events. Consequently, evaluating the effect of these activities is challenging. Only six survey respondents (2 per cent of participants) participated in awareness-raising activities and answered the related survey questions. From these, 80 per cent agree or strongly agree they are *more aware about the use of Earth Observation and GIT in the fields of Disaster Risk Reduction/Climate Change Adaptation and Natural Resource Management* after participation.

38. The project's ToC links the delivery of the project outputs to attaining three interlinked intermediate outcomes:
    - Strengthened knowledge, skills and awareness in utilizing GIT.
    - Improved ability to analyse geospatial data and information following natural hazards.
    - Long-term sustainability of technical capacities.
    - Improved access to climate finance in the target countries of the Pacific.

Strengthened knowledge, skills and awareness in utilizing Geospatial Information Technology

Indicator: Percentage of trained technical stakeholders confirming application of knowledge and skills

39. Technical training provides knowledge, skills and awareness on GIT to staff of focal point organizations and other beneficiary organizations. Reaction to technical training was overall positive across all events with participants strongly agreeing or agreeing that the training was overall useful (100 per cent), included new information (100 per cent), was relevant to their job (97 per cent) and that they intend to use knowledge/skills acquired from the training (99 per cent).[13] Focal point organization representatives in the midline workshop confirmed increased confidence in their organizations on the use of GIS applications. Ninety per cent of the survey respondents (52) who participated in project technical training state that they have applied the knowledge acquired in the training in their work, either often (60 per cent), daily (5 per cent) or sometimes (35 per cent).[14] Risk and asset mapping are the technical skills most often used (46 per cent), followed by spatial analysis (24 per cent) and basic GIS. Examples included are showcased in Box 1.

Box 1 - Examples of application of knowledge and skills from technical training

"I was trained on drone (UAV) image processing and flight planning. I've been using that knowledge to create ortho-maps and plan flight maps whenever required."

"In the recent spate of disasters across the country, I developed a map layout detailing all incidents in April and May 2023. This was used during the briefing to the Disaster Risk Reduction Platform Members about disaster incidents in the country."

"One area in which I have transferred and applied GIS (Geographic Information System) knowledge and skills is in the analysis of spatial data for urban planning projects. Through my previous experience working with GIS tools and datasets, I have gained expertise in spatial analysis, data visualization and mapping. When I started working on the current village profiling in the indigenous communities, I applied my GIS knowledge and skills in the following specific ways:

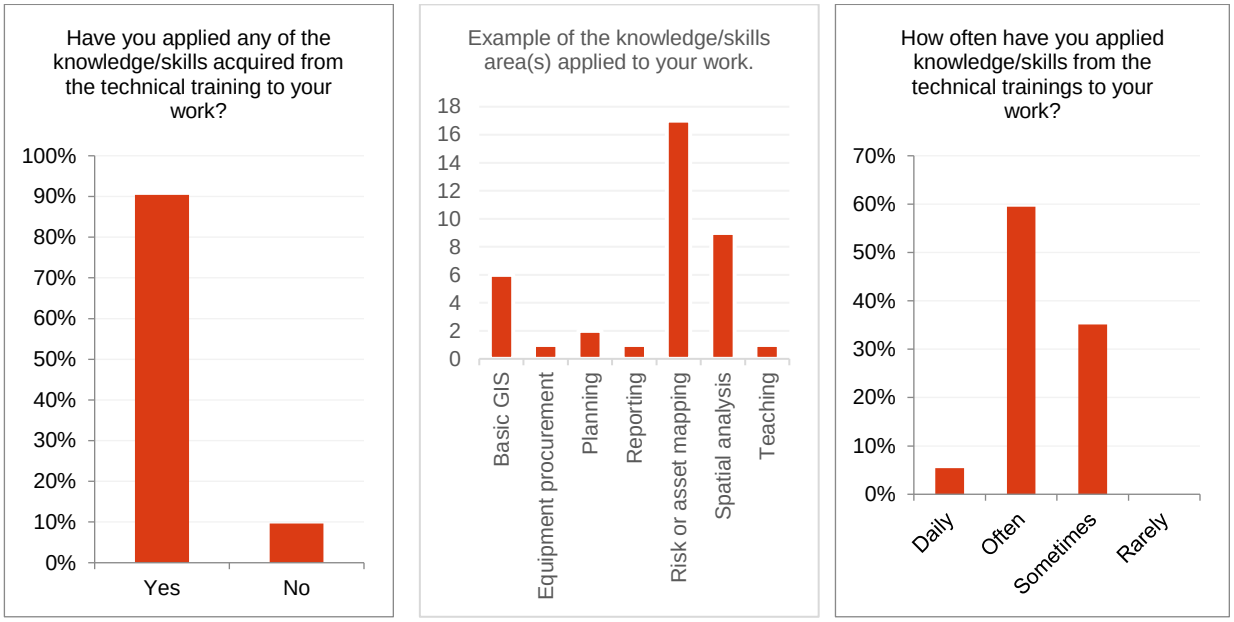
Spatial Data Analysis: Leveraging my knowledge of GIS software, I conducted spatial data analysis to identify patterns and relationships in the rural environment. By overlaying different layers of data, such as land use, population density and environmental factors, I gained insights into spatial relationships that influenced the planning decisions.

Visualization and Mapping: Applying my GIS skills in data visualization, I created interactive maps and visual representations of the rural planning data. By utilizing GIS software's mapping capabilities, I could effectively communicate complex spatial information to stakeholders, facilitating their understanding and decision-making processes.

[13] These rates are higher than the UNITAR-wide annual average: Key Performance Indicators | UNITAR
[14] This application rate is higher than the UNITAR-wide annual average: Key Performance Indicators | UNITAR

Environmental Impact Assessment: Drawing from my knowledge of GIS, I conducted environmental impact assessments for proposed development projects. By analysing spatial data on sensitive ecosystems, protected areas and natural resources, I could identify potential environmental risks and propose mitigation measures to minimize the impact of the projects."

Figure 4 - Application of skills acquired



40. Survey respondents also confirmed the relevance of the acquired knowledge to their work (83 per cent) and the importance of enabling factors, such as systems and processes (68 per cent), and supervisor support (62 per cent) (Figure 5).

Figure 5 - Enabling and hindering factors

Knowledge and skills are sustained, thereby enhancing evidence-based decision-making among beneficiaries.

***Indicator: Percentage of trained technical stakeholders "regularly "or "often" utilizing geospatial* information technology in their respective home institutions/organization**

41. Requests for backstopping support also reveal engagement and application of acquired skills at the individual and institutional levels. Backstopping by UNOSAT is deemed crucial by workshop participants while the community of practice (CoP) and knowledge platform are being consolidated, which are expected to complement backstopping through peer support. Despite the critical consideration of backstopping by the focal point organizations, not just for achieving the intermediate outcomes but also to enable sustainability of the acquired skills, a significant proportion of project beneficiaries are not aware (30 per cent) of this service. However, for those who are aware and requested backstopping (44 per cent), 94 per cent of survey respondents consider it essential. Survey respondents estimate the monetary benefits of the backstopping service ranging from USD 300 (minimum) to USD 1,000,000 (maximum). The four orders of magnitude difference between the extreme values (300 and 1,000,000 USD) detracts significance to a median or average monetary value of backstopping. However, as confirmed by workshop participants, it supports the conclusion that backstopping had tangible effects and, as expressed by survey respondents, was essential for the GIT-related workflow.

42. Up to June 2023, the project had received 120 backstopping requests, of which 109 had been completed, five are in progress, another five are on hold and one had been dropped (as it was not relevant to the project's working packages and results). Backstopping requests came from all target countries except Nigeria, where project activities have not yet started (Figure 6).

43. Most backstopping requests were related to risk assessment or land/ecosystem mapping (50 per cent) and over a fifth (22 per cent) for decision-making processes (Figure 7). Workshop and survey respondents confirm there is a lack of other sources of backstopping support.

Figure 6 - Countries originating backstopping requests.

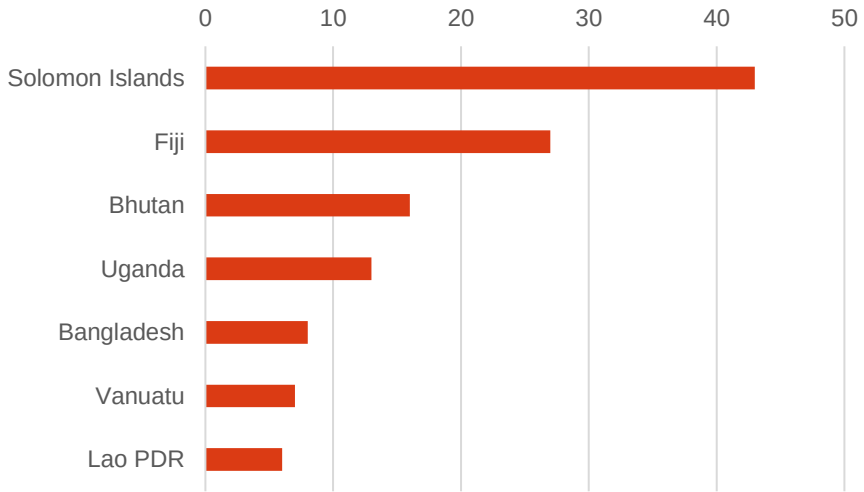
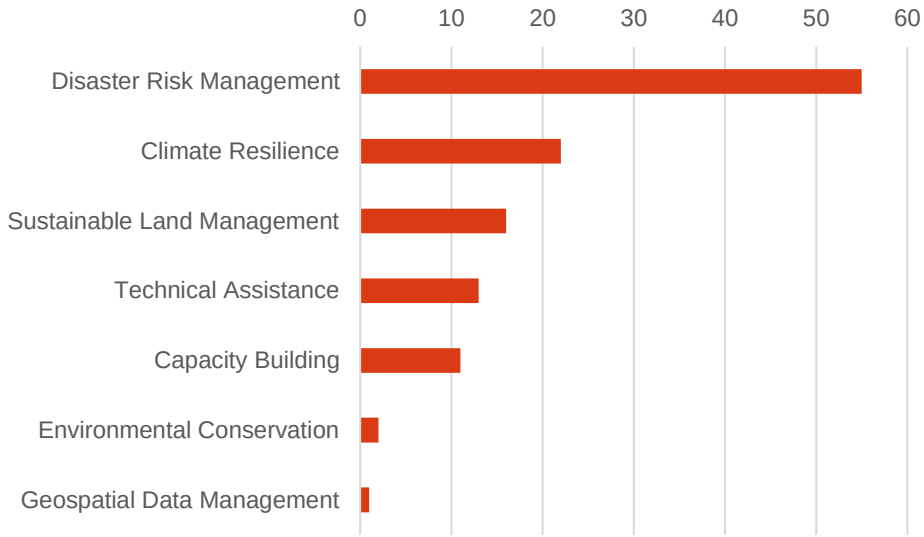


Figure 7 – Type of backstopping solutions provided by the project



Box 2. Examples of use of backstopping requests

"I have requested […] Lidar Processing Modules and they have supplied us with Open Software Modules using QGIS and Cloud Compare which we are so fortunate since we will not be paying for software subscriptions. This Lidar data processing will help us process our Lidar data collected from drones to DSM and DTM so that we can use them in [i]nfrastructure designs and coastal inundations. These processes [have] been done previously by expats at very high costs and the new skills we developed from the technical backstops will reduce the cost in future projects."
"Supported the development of maps of impact of landslides disaster."

"To make decision and review livelihood and food security emergency response plans in Solomon Islands."

"Maps to conduct the development of the Savo Volcano Plan as well as for the field simulation exercise on the plan as part of testing the components that cannot be tested in desktop exercises."

44. The survey responses also indicate that some backstopping requests could not fully address the needs of requesters. Seventeen per cent (three respondents) indicated that needs were only partially addressed and 11 per cent (two respondents) said that the request was not addressed. A review of the backstopping request database shows that some (10) requests are still ongoing given that the response requires, for instance, the development of a specific tool and is hence time-intense or consists of several outputs of which only some have been completed. Project stakeholders have also explained that other requests were closed without being addressed as other actors may be better placed to respond to them.

Improved access to climate finance in the target countries in the Pacific

45. Implemented by the Climate Finance Hub of the Commonwealth Secretariat, this project component has recruited national climate finance advisers (CFA) attached to the project's beneficiary organizations in Fiji, Solomon Islands and Vanuatu. The CFAs provide

institutional capacity by assessing how GIT data can strengthen climate change mitigation and adaptation proposals submitted to diverse climate finance sources.

46. While the main finance target in the three countries is the Green Climate Fund (GCF), the project CFAs have supported the preparation of proposals for other funding institutions. According to project reports, CFAs have also supported the preparation of proposals to support the relocation of vulnerable coastal communities (UNDRR-GRAF), the Rural Electrification Fund (UNDP), protecting coastal communities with nature-based seawalls[15] (Adaptation Fund, USD 5.8 million) and electric mobility in Fiji (funding source to be confirmed). In Solomon Islands, the project supported three proposals: relocation of the National Referral Hospital (not submitted yet), electric mobility (USD 1.8 million, GEF), and nature-based seawalls (USD 0.25 million, Global EbA Fund). It also supported a proposal for energy efficiency in schools (USD 10 million, Scotland) in Vanuatu. Table 10 details the project's climate finance support.

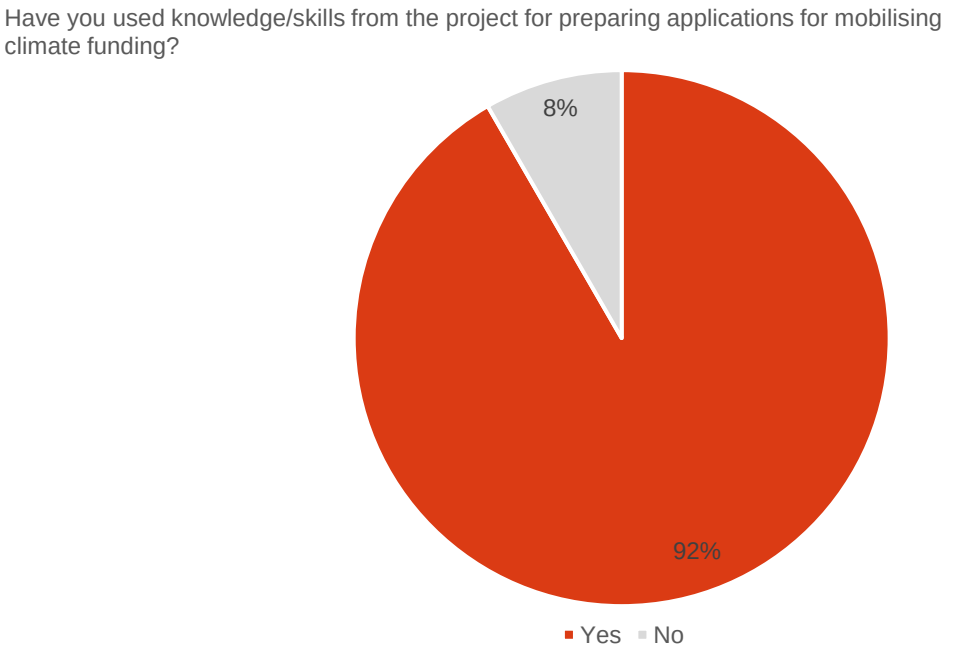
Table 10 - Project climate finance support

Country	Project	Project contribution	Funded
Fiji	Vulnerable community relocation	Mapping village location and complementary to other funding	No
Fiji	Rural Electrification	Mapping sites[16]	No
Fiji	Nature-based seawalls	Mapping sites	Yes
Fiji	Electric mobility	Mapping electric bus routes	No
Solomon Islands	Electric mobility	Mapping of routes and charging stations sites	Yes
Solomon Islands	National Referral Hospital	Mapping vulnerable areas	No
Vanuatu	Ecosystems Based Adaptation Fund (EBA Fund)	Mapping sites	No
Vanuatu	Energy security for schools in Vanuatu	Mapping sites	No

The project has promoted use of geospatial data in the preparation of climate change funding proposals, although this is yet to be done in a systematic manner (Figure 8).

Figure 8 – Application of knowledge/skills in preparing applications for mobilizing climate funding

[15] The proposed seawalls are breakwaters with a fore belt of mangroves and further vegetation belts inland.
[16] https://unosat-geodrr.cern.ch/portal/apps/webappviewer/index.html?id=49f2400a7aef4ebdb184c3aaac5aeb40

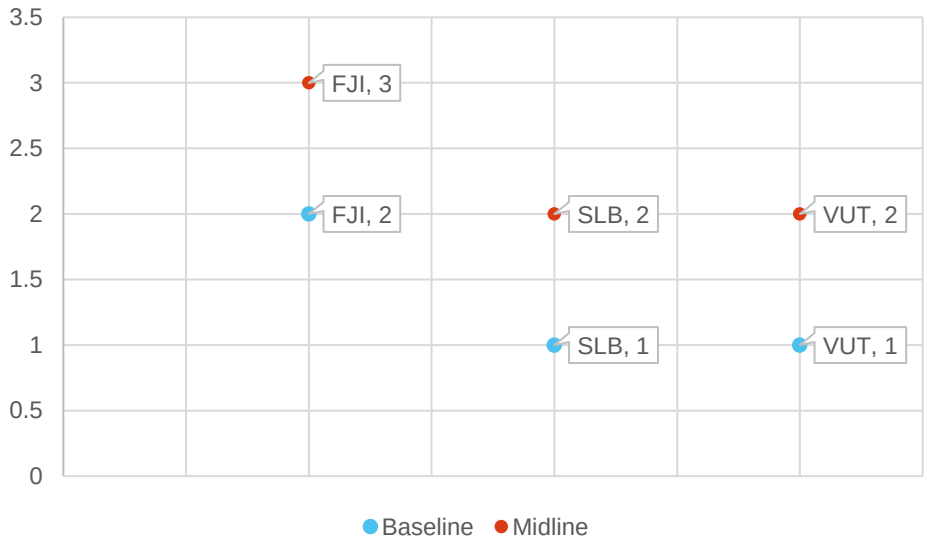


47. Project stakeholders agree that the linkage with geospatial data and applications will enable future funding and has already produced tangible effects in establishing synergies with projects funded by other agencies. The establishment of synergies goes beyond the three Pacific countries and successful cooperation with other projects has also been identified in Bhutan and Uganda.

48. However, based on survey results, synergies and funding opportunities are based more on other project components (web apps, backstopping and technical training) than on the CFAs. Survey responses indicate that loss and damage estimation, post-disaster needs assessment estimation and costing, and UAV knowledge/skills acquired have been used in applying for climate funding. The CFAs have delivered a total of six writeshops (two per country) to improve proposal writing skills for a total of eight organizations.

49. National focal agencies indicate through the scorecard that there has been progress on the use of GIS in climate finance proposals. Fiji indicates that the organization is now proactively seeking finance and preparing proposals, with systematic use of risk/GIS/GIT data, and Solomon Islands and Vanuatu stating that they now proactively seek finance and prepare proposals, but without systematic use of risk/GIS/GIT data. Vanuatu clarifies that reliance on external consultants has been decreased thanks to the support of the national adviser.

Figure 9 – Pacific countries scorecard results to question 5 on capacity to prepare informed proposals



Improved efforts towards attaining gender equity.

Finding 3. The project has no discernible gender strategy beyond aiming for parity in trainings and has not influenced gender parity in the GIT sector within participating countries. Nevertheless, focal organizations are aware of the importance of the issue. Countries have varied perceptions and actions to ensure gender equity independent from the project.

50. The project tries to ensure equal access to training, which is often limited by the smaller female GIT professional pool in the participant countries. Still, female participants have been successful in applying the skills acquired through the project (Table 11).

51. All the participant countries implement gender parity strategies, but they have not directly been considered into the project's training and web app development.

52. Scorecard results indicate no progress between the baseline and midline with regards to data disaggregation of gender/vulnerable groups and incorporation of the issues into climate risk, DRR strategies and climate finance proposals, except for little progress in Vanuatu and Solomon Islands. However, project web apps are designed to incorporate gender disaggregated data, in line with the INFORM Risk Index Methodology adopted by the project team.

Table 11 - Gender disaggregation of participants who applied knowledge/skills acquired from the technical training in the workplace

	Yes	No
Female	12	0
Male	23	4
Undisclosed	12	1
Total	47	5

Progress towards institutional outcomes

Finding 4. Project focal point organizations have increased their capacity and use of GIT in their thematic areas. However, the project's beneficiary organizations, with a marked technical profile, do not possess the power to increase budget allocations, limiting the reach of acquired capacities.

53. All national focal agencies have significantly increased their capacity to use, and actual usage of GIT data in their regular workflows and are planning to incrementally use more geospatial information as more technical trainings are deployed and web apps developed. However, stakeholders agree that they have limitations in communicating the need and usefulness of GIT to other levels and institutions in their governments that make decisions on resource allocations. Thus, stakeholders feel that they have not yet been provided with sufficient tools to fully deploy the capacity acquired from the project. However, in the project's Pacific countries, synergies with other departments catalysed by the focal point organization's GIT capacities have contributed to pooling resources.

54. Despite the advances, progress is uneven in all countries, directly linked to the different implementation paces of the project in each of them (Figure 10). A direct correlation between the number of trainings and the progress made between the baseline and the midline could not be observed, since other institutional (mandate and resources) factors are at play. However, based on workshop participants and scorecard results, the project has been the primary, if not the only, driver of progress in utilization of GIT solutions, which have had tangible impacts in resilience-related workflows and synergies.

55. Workshop participants confirm limitations related to budgetary and human resources constraints within targeted ministries preventing them from fully using the skills conveyed in the technical training workshops (see Figure 5). Countries' initial level of GIT use also determines the extent to which the first project trainings affect their overall capacity: where GIT/GIS was in use, the "capacity breakthrough" is expected out of the development and use of the web apps, whereas where the initial GIT/GIS use was none or very limited, just starting to apply GIS solutions has important effects.

Figure 10 – Correlation between number of trainings administered and progress in the use of GIT and data[17]

[17] Scorecard for Uganda not yet received. Scorecard for Nigeria filled in but not considered due to the very initial nature of activities in Nigeria.

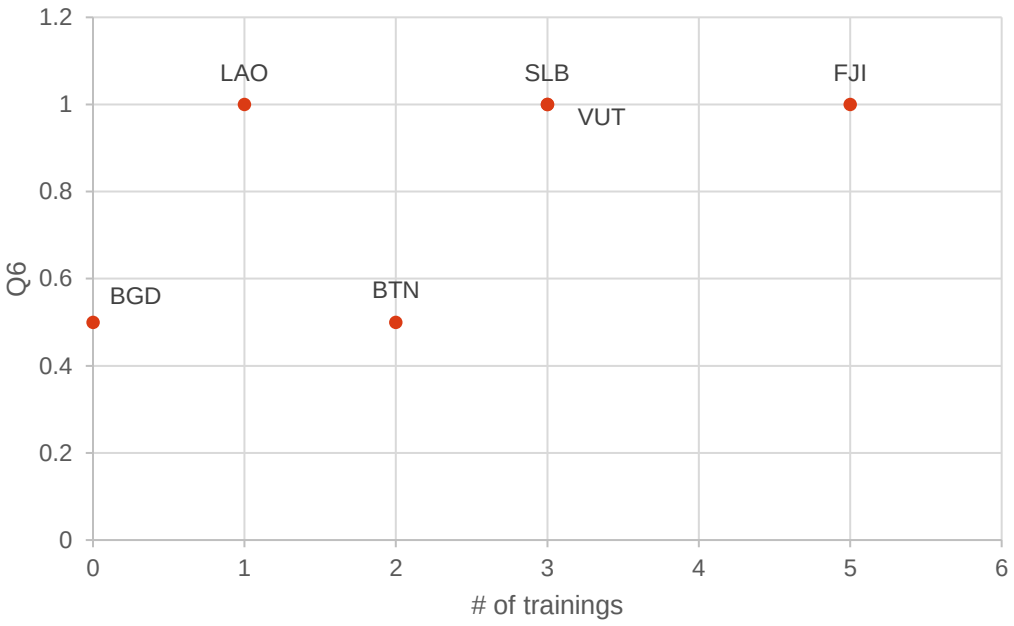


Figure – Use of GIT for decision-making

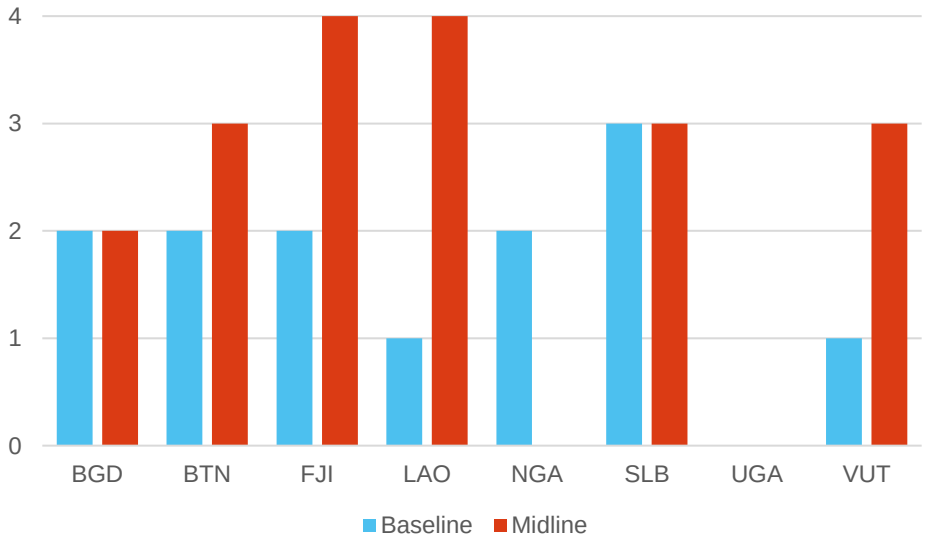
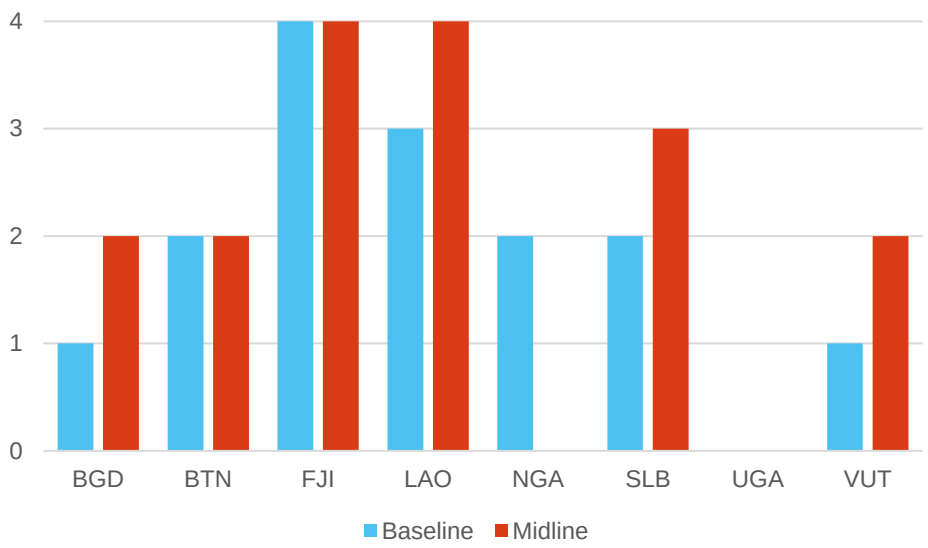


Figure 11 – Data use



Finding 5. Project beneficiary organizations are confident in maintaining their enhanced capacities provided sustainability of the in-country expert, technical backstopping and knowledge platform.

56. The national in-country GIS expert is key in facilitating the absorption of project GIT capacities. However, the fact that the national GIS expert is the linchpin of GIT applications within the partner organization questions the internalisation and sustainability after project end in 2024, as stakeholders strongly agree that technical support needs to be sustained beyond that date. Project stakeholders need assurance and clarity on what support can be maintained beyond July 2024, especially considering that some of the project implementation agreements are valid until 2025 (Table 2).

Finding 6. The project has catalysed the development of synergies with other government organizations contributing to expanding the reach of GIT applications.

57. Most participating beneficiary organizations share that the newly acquired GIT expertise has enabled them to cooperate with other government organizations and development partners (bilateral and multilateral, including UN agencies) providing GIT services that has resulted in enhanced outputs for other projects, such as providing road and other maps to facilitate implementation of electric mobility in the Pacific countries, identifying and reaching vulnerable communities for emergency relocation in Uganda or fully deployed geo-referred data produced by past projects in Bangladesh. As mentioned previously, GIT-based services provided by the project's focal point organization have contributed to accessing additional external funding.

Progress towards impact

Finding 7. There is evidence of the project starting to cause a transformational change towards improving resilience by making disaster preparedness and response more

efficient, as well as by setting the basis for a systematic climate change adaptation response by governments and private individuals.

58. In the Pacific countries of Fiji, Solomon Islands and Vanuatu, project stakeholders confirm that GIT capacities have made disaster relief more efficient, by providing decision makers and response units with accurate maps, assessments of initial impacts and situation analysis, which have reduced response time by at least one day on average.

59. Pacific countries and Lao PDR also report more effective disaster preparedness and response, as graphic information enables better communication to vulnerable populations and officials, enabling the timely adoption of measures (both protection and evacuation) and coordination of relief teams delivering relief supplies.

60. In Bhutan, the project has enabled the use of UAV technology, significantly improving the country's mapping capacity in a much more efficient manner, as its rugged topography makes field surveys expensive and inefficient in terms of coverage.

Efficiency

Finding 8. Project stakeholders follow project implementation procedures, communications and reporting. However, project stakeholders agree that delays in disbursements of project funds have affected project implementation. Moreover, project stakeholders need better transparency and communication of the project's budget and expenditure.

61. Project procedures, reporting and contact points are somewhat clear for focal points with the assistance of the project-posted national in-country GIS experts. However, both national focal points and GIS experts agree that communication and transparency, especially budget transparency, could be enhanced.

62. National focal points need to report to their own governments on project expenditure in terms of their national budget lines but lack the necessary information to do so. Moreover, the project has not given national focal points or national GIS experts access to information on the project's global expenditure or broken it down per activity and country, which is sometimes required by national finance authorities to account for official development assistance (ODA). Of the six implementation instruments reviewed, only the project document signed for Bangladesh contains an estimate of the national implementation budget.

63. Current disbursement procedures are sub-optimal, both in terms of timing of processes and accuracy of information. Disbursement delays have negatively impacted project implementation but were solved when national focal point organizations were able to advance the necessary funds to complete project activities, which is not the case for all focal point organizations. Most delays are related to UNITAR's new ERP management system, which has caused severe disruptions. Although the project team informed stakeholders when disbursement delays occurred, procurement requirements and rules are not well understood, causing confusion about the type of cost categories/services that can be supported by the project.

64. Project focal points report on their national activities but have limited access to information and stories from other participating countries, which focal point organizations could refer to in informing their own governments positioning and raising awareness on GIT applications. This reflects a limited knowledge exchange among the partner countries' focal point organizations and is emphasised by the fact that the midline event meeting was the first opportunity for exchange between countries. As the project-placed GIS experts have a very technical profile, the partner organizations acknowledge having limited capacities to cover the cost required to sustain the management of GIT applications, increasing their respective governments' investment on internal human resources.

65. Delays in starting implementation of the project in Nigeria indicate that the project is not timely regarding delivery of some of its outputs, such as app development and community of practice. However, overall, activities in other countries are on track. All delays in activity implementation, according to the project's monitoring data and workshop participants' opinions, are related to discussions on the project's institutional focal point or long approval procedures, and the extended rescoping phase. Yet the project needs to complete all activities and deliver all outputs for the project's eight countries before August 2024, meaning that there is just one year of project implementation left.

66. Regarding enabling factors, focal agencies have highlighted conditions that need to be in place for an efficient collaboration, including commitment from the government and UNOSAT, alignment of priorities of the government and the project, the mandate of the respective focal agency, trust developed between UNOSAT and the focal agency, and the budget required to undertake joint work, amongst others.

Conclusions

67. The project's objective is exceptionally relevant and addresses the core needs of the project's selected focal point organizations. Focal point organizations are established and relevant national government organizations responsible for disaster risk reduction or environmental and land management that, albeit with some limitations, have sufficient staff and equipment to implement the project's capacity and solutions. While the focal point organizations' technical profile facilitates the understanding and the co-development of the solutions, it hampers, to a degree, the expansion of resource allocation for GIT applications, including human resources and equipment, as resource allocation is hosted in higher-up levels in the focal point's respective ministries.

68. The project has suffered significant delays in some countries. While the project has transitioned smoothly from a previous project led by UNOSAT (the CommonSensing project) in the Pacific countries, in other countries, particularly in Bangladesh, Uganda and Nigeria, setting up the national project structures and securing the necessary agreements and approvals has proved more challenging, primarily due to those countries' administrative procedures related to official communications and approval of external projects. However, on the other hand, web app solution development has been accelerated and, to date, 12 web app solutions have been completed, more than the target of eight, five of which have been officially released. Moreover, the project has been overperforming on backstopping requests and is already beyond the target set for the end of the project.

69. Where the project has started implementation, there is strong evidence of a tangible and significant development of GIT capacities that have led to the initial stages of a transformational change in disaster risk reduction, climate change adaptation, and land and ecosystem management. GIT capacities have also catalysed cooperation with external and internal initiatives, which have benefited from GIT solutions and facilitated access to climate finance. Climate change advisers and GIT solutions have supported the climate finance proposals in the three Pacific countries, and stakeholders expect a consequent increase in climate finance.

70. Project management has been efficient and is readily accessible for national focal point organizations. However, the project's procedures for disbursements and procurement, and rules for recruitment must be adequately communicated to stakeholders. Limited communication has caused confusion and frustration, as disbursement delays have affected project implementation. Moreover, country representatives wish for additional information regarding the overall budget of the project and require such information for internal reporting.

71. The project-placed national GIS experts are fundamental to the focal point organization's absorption of project technical capacity and, together with technical backstopping and training of trainers, they have significantly increased the confidence of the focal point organization in generating and using GIT solutions. However, stakeholders deem an extension of project support as paramount to maintain the capacities and the incipient systemic transformations, making disaster preparedness and response more efficient and effective. Still, they are unsure how this support can continue after the planned end of the project in August 2024, as the project-planned knowledge platform and CoP have yet to be established.

Lessons Learned

72. Workshop participants were asked to identify lessons learned during the first half of the project implementation. These lessons are listed here, as grouped by the workshop participants.

Project nomenclature

- The significance of project nomenclature is demonstrated in awareness-raising campaigns and communicating results effectively. Excessively lengthy and dull project titles may have limitations, making it beneficial to opt for a more engaging and catchier title to enhance the impact of the project.

Gender

- There remains significant work to be done regarding gender mainstreaming and dissemination of the project’s gender efforts. The project’s current engagement of female students is indeed a good strategy to enable a more inclusive future professional pool.

Open-source software and other tools

- Utilizing open-source software, such as QGIS, is effective. It is likewise essential to customize the tools to suit specific country requirements. Prioritising enhancement of data availability and accessibility is paramount.

Coordination and communication

- Consistent communication with partners and sharing project outcomes with higher officials and authorities is fundamental to magnifying project results and expanding project outreach.

Monitoring Results

- Employing scorecards and other monitoring instruments is essential in visualising project progress, offering valuable insights for effective decision-making and planning.

Partnerships

- Synergies and cooperation with other initiatives expands the project's reach and avoids overlaps.
- Fostering knowledge exchanges among focal point organizations in participating countries can effectively address challenges and should be further promoted through yearly stakeholder meetings.

Country ownership

- Country ownership is fundamental for successful implementation and sustainability.

Training

- More technical capacity building is needed, including reaching subnational authorities and organizations at the provincial, district and community levels.

Recommendations

73. Seven recommendations are put forward following the midline review workshop.

1. **On project sustainability:** To ensure sustainability of the project, the project should prioritize the development of the knowledge platform and CoP to ensure that project participants have sufficient confidence to apply the project's GIT solutions, in addition to continuing backstopping services. As an expanded backstopping programme would need additional resources, UNITAR should continue to mobilize further resources (recommendation 3). At the same time, the focal point organizations should ensure sufficient budget to maintain the position of the project's national GIS experts.

The possibility of extension of technical backstopping services beyond 2024 must be clarified to focal point organizations, establishing the budget and staff requirements that UNOSAT would need for that purpose. Training of trainers may need to be advanced to take place before the project's final month to allow for trainers' practice.

2. **On project implementation:** The project should make the web application solution finalization a priority in order to allow for accompanied use of the app by August 2024. While the project is on track or has surpassed targets for other outputs, it is behind on release of the apps. As testing and user training takes time, it is recommended that the project concentrates on this work package, building on the user feedback received during the midline workshop.

3. **On mobilizing funding:** Considering the significant evidence of transformational change in matters as critical as disaster risk preparedness and response, UNOSAT and the focal point organization should, in consultation with the donor, design a strategy to mobilise funding for a subsequent phase and consolidate results, especially in those countries where the project implementation is delayed, or extend support to further countries. A better definition and orientation of "awareness-raising events" could be the conduit to communicate project results better to advocate for further funding.

4. **On administration and finance:** The project should clearly communicate administrative procedures to national focal agencies and share project resource estimates by country to improve transparency and allow focal points to use the information for ministerial reporting.

5. **On communication and reporting:** The project should put additional emphasis on regular communication products that can be shared with national focal points and should include impact stories, and monitoring and evaluation results so that focal points can better report and present to their national authorities and other ministries.

6. **On gender equality and needs:** Project management should brainstorm jointly with national focal points and in-country experts regarding additional avenues to address women's needs in GIS, aligning with national gender equality strategies and following up on the current engagement of female university students, to enable a more inclusive future professional pool. This could be done by hosting a dedicated session on gender equality and the empowerment of women and also be informed by data collected by the project, such as technical training objective knowledge assessments where data is disaggregated by sex, and continuing practices, such as gender-disaggregated indicators in the web applications and involving women in activities.

7. **On reporting unplanned outcomes resulting from backstopping requests:** Project management should align backstopping requests to project outcomes, including unplanned outcomes, and develop a monitoring survey that is sent to requesters to better understand the potential results obtained following the request completion.

Annexes

Annex I. Suggested project log frame with midline data collected

Indicators	Country	Target	Baseline	Midline	Endline	Notes
Overall Impact 1: Enhanced resilience to natural hazards and climate change in Africa and Asia-Pacific						
Increased efficiency in conducting analyses i.e. Customized thematic applications enable stakeholders to work more efficiently in identifying climate and disaster-related risks						
Evidence supported disaster assessments enable more efficient and effective delivery of relief measures						
Overall Impact 2: Improved access to climate funds						
Number of government-approved project proposals or concept notes that were developed with the support of the climate finance advisers (CFAs) i.e. number of those proposals using GIT		3				
Institutional Outcome (Level 2): Stakeholders in member states and regional institutions using geospatial applications for decision-making related to improving resilience						
Percentage of high-level stakeholders agreeing to more efficient delivery of their mandate			1.86	3		Scorecard question 6
Number of “impact stories” published on UNOSAT’s website highlighting a beneficiary from a technical training			0			Stories collected during the BKK scorecard and outcome harvest workshop
Institutional Outcome (Level 2): Gender is mainstreamed in beneficiary organizations' activities and outcomes						

Percentage of high-level stakeholders agreeing to gender mainstreaming (equal opportunities and disaggregated data)			Scorecard questions 7 and 8
Institutional Outcome (Level 1): Enhanced capacity to apply GIT and Earth Observation (EO) application in the thematic areas			
Percentage of high-level stakeholders agreeing to the benefit of geospatial applications solutions for decision-making	1.9	2.7	Scorecard question 1
Institutional Outcome (Level 1): Increased usage of GIT in trained stakeholder's respective home institutions/organizations Institutional Outcome (Level 1): Enhanced evidence-based decision-making among stakeholders during major hazard events			
Percentage of high-level stakeholders agreeing to increase usage of geospatial applications solutions for decision-making	2.8	2.1	Scorecard question 2
Institutional Outcome (Level 1): Embedding of GIT in stakeholder's organizations			
Percentage of high-level stakeholders agreeing to having internalized capacity in a sustainable manner	1.71	2.31	Scorecard question 3
Institutional Outcome (Level 1):			
Percentage of stakeholders agreeing to increased climate finance likelihood by use of GIT	0	0.83	Scorecard question 5
Intermediate Outcome: Strengthened knowledge, skills and awareness on the use of geospatial applications and tools for decision-making			
Percentage of trained technical stakeholders confirming application of knowledge and skills from the training	0	0.9	Midline survey question 2
Percentage of high-level stakeholders in member states and regional institutions surveyed agreeing or strongly agreeing to the benefit of geospatial applications solutions for decision-making	0	0.8	Midline survey question 7
Intermediate Outcome: Improved ability to analyse geospatial data and information following natural hazards			
Percentage of trained technical stakeholder's "regularly "or "often" utilizing geospatial information	0	0.45	Midline survey question 4

technology in their respective home institutions/organization				
Intermediate Outcome: Long-term sustainability of technical capacities				
Percentage of staff of beneficiary organizations applying backstopping solutions to their work		0	0.94	Midline survey question 11 (Essential, Very Important)
Average monetary value of solution applied (in USD)		0	148,000	Value from question 13
Intermediate Outcome: Strengthened knowledge and skills on accessing climate finance				
Percentage of national stakeholders involved in preparing applications for mobilizing climate funding using knowledge/skills from the project		0	0.24	Midline survey question 19
Intermediate Outcome: Improved efforts towards attaining gender equity				
All female participants achieve equal or more than their male counterparts in regard to the learning objectives to ensure no one is left behind				Survey
Increase in knowledge on how to collect and apply gender disaggregated data				Midline participant stories during scorecard exercise
Improved knowledge on how to include gender and human rights considerations in climate funding proposals				Midline participant stories during scorecard exercise
Output: In-country capacity development trainings delivered to technical officials				
Number of in-country technical trainings delivered	BGD	0	0	
Number of key national/regional institutions targeted as beneficiaries per training	BTN	0	2	

Number of participants per training	FJI	0	3
	LAO	0	1
	NGA	0	0
	SLB	0	3
	UGA	0	1
	VUT	0	2
	BGD	0	0
	BTN	0	1
	FJI	0	1
	LAO	0	1
	NGA	0	0
	SLB	0	1
	UGA	0	1
	VUT	0	0
	BGD	0	0
	BTN	0	36
	FJI	0	48
	LAO	0	25
	NGA	0	0
	SLB	0	67
	UGA	0	20
	VUT	0	32
Activity: Technical Training Output: Awareness-raising events delivered to stakeholders			
Number of awareness-raising events organized or attended	BGD	0	
Number of key national/regional agencies or institutions at each event	BTN	0	
Number of attendees at each event	FJI	0	
	LAO	0	
	NGA	0	
	SLB	0	

	UGA	0	
	VUT	0	
	BGD	0	
	BTN	0	
	FJI	0	
	LAO	0	
	NGA	0	
	SLB	0	
	UGA	0	
	VUT	0	
	BGD	0	
	BTN	0	
	FJI	0	
	LAO	0	
	NGA	0	
	SLB	0	
	UGA	0	
	VUT	0	
Output: Outreach highlights accomplishments of the project			
Project's web and social media stats			
Activity: Awareness-raising Output: Thematic geospatial platforms implemented			
Number of geospatial platforms or solutions implemented	BGD	0	0
	BTN	0	0
	FJI	0	0
	LAO	0	0
	NGA	0	0
	SLB	0	0
	UGA	0	0
	VUT	0	0
Number of views of the geospatial platforms	BGD	0	0

Number of visitors to the geospatial platforms	BTN	0	0
	FJI	0	0
	LAO	0	0
	NGA	0	0
	SLB	0	0
	UGA	0	0
	VUT	0	0
	BGD	0	0
	BTN	0	0
	FJI	0	0
	LAO	0	0
	NGA	0	0
	SLB	0	0
	UGA	0	0
	VUT	0	0
Activity: Web applications solutions Output: Ad-hoc technical backstopping provided to stakeholders			
Number of ad-hoc technical backstopping provided	BGD	0	
	BTN	0	
	FJI	0	
	LAO	0	
	NGA	0	
	SLB	0	
	UGA	0	
	VUT	0	
Activity: Technical backstopping Output: A knowledge hub is created, acting as the portal for training resources and the community of practice			
Knowledge hub and community of practice are established	BGD	0	0
	BTN	0	0
	FJI	0	0
	LAO	0	0
	NGA	0	0
	SLB	0	0

	UGA	0	0
	VUT	0	0
Activity: Knowledge platform and communit practice Output: Stakeholders in the Pacific are provided technical support in applying for climate funds			
Number of proposals prepared with the support of climate finance advisers	FJI	0	
	SLB	0	
	VUT	0	
Activity: Finance advisers Output: Gender is mainstreamed in the project's activities			
Gender responsive approaches have been taken to ensure equity of the project's activities			
Activity: Gender activities			

Annex II. Scorecard summary results

Information from Uganda will be collected at a later stage. Values transposed 1 point (1-4 scale) to avoid denominator zeroes in progress calculation. Only baseline values are considered for Nigeria given the delay in the implementation of project activities in the country.

Question	Country	Baseline	Midline	Endline	Midline progress	Clarifications	Averages
1	BGD	2	2	ND	0%	My organization is fully aware of the technology but we do not have adequate manpower to operate. Manpower structure is actually designed and designated by the central government. This process is not easy.	0.46
	BTN	2	3	ND	50%	Organization = Government. Less of domain experts in the decision-making body.	
	FJI	2	4	ND	100%	Organization = Office of the prime minister. We did not have the access, web applications, training, now there is!	
	LAO	1	4	ND	300%	Organization = Division	

	NGA	2	0	ND	ND	The government has relevant agencies which provide info on use of GIT for decision-making and planning.	
	SLB	3	3	ND	0%		
	UGA	ND	ND	ND	ND		
	VUT	1	3	ND	200%	Organization = Ministry of Climate Change. Baseline: GIT is not really considered as a tool for decision-making especially in regards to the disaster preparedness and other sectoral gaps in the government. The Midterm is 2, the MOCC is aware and already used, but still needs improvement.	
2	BGD	1	2	ND	100%	We have data from several previous projects but due to limited technical knowledge we can't use those fully functionally.	0.32
	BTN	2	2	ND	0%	Data are often being used but the data are often incomplete.	

	FJI	4	4	ND	0%	Helps inform decision-making.	
	LAO	3	4	ND	33%		
	NGA	2	ND	ND	ND	The use of information from such agencies helps in providing early warnings, pollution control, etc.	
	SLB	2	3	ND	50%		
	UGA	ND	ND	ND	ND		
	VUT	1	2	ND	100%	For the midterm review, I do not think any statement is relevant as regularly the GIT/GIS is used, I think in one or 2 disasters already, so not regularly, but slowly graduating – often.	
3	BGD	1	1	ND	0%	We have DRR-related capacity development programmes but there is no known programme focusing on GIS. We could not implement my training for this project yet due to the approval delay.	2.307692308
	BTN	2	3	ND	50%	e.g. in the field of ILLEGIBLE, no ILLEGIBLE team programme covered	

	FJI	1	4	ND	300%		
	LAO	1	4	ND	300%	I want to upgrade GIT/GIS.	
	NGA	3	ND	ND	ND		
	SLB	2	3	ND	50%		
	UGA	ND	ND	ND	ND		
	VUT	2	3	ND	50%	So far, I think the METS team only has been having such trainings in the past but once the NORAD project comes in, we have focal points from each department who attended technical trainings but I think these skills need to be utilized.	
4	BGD	2	2	ND	0%		
	BTN	2	2	ND	0%	Not enough resources to prioritize the ILLEGIBLE.	

	FJI	1	4	ND	300%	We now have a GIS platform.	
	LAO	1	3	ND	200%	Human (resources) = IDMS (Information Disaster Management Office).	
	NGA	2	ND	ND	ND	As in the case of most countries, budgeting constraints is a challenge.	
	SLB	1	2	ND	100%		
	UGA	ND	ND	ND	ND		
	VUT	1	2	ND	100%	I am not sure how to respond in terms of the midterm as NORAD still supporting this but collaboration between other projects and departments SOP/business plan can support the budgetary needs.	
5	FJI	2	3	ND	50%	We have now started to incorporate GIS data in proposals.	83%
	SLB	1	2	ND	100%		

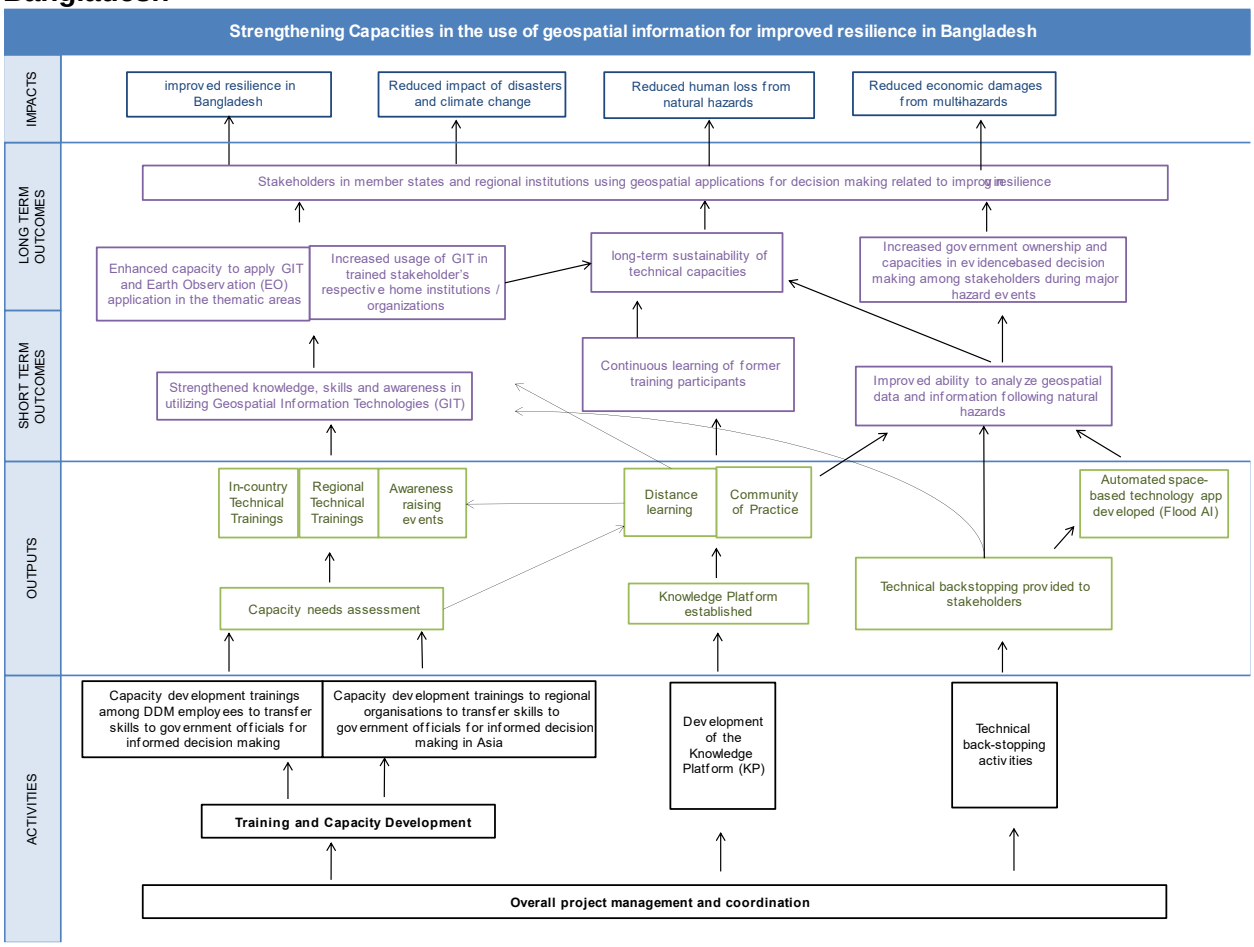
	VUT	1	2	ND	100%	For this, in the past, external help provided to prepare proposals. At the moment, with help of the national advisers working closely with external country experts, it's slowly improving.	
6	BGD	2	3	ND	50%	Lack of staff to utilize GIS technology.	1.857142857
	BTN	2	3	ND	50%	Land management is the cross-cutting issues and not able to resolve the issues even through GIT.	
	FJI	2	4	ND	100%	On multiple sectors now.	
	LAO	2	4	ND	100%		
	NGA	3	ND	ND	ND		
	SLB	1	2	ND	100%		
	UGA	ND	ND	ND	ND		
	VUT	1	2	ND	100%	The ministry is adapting the GIS/GIT into disaster response that it has informed the decision-making but the limitation	

						is the baseline data that can be used quickly especially during response.	
7	BGD	4	4	ND	0%	Our organization have disaggregated data by gender.	
	BTN	1	1	ND	0%	Not applicable	
	FJI	4	4	ND	0%		
	LAO	1	1	ND	0%		
	NGA	2	ND	ND	ND		
	SLB	2	3	ND	50%		
	UGA	ND	ND	ND	ND		
	VUT	2	3		50%	This is still the gap that we'll need to address in the project, developing a data dashboard.	
8	BGD	4	4	ND	0%		

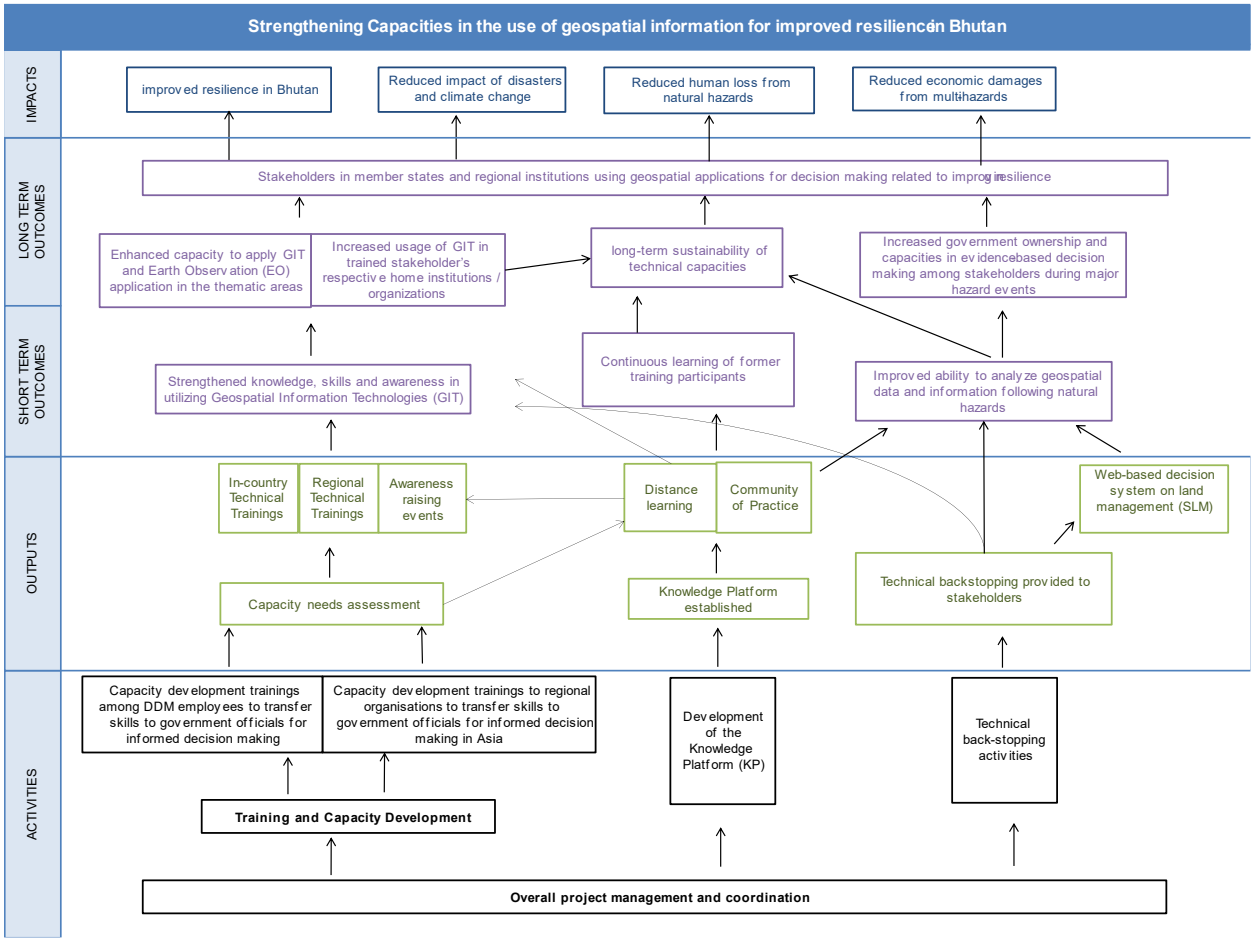
	BTN	3	3	ND	0%	Gender issues are considered.	
	FJI	4	4	ND	0%		
	LAO	1	1	ND	0%		
	NGA	2	ND	ND	ND	Gender mainstreaming is incorporated but not applied systematically due to lack of professionals.	
	SLB	2	2	ND	0%		
	UGA	ND	ND	ND	ND		
	VUT	2	3	ND	50%	There is still need for improvement in terms of implementation.	

Annex III. National ToC as proposed by the UNOSAT project team

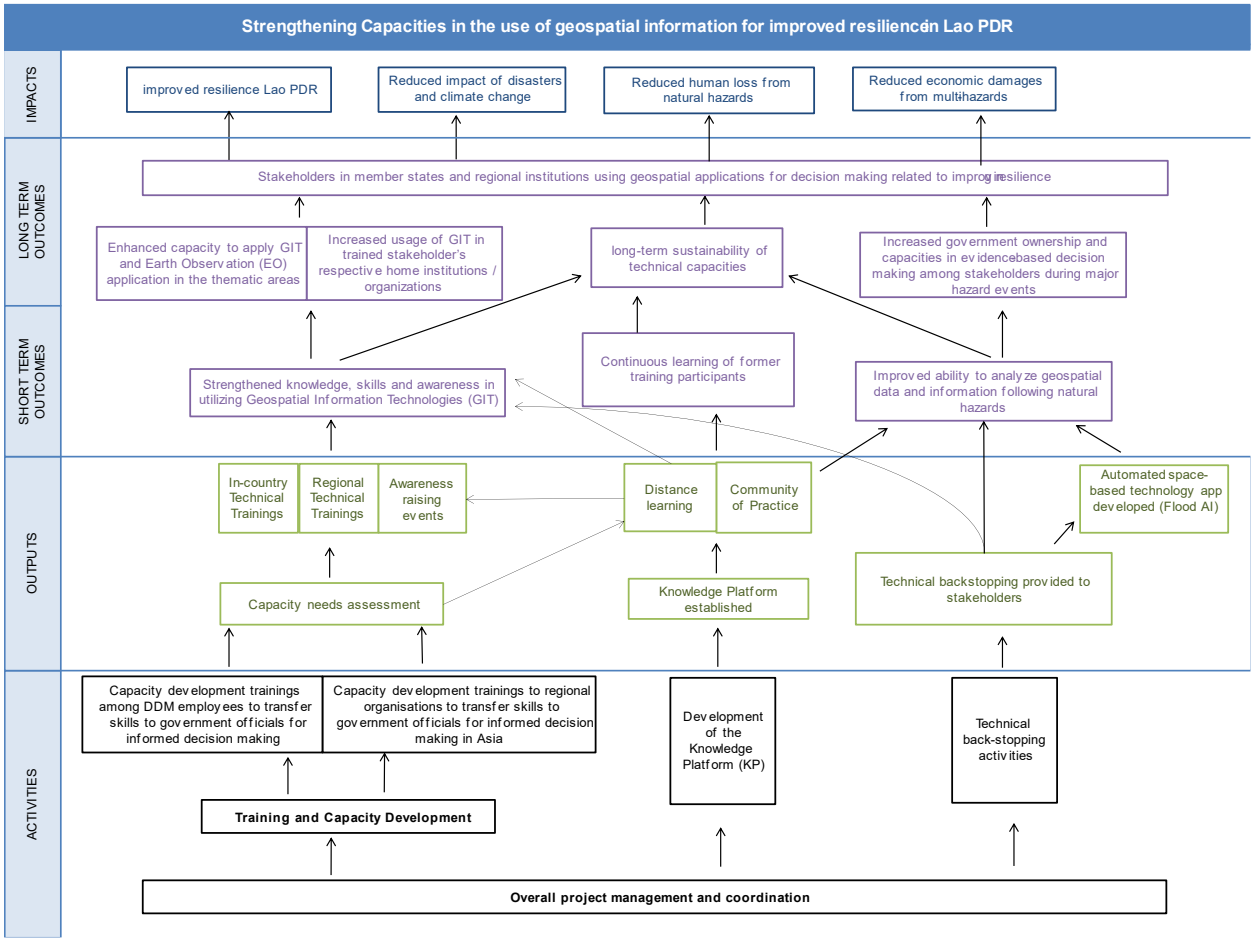
Bangladesh



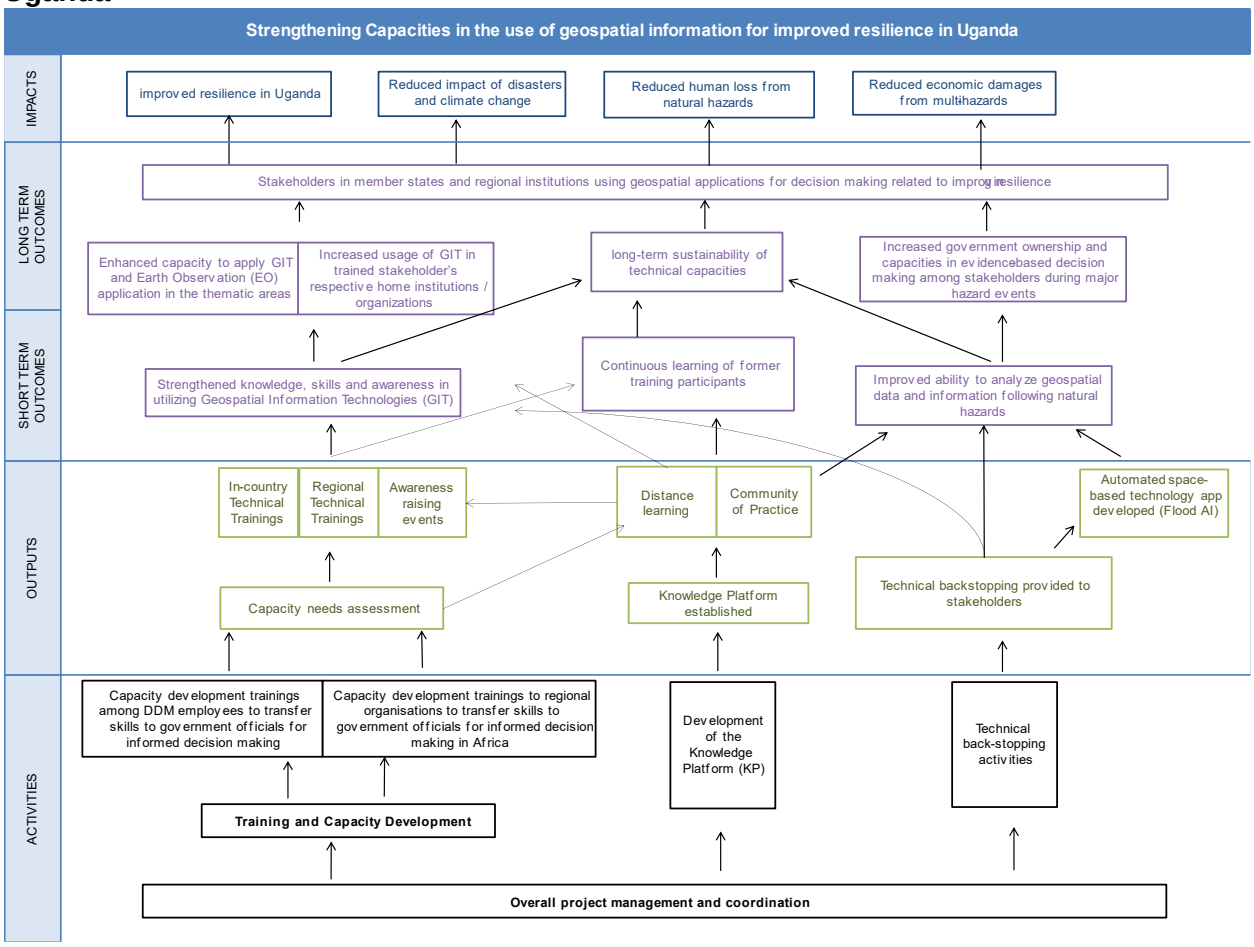
Bhutan


Strengthening Capacities in the use of geospatial information for improved resilience in Bhutan
IMPACTS
improved resilience in Bhutan
Reduced impact of disasters and climate change
Reduced human loss from natural hazards
Reduced economic damages from multi-hazards
LONG TERM OUTCOMES
Stakeholders in member states and regional institutions using geospatial applications for decision making related to improved resilience
Enhanced capacity to apply GIT and Earth Observation (EO) application in the thematic areas
Increased usage of GIT in trained stakeholder's respective home institutions / organizations
long-term sustainability of technical capacities
Increased government ownership and capacities in evidencebased decision making among stakeholders during major hazard events
SHORT TERM OUTCOMES
Strengthened knowledge, skills and awareness in utilizing Geospatial Information Technologies (GIT)
Continuous learning of former training participants
Improved ability to analyze geospatial data and information following natural hazards
OUTPUTS
In-country Technical Trainings
Regional Technical Trainings
Awareness raising events
Distance learning
Community of Practice
Web-based decision system on land management (SLM)
Capacity needs assessment
Knowledge Platform established
Technical backstopping provided to stakeholders
ACTIVITIES
Capacity development trainings among DDM employees to transfer skills to government officials for informed decision making
Capacity development trainings to regional organisations to transfer skills to government officials for informed decision making in Asia
Development of the Knowledge Platform (KP)
Technical back-stopping activities
Training and Capacity Development
Overall project management and coordination

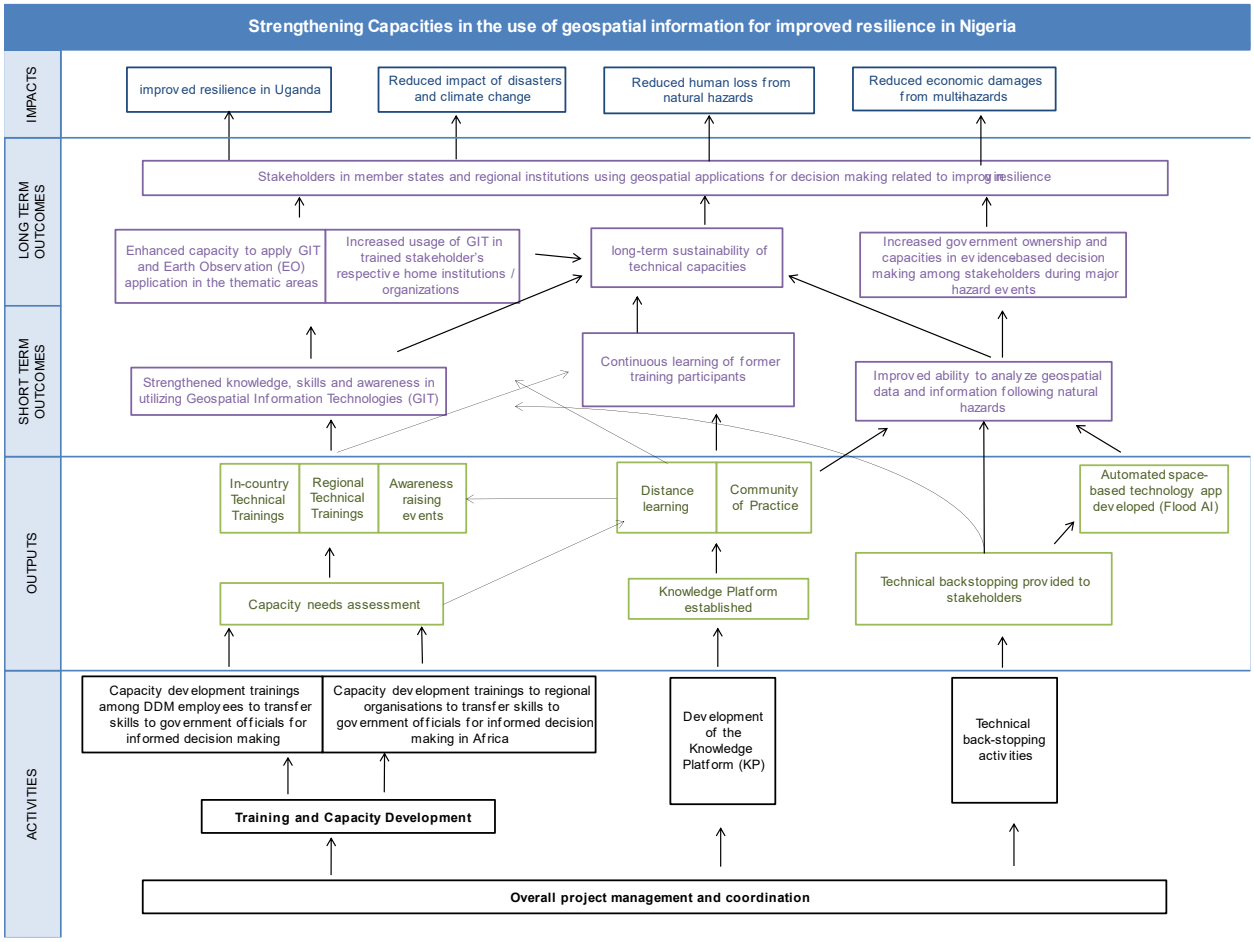
LAO PDR


Strengthening Capacities in the use of geospatial information for improved resiliencén Lao PDR
IMPACTS
LONG TERM OUTCOMES
SHORT TERM OUTCOMES
OUTPUTS
ACTIVITIES
improved resilience Lao PDR
Reduced impact of disasters and climate change
Reduced human loss from natural hazards
Reduced economic damages from multihazards
Stakeholders in member states and regional institutions using geospatial applications for decision making related to improved resilience
Enhanced capacity to apply GIT and Earth Observation (EO) application in the thematic areas
Increased usage of GIT in trained stakeholder's respective home institutions / organizations
long-term sustainability of technical capacities
Increased government ownership and capacities in evidencebased decision making among stakeholders during major hazard events
Strengthened knowledge, skills and awareness in utilizing Geospatial Information Technologies (GIT)
Continuous learning of former training participants
Improved ability to analyze geospatial data and information following natural hazards
In-country Technical Trainings
Regional Technical Trainings
Awareness raising events
Distance learning
Community of Practice
Automated space-based technology app developed (Flood AI)
Capacity needs assessment
Knowledge Platform established
Technical backstopping provided to stakeholders
Capacity development trainings among DDM employees to transfer skills to government officials for informed decision making
Capacity development trainings to regional organisations to transfer skills to government officials for informed decision making in Asia
Development of the Knowledge Platform (KP)
Technical back-stopping activities
Training and Capacity Development
Overall project management and coordination

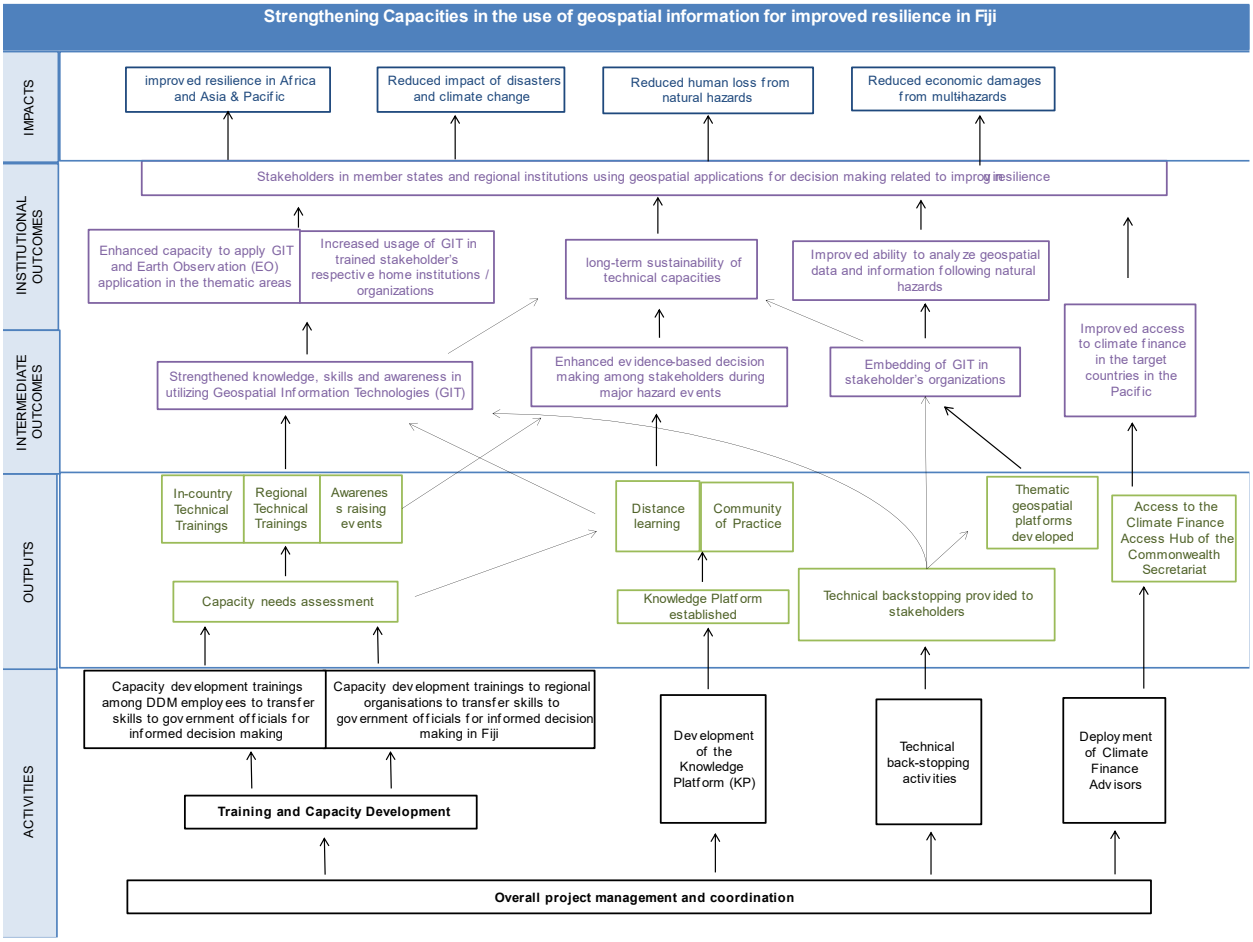
Uganda


Strengthening Capacities in the use of geospatial information for improved resilience in Uganda
IMPACTS
improved resilience in Uganda
Reduced impact of disasters and climate change
Reduced human loss from natural hazards
Reduced economic damages from multihazards
LONG TERM OUTCOMES
Stakeholders in member states and regional institutions using geospatial applications for decision making related to improved resilience
Enhanced capacity to apply GIT and Earth Observation (EO) application in the thematic areas
Increased usage of GIT in trained stakeholder's respective home institutions / organizations
long-term sustainability of technical capacities
Increased government ownership and capacities in evidencebased decision making among stakeholders during major hazard events
SHORT TERM OUTCOMES
Strengthened knowledge, skills and awareness in utilizing Geospatial Information Technologies (GIT)
Continuous learning of former training participants
Improved ability to analyze geospatial data and information following natural hazards
OUTPUTS
In-country Technical Trainings
Regional Technical Trainings
Awareness raising events
Distance learning
Community of Practice
Automated space-based technology app developed (Flood AI)
Capacity needs assessment
Knowledge Platform established
Technical backstopping provided to stakeholders
ACTIVITIES
Capacity development trainings among DDM employees to transfer skills to government officials for informed decision making
Capacity development trainings to regional organisations to transfer skills to government officials for informed decision making in Africa
Development of the Knowledge Platform (KP)
Technical back-stopping activities
Training and Capacity Development
Overall project management and coordination

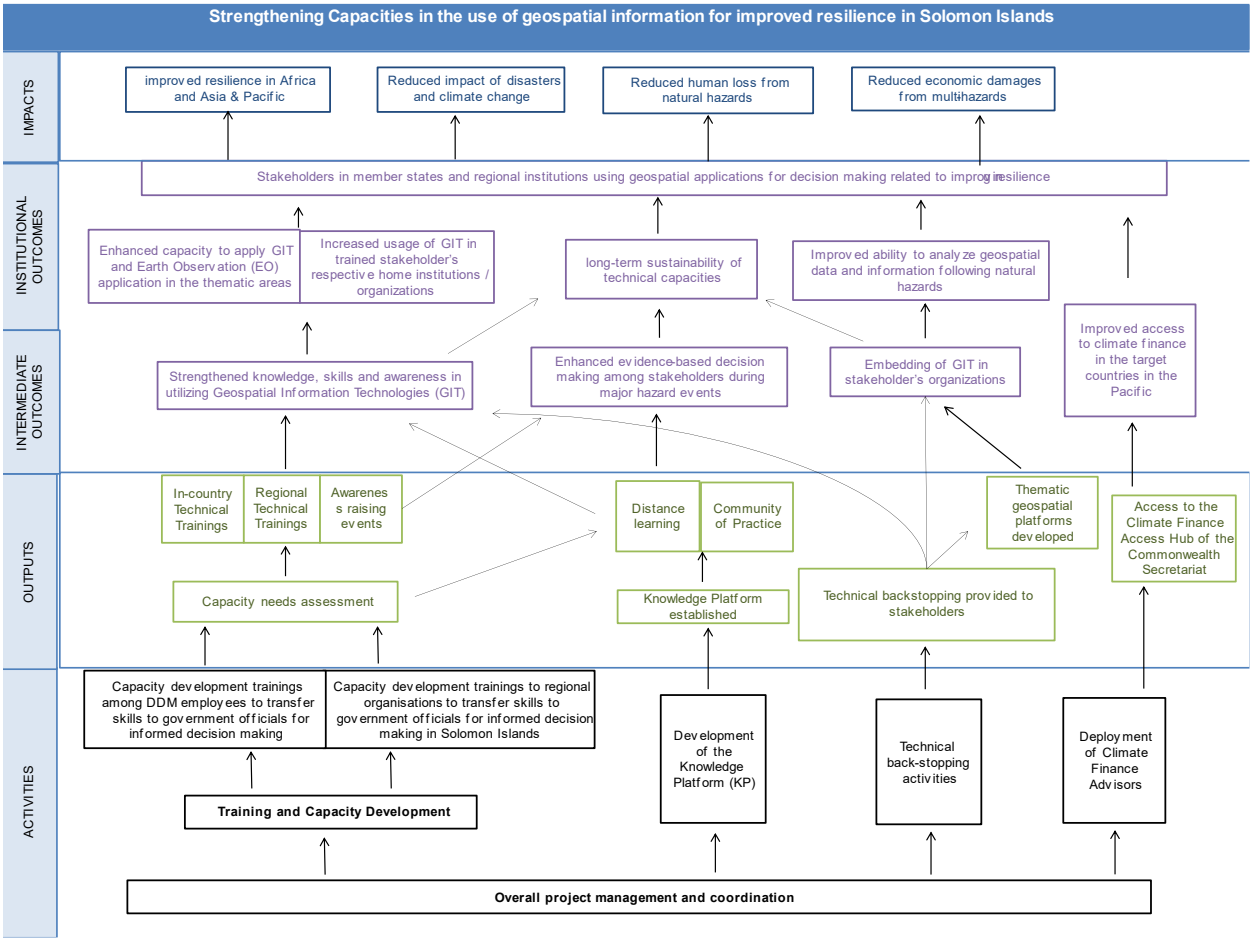
Nigeria


Strengthening Capacities in the use of geospatial information for improved resilience in Nigeria
IMPACTS
LONG TERM OUTCOMES
SHORT TERM OUTCOMES
OUTPUTS
ACTIVITIES
improved resilience in Uganda
Reduced impact of disasters and climate change
Reduced human loss from natural hazards
Reduced economic damages from multi-hazards
Stakeholders in member states and regional institutions using geospatial applications for decision making related to improved resilience
Enhanced capacity to apply GIT and Earth Observation (EO) application in the thematic areas
Increased usage of GIT in trained stakeholder's respective home institutions / organizations
long-term sustainability of technical capacities
Increased government ownership and capacities in evidencebased decision making among stakeholders during major hazard events
Strengthened knowledge, skills and awareness in utilizing Geospatial Information Technologies (GIT)
Continuous learning of former training participants
Improved ability to analyze geospatial data and information following natural hazards
In-country Technical Trainings
Regional Technical Trainings
Awareness raising events
Distance learning
Community of Practice
Automated space-based technology app developed (Flood AI)
Capacity needs assessment
Knowledge Platform established
Technical backstopping provided to stakeholders
Capacity development trainings among DDM employees to transfer skills to government officials for informed decision making
Capacity development trainings to regional organisations to transfer skills to government officials for informed decision making in Africa
Development of the Knowledge Platform (KP)
Technical back-stopping activities
Training and Capacity Development
Overall project management and coordination

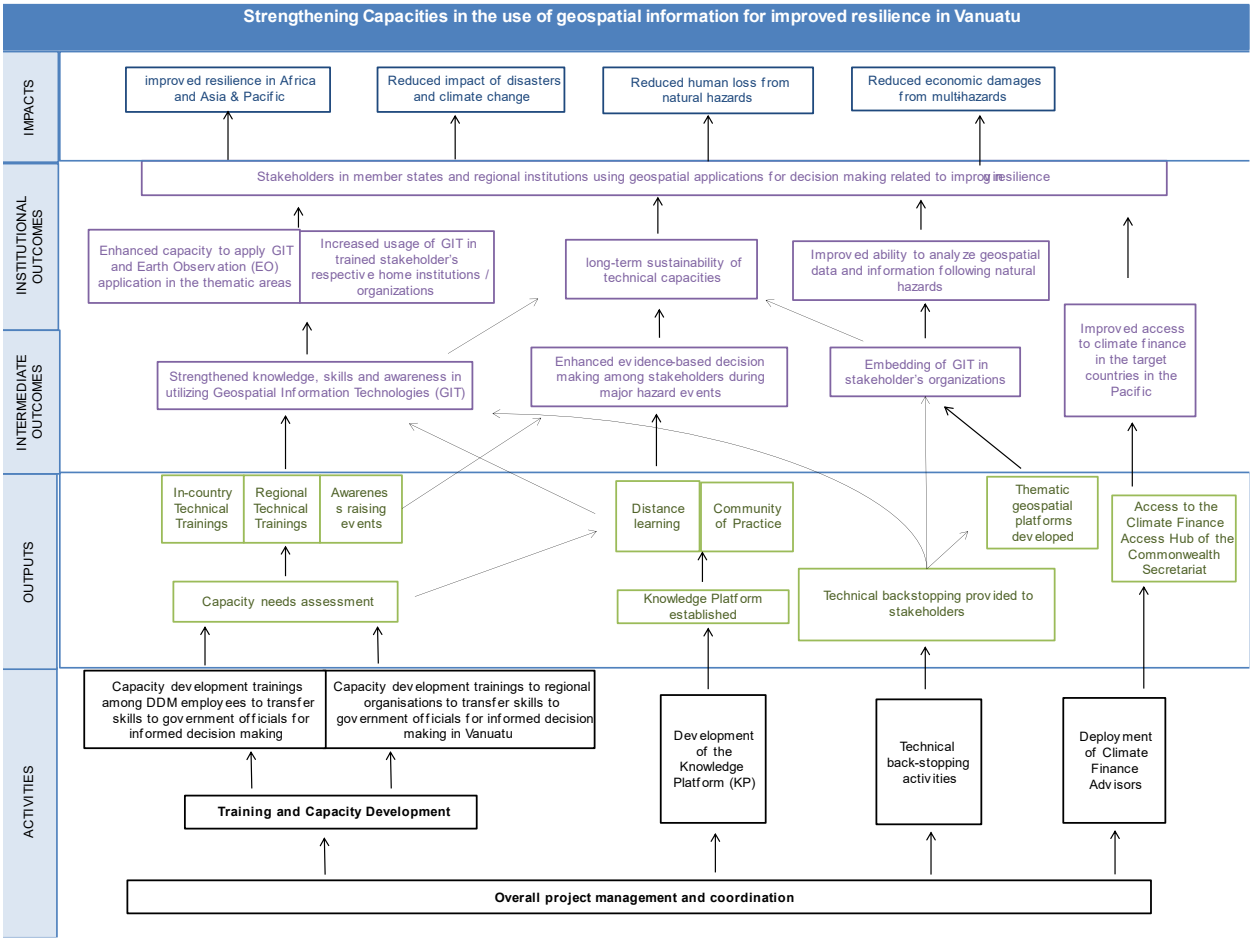
Fiji


Strengthening Capacities in the use of geospatial information for improved resilience in Fiji
IMPACTS
INSTITUTIONAL OUTCOMES
INTERMEDIATE OUTCOMES
OUTPUTS
ACTIVITIES
improved resilience in Africa and Asia & Pacific
Reduced impact of disasters and climate change
Reduced human loss from natural hazards
Reduced economic damages from multi-hazards
Stakeholders in member states and regional institutions using geospatial applications for decision making related to improved resilience
Enhanced capacity to apply GIT and Earth Observation (EO) application in the thematic areas
Increased usage of GIT in trained stakeholder's respective home institutions / organizations
long-term sustainability of technical capacities
Improved ability to analyze geospatial data and information following natural hazards
Improved access to climate finance in the target countries in the Pacific
Strengthened knowledge, skills and awareness in utilizing Geospatial Information Technologies (GIT)
Enhanced evidence-based decision making among stakeholders during major hazard events
Embedding of GIT in stakeholder's organizations
In-country Technical Trainings
Regional Technical Trainings
Awarenes s raising events
Distance learning
Community of Practice
Thematic geospatial platforms developed
Access to the Climate Finance Access Hub of the Commonwealth Secretariat
Capacity needs assessment
Knowledge Platform established
Technical backstopping provided to stakeholders
Capacity development trainings among DDM employees to transfer skills to government officials for informed decision making
Capacity development trainings to regional organisations to transfer skills to government officials for informed decision making in Fiji
Development of the Knowledge Platform (KP)
Technical back-stopping activities
Deployment of Climate Finance Advisors
Training and Capacity Development
Overall project management and coordination

Solomon Islands



Vanuatu


Strengthening Capacities in the use of geospatial information for improved resilience in Vanuatu
IMPACTS
improved resilience in Africa and Asia & Pacific
Reduced impact of disasters and climate change
Reduced human loss from natural hazards
Reduced economic damages from multi-hazards
INSTITUTIONAL OUTCOMES
Stakeholders in member states and regional institutions using geospatial applications for decision making related to improved resilience
Enhanced capacity to apply GIT and Earth Observation (EO) application in the thematic areas
Increased usage of GIT in trained stakeholder's respective home institutions / organizations
long-term sustainability of technical capacities
Improved ability to analyze geospatial data and information following natural hazards
INTERMEDIATE OUTCOMES
Strengthened knowledge, skills and awareness in utilizing Geospatial Information Technologies (GIT)
Enhanced evidence-based decision making among stakeholders during major hazard events
Embedding of GIT in stakeholder's organizations
Improved access to climate finance in the target countries in the Pacific
OUTPUTS
In-country Technical Trainings
Regional Technical Trainings
Awarenes s raising events
Distance learning
Community of Practice
Thematic geospatial platforms developed
Access to the Climate Finance Access Hub of the Commonwealth Secretariat
Capacity needs assessment
Knowledge Platform established
Technical backstopping provided to stakeholders
ACTIVITIES
Capacity development trainings among DDM employees to transfer skills to government officials for informed decision making
Capacity development trainings to regional organisations to transfer skills to government officials for informed decision making in Vanuatu
Development of the Knowledge Platform (KP)
Technical back-stopping activities
Deployment of Climate Finance Advisors
Training and Capacity Development
Overall project management and coordination

Annex IV. ToR of the midline review

Midterm evaluation workshop of the project Strengthening Capacities in the Use of Geospatial Information for Improved Resilience in Asia-Pacific and Africa

Background

1. The **United Nations Institute for Training and Research (UNITAR)** is a principal training arm of the United Nations, with the aim to increase the effectiveness of the United Nations in achieving its major objectives through training and research. UNITAR's mission is to develop individual, institutional and organizational capacities of countries and other United Nations stakeholders through high quality learning solutions and related knowledge products and services to enhance decision-making and to support country-level action for overcoming global challenges.

2. The United Nations Satellite Centre (UNOSAT), hosted by UNITAR's Division for Satellite Analysis and Applied Research, is a knowledge centre within the UN dedicated to supporting fellow agencies and Member States in their use of Geospatial Information Technologies (GIT). UNOSAT has spearheaded the use of these technologies in various fields of application, namely for emergency response, disaster risk reduction, peace and security, but also for the protection of cultural heritage and monitoring and evaluation of development projects.

3. Since 2011, UNOSAT has been implementing, with the financial support from the Norwegian Ministry of Foreign Affairs and NORAD, training and capacity development activities in Asia with support from its centre in Bangkok hosted at United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), and in East Africa with key contribution from its centre in Nairobi.

4. The **Strengthening Capacities in the Use of Geospatial Information for Improved Resilience in Asia-Pacific and Africa** project aims to improve resilience in Africa and in the Asia-Pacific region using geo-spatial information technologies. This will be accomplished through capacity development that is comprised of trainings delivered in various modalities, and in developing actual solutions tailored to beneficiaries' needs and resources. The aim will be accomplished through a user-centred approach focusing on practical technical trainings, technical backstopping and support from peers through a community of practice.

5. The project builds on past experiences by:
   - I. Deepening the impact of past capacity development trainings;
   - II. Replicating success from the Pacific SIDS in other regions; and
   - III. Revealing the inter-connections between various risks in developing applications of geo information technologies to other thematic areas where it brings high benefits, like Climate Resilience, Environmental Preservation and Land Use Management, and fostering exchanges of knowledge acquired between project stakeholders by inter alia assisting selected countries to apply GIT to the interlinked thematic areas to improve knowledge sharing among project stakeholders.

6. More precisely, the project design intends to further strengthen capacities from previous project cycles, introduce modern technological advancement including artificial intelligence, and provide integrated solutions for decision-making related to the thematic areas. Through awareness-raising activities the project shall promote project achievements and impacts of innovative technological solutions at the

regional/national level. Also, a community of practice shall be created, and technical backstopping will be continued for sustaining developed knowledge and capacities. Finally, a training of trainers and a knowledge hub is planned to ensure capacities will be sustained in the future.

7. The project document calls for an independent baseline, midline and endline evaluation. The baseline evaluation can be found here. In the context of capacity development training activities that have been started to be implemented as of November 2022, the Planning, Performance Monitoring and Evaluation Unit and UNOSAT agreed that the midline evaluation will take the format of an interactive workshop instead of a full-fledged report.

Purpose of the midline workshop

8. The purpose of this midline workshop is to reflect upon opportunities and challenges (what went well, what did not) during the first one and a half to two years of the project, both during the scoping time and the implementation. The progress will be discussed compared to the baseline evaluation situation and revised ToC and implementation plan in an After-Action Review (AAR), with the specific objective to reflect on the progress, gaps and contributing factors, and identification of areas of improvement from the project up until the AAR takes place.
9. The AAR will bring stakeholders together to exchange experiences and views and try to analyse in-depth what has happened in the project implementation, and what can be done differently in the longer term to improve the responses of the project's activities until the project's end.

Scope of the workshop and target audience

10. The midline workshop will cover the first half of the project timeframe (1 August 2021 to April/May 2023). Project management, the donor, the partner Commonwealth Secretariat, and other relevant stakeholders including those from all project countries (one representative from Bhutan, Bangladesh, Fiji, Nigeria, Lao PDR, Solomon Islands, Uganda and Vanuatu) will be invited to the face-to-face workshop (or participate through distance communication means in case they cannot join in person).

Proposed structure and principal questions for the midline workshop

1. The following questions are proposed to guide the workshop. Presentation and discussion of the revised ToC and implementation plan:
    i. Does the revised ToC and implementation plan reflect on what has happened during the first half of the project implementation? What is missing or more?
    ii. What has been required to achieve the planned outputs? What requirements for change were experienced?
2. Guiding questions on the implementation experience based on the revised ToC:
    i. What has gone well in the first half of the project implementation? Which factors have enabled implementation of the project as planned?
    ii. What has not gone so well in the first half of the project implementation? Has there been any deviations from the proposed ToC and implementation plan and why? How have these been addressed?
    iii. To what extent is the project on track in delivering according to the project document and implementation plan? In which areas is it advanced or delayed?
3. Lessons learned:
    i. What have we learned from the project implementation so far?
    ii. What to do differently during the second half of the project?

Evaluation Approach and Methods

11. The midline workshop is to be undertaken in accordance with the UNITAR Evaluation Policy and Norms and Standards of the United Nations Evaluation Group.

12. The midline workshop shall follow a participatory approach and engage a range of project stakeholders in the process. To collect data, the midline workshop will use a debrief AAR format. Table 1 presents the summary of the debrief AAR.

Table 1 - Summary of the debrief AAR, adapted from WHO (2019)[18]

When to use	Outcomes	Results and follow-up
Appropriate when there is a limited number of responses (interventions) to review.	Focused on learning within a team. Produces brief report, including a plan of action identified during the session.	Final workshop summary report.

13. The midline workshop will be facilitated by an international consultant (the "evaluator") under the overall responsibility of the UNITAR Planning, Performance Monitoring and Evaluation (PPME) Manager.

Workshop objectives

- Reflect upon opportunities and challenges (what went well, what did not) during the first one and a half to two years of the project, both during the scoping time and the implementation.
- Discuss progress compared to the baseline evaluation situation and revised ToC and implementation plan in an After Action Review (AAR), with the specific objective to reflect on the progress, gaps and contributing factors, and identification of areas of improvement from the project up until the AAR takes place.

Format and duration

- Two days face-to-face in the week of 20 to 21 June 2023 (the last day will be dedicated to the midline evaluation only) in a conference room (Pullman King Power hotel) Bangkok, Thailand, to be combined with meeting of project management to minimize the impact on the environment.
- Interactive format, using tools such as Miro/Mural for the pre-online workshop and whiteboards and group discussions and brainstorming during face-to-face workshop. Prior to face-to-face meeting, hold an online meeting and issue two surveys: one to beneficiaries and one to workshop participants.
- Workshop language: English (translation required for Lao PDR).

Timeframe, work plan, deliverables and review

14. The proposed timeframe for the midline workshop spans from April 2023 to August 2023 (submission of workshop summary report).

15. Indicative timeframe: April 2023 to August 2023

Activity	April	May	June	July	August
Evaluator selected and recruited					

[18] https://www.who.int/fr/publications-detail/WHO-WHE-CPI-2019.4

Initial desk review and stakeholder analysis					
After Action Review design, including survey and pre-workshop organization					
After Action Review workshop					
Zero draft workshop summary report submitted to UNITAR evaluation manager					
Draft workshop summary report submitted to project management					
Project management reviews draft workshop summary report and shares comments and recommendations					

16. **Measurable outputs/Deliverables/Schedule of deliverables*:**

Deliverable	**From**	**To**	**Deadline**
After Action Review design including survey and pre-workshop organization	Evaluator	Evaluation manager	May 2023
Comments on design	Evaluation manager	Evaluator	May 2023
Delivery of After Action Review Workshop	Evaluator	Stakeholders	June 2023
Zero draft workshop summary report	Evaluator	Evaluation manager	July 2023
Comments on zero draft	Evaluation manager	Evaluator	July 2023
Draft workshop summary report	Evaluator	Evaluation manager/project management	July 2023
Final workshop summary report	Evaluator	Evaluation manager	August 2023

*Subject to review and adjustment on agreement between the consultant and the Evaluation Manager.
The After Action Review design should include:

- Confirmed event objectives
- Content and Structure
- Methodology

- Targeted Audience
- Logistics
- Additional Information

The workshop summary report shall be 8-10 pages (without annexes) long and follow the following outline:

- Title page
- Executive summary
- Acronyms and abbreviations
- Introduction
- Midline workshop findings
- Conclusions
- Recommendations
- Lessons Learned
- Annexes
    - Terms of References
    - Agenda
    - List of participants

Communication/dissemination of results

17. The midline workshop summary report shall be written in English. The final report will be shared with all partners and be posted on an online repository of evaluation reports open to the public.

Evaluation management arrangements

18. The evaluation consultant will be contracted by UNITAR and will report directly to the Director of the Strategic Planning and Performance Division and Manager of Planning, Performance Monitoring, and Evaluation Unit (PPME) (‘evaluation manager’).

19. The evaluation manager reports directly to the Executive Director of UNITAR and is independent from all programming related management functions at UNITAR. According to UNITAR’s Monitoring and Evaluation Policy, in due consultation with the Executive Director/programme management, PPME issues and discloses final evaluation reports without prior clearance from other UNITAR Management or functions. This builds the foundations of UNITAR’s evaluation function’s independence and ability to better support learning and accountability.

20. The evaluator should consult with the evaluation manager on any procedural or methodological matter requiring attention. The evaluator is responsible for planning any meetings, organizing online surveys and undertaking administrative arrangements for any travel that may be required (e.g. accommodation, visas, etc.). The travel arrangements, if any, will be in accordance with the UN rules and regulations for consultants.

Evaluator Ethics

21. The evaluator selected should not have participated in the project’s design or implementation or have a conflict of interest with project activities. The selected consultant shall sign and return a copy of the code of conduct under Annex F prior to initiating the assignment and comply with UNEG Ethical Guidelines.

Professional requirements

22. The evaluator should have the following qualifications and experience:

- MA degree or equivalent in evaluation, environmental science or a related discipline. Training and/or experience in the area of GIS, disaster risk reduction and climate resilience and environmental preservation and land use management would be a clear advantage. Alternatively, experience in facilitation of workshops and After Action review methods or similar would be an asset.
- At least seven years of professional experience conducting evaluation in the field of capacity building, sustainable learning, GIS, disaster risk reduction and climate resilience and environmental preservation and food security.
- Technical knowledge of the focal area (optional).
- Field work experience in developing countries.
- Excellent research and analytical skills, including experience in a variety of evaluation methods and approaches.
- Excellent writing skills.
- Strong communication and presentation skills.
- Cross-cultural awareness and flexibility.
- Availability to travel.
- Fluency in English.

Annexes: (to be added)
A: List of documents and data to be reviewed
B: List of Project Partners and Contact Points
D: Revised project ToC, logical framework, and implementation plan
E: Audit trail
F: Evaluator code of conduct

Annex V. Survey questionnaire

Strengthening capacities in the use of geospatial information for improved resilience in Asia-Pacific and Africa follow-up, midline and monitoring survey

Dear Sir or Madam,

You have been identified as a **key stakeholder** by the "**Strengthening capacities in the use of geospatial information for improved resilience in Asia-Pacific and Africa**" project management team. The project aims to improve resilience in Africa and in the Asia – Pacific region using geo-spatial information technologies.

As part of our **monitoring and evaluation** of the project, the project team has created the following survey as a follow-up to your participation in a technical training/backstopping request or participation to awareness raising to learn more about your experience participating in project activities. Please note that all information provided by you will always be presented in aggregate form so that answers will not be attributable to individuals.

The survey is structured in four sections: technical training, awareness-raising, backstopping services and climate finance advisor support (the latter for the Pacific only).

We know how precious your time is, so that's why we made sure this survey should only take around **10 minutes** to complete. If you have any questions, please email the Monitoring Expert, Jelinke Wijnen, at jelinke.wijnen@unitar.org or respond directly to this message.

Kindly respond by **2 June 2023, 23:59 CET.**

When you are ready to begin, just click on the "Next" button below. Thank you, and we look forward to receiving your feedback!

Strengthening capacities in the use of geospatial information for improved resilience in Asia-Pacific and Africa follow-up, midline and monitoring survey

A few questions on technical training....

* 1. Have you participated in any of the project's **technical training** on Geospatial Information Technologies (GIT) tools and/or Climate finance access?

- ◯ Yes
- ◯ No

Strengthening capacities in the use of geospatial information for improved resilience in Asia-Pacific and Africa follow-up, midline and monitoring survey

Technical training (continued)

* 2. Have you applied any of the knowledge/skills acquired from the **technical training** to your work?

- ◯ Yes
- ◯ No

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Strengthening capacities in the use of geospatial information for improved resilience in Asia-Pacific and Africa follow-up, midline and monitoring survey

Technical training (continued)

* 3. Please provide an example of the knowledge/skills area(s) which you have transferred or applied to your work. Please try to be as specific as possible, indicating what you may have done differently as a result of transferring or applying the knowledge/skills.

* 4. How often have you applied knowledge/skills from the technical trainings to your work?

- ◯ Daily
- ◯ Often
- ◯ Sometimes
- ◯ Rarely

* 5. Which of the following factors enabled or prevented application of knowledge/skills from the training? (Select all that apply.)

	Enabled	Prevented	Not applicable
Opportunity to apply/lack of opportunity	◯	◯	◯
Importance/unimportance of knowledge/skill to your job success	◯	◯	◯
Support/lack of support or feedback from your supervisor	◯	◯	◯
Support/lack of support or feedback from colleagues or peers	◯	◯	◯
Confidence/lack of confidence or autonomy to apply knowledge/skills	◯	◯	◯
Action planning during training /Absence of action planning	◯	◯	◯
Systems and processes supported the use of knowledge/skills/Absence of systems and processes	◯	◯	◯
Funds available/ lack of funds	◯	◯	◯

Other (please specify)

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A few questions on awareness-raising events....

* 6. Have you participated in any of the project's **awareness-raising events** (e.g. "Pacific Climate Justice Summit" etc.)?

◯ Yes

◯ No

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resilience in Asia-Pacific and Africa follow-up, midline and monitoring survey

Awareness-raising events (continued)

* 7. Please indicate your level of agreement to the following statement: I am more aware about the use of Earth Observation and Geographic Information Technology (GIT) in the fields of Disaster Risk Reduction/ Climate Change Adaptation and Natural Resource Management than prior to attending the project's awareness-raising events.

- ◯ strongly agree
- ◯ agree
- ◯ neutral
- ◯ disagree
- ◯ strongly disagree

Please explain how your awareness has changed.

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Strengthening capacities in the use of geospatial information for improved resilience in Asia-Pacific and Africa follow-up, midline and monitoring survey

A few questions on technical backstopping support....

* 8. Have you requested any **technical backstopping support** (e.g. imagery, analysis, web-map, on-the-job training, technical products and/or advisory support on climate finance proposals) from the project?

- ◯ Yes, but only once
- ◯ Yes, more than once
- ◯ No
- ◯ I am not aware of this service but I would like to receive more information

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Strengthening capacities in the use of geospatial information for improved resilience in Asia-Pacific and Africa follow-up, midline and monitoring survey

Technical backstopping support (continued)

* 9. Why did you request the project team (UNITAR/CommonWealth Secretariat) for backstopping support? Select all that apply.

- [ ] Matter of urgency, i.e. access to support in emergency or disaster situation
- [ ] Matter of convenience, i.e. access to support through backstopping is faster/ more convenient than other support sources
- [ ] Interest in increasing use of geospatial information
- [ ] Internal technical skills capacity issues
- [ ] Software or hardware capacity issues
- [ ] Funding issues
- [ ] Other (please specify)

* 10. What needs did this request support? If multiple requests, please select all that apply.

- [ ] Policy-related planning
- [ ] Planning for activities or projects
- [ ] Coordinating with other agencies and ministries
- [ ] Decision-making
- [ ] Prepare emergency response plans/interventions
- [ ] Other (please specify)

* 11. How important was the technical backstopping support to addressing the needs you specified above?

- ◯ Essential
- ◯ Very important
- ◯ Neutral
- ◯ Somewhat important
- ◯ Not at all important
- ◯ Not applicable

* 12. Please describe **how you used** the project's backstopping support (e.g. maps) **for your work**. Please try to be as concrete as possible, indicating what tangible results or benefits were produced that can be clearly attributed to the support (i.e. if the backstopping support was not provided, then the results or benefits would not have been produced).

13. Please estimate the **monetary value (US dollar)** of the benefits identified in the previous question, above. For example, if the benefits were staff cost savings for improved coordination or more efficient decision making, what is the estimated US dollar value of those savings? Or if the benefits were material developed for training, what is the estimated US dollar value if the material had to be developed elsewhere? Please provide the aggregate monetary value for all benefits identified.

Monetary value in US dollar

Please explain if needed

* 14. Did UNITAR/CommonWealth Secretariat answer the request for technical backstopping support?

- ◯ Yes, and needs were fully addressed
- ◯ Yes, but needs were only partially addressed
- ◯ No, the request was not addressed

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Technical backstopping support (continued)

* 15. If needs were not (fully) addressed, how did you address your technical backstopping needs?

- ◯ I addressed the needs with support from another organization
- ◯ The needs were left unaddressed
- ◯ Other (please specify)

* 16. How confident are you to use the knowledge and skills from the project without relying on additional backstopping services?

- ◯ I am fully confident using geospatial applications without additional backstopping support.
- ◯ I am somewhat confident to use geospatial applications, but I would prefer additional backstopping support.
- ◯ I am not confident to use geospatial applications without additional training or backstopping support.

Please please explain your answer

* 17. In the absence of technical backstopping support, how would you obtain products or services to address information needs (i.e. for DRR/CCA DRR/Natural Resource management)?

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A few questions on use of geospatial or remote-sensing data and climate funding applications

* 18. Does your organization or entity use geospatial or remote-sensing data for the following purposes?

	Yes, regularly	Yes, sometimes	No	I do not know.
Strategic planning	◯	◯	◯	◯
Decision-making	◯	◯	◯	◯
Preparing applications for climate funding	◯	◯	◯	◯
Policy/action plans	◯	◯	◯	◯

Other (please specify)

* 19. If you are involved in preparing applications for mobilizing **climate funding**, did you use knowledge/skills from the project (technical trainings, awareness raising, backstopping, Web application solutions) for this purpose?

- ◯ Yes
- ◯ I am not involved in climate funding applications
- ◯ No (please specify why)

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Climate funding applications in the Pacific (continued)

* 20. If you answered yes to the previous question, did you use knowledge/skills from the training, awareness-raising, backstopping activities or Web application solutions?

- [ ] Technical training
- [ ] Awareness-raising activities
- [ ] Backstopping activities
- [ ] If none, please indicate why not
- [ ] Web application solutions
- [ ] I did not prepare any climate funding applications in the last two years

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* 21. More specifically, have you applied any knowledge or skills from the project in order to:

- ◯ Help prepare applications to donors for accessing climate funding
- ◯ To support decision-making in disaster risk reduction or climate change adaptation
- ◯ Both of the above
- ◯ None of the above
- ◯ Other (please specify)

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Climate funding applications

* 22. Have the applications to donors:

- ◯ Been finalized and submitted to donors
- ◯ Are likely to be finalized and submitted to donors in the next several months
- ◯ It's too early to tell
- ◯ Other (please specify)

* 23. Please provide an example of the knowledge/skills area(s) acquired through the project **which you have used in applying for climate funding**. Please try to be as specific as possible, indicating what you may have done differently as a result of transferring or applying the knowledge/skills.

* 24. Have you received support from the Climate Finance Advisors through the project?

- ◯ Yes
- ◯ No

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* 25. If yes, what type of support did you receive?

- ☐ Support in the access and mobilisation of climate finance
- ☐ Support in applying Web application solutions in climate finance applications
- ☐ Support in strengthening institutional mechanisms or processes
- ☐ Other (please specify)

* 26. In case there may be follow-up questions from our end, would you agree to be contacted after submitting this questionnaire to discuss at more length your experience? If yes, kindly provide an email address below.

- ◯ No
- ◯ If yes, kindly indicate your email address here

Thank you very much!

Annex VI. Scorecard template

Intermediate outcome: Strengthened knowledge, skills and awareness in utilizing Geospatial Information Technologies (GIT)

Indicator 1: Percentage of high-level stakeholders agreeing to the benefit of geospatial applications solutions for decision-making

#	Question	Answer score	Baseline Answer	Midterm Answer	Endline Answer
1	**Use of GIT for decision-making and planning**				
A	My organization does not think of GIT as a useful tool for decision-making.	0			
B	My organization is aware about GIT as a useful tool for decision-making.	1			
C	My organization uses GIT but we have some limitations in implementing GIT-based solutions.	2			
D	My organization is aware about GIT as a useful tool and we are/I am actively implementing related solutions.	3			
Clarifications to the answers above and link to project activities					
2	**Data use**				
A	My organization uses GIT/GIS data to disaster assessment/early warning/land management/ pollution control but not systematically.	0			
B	My organization systematically uses GIT/GIS data to disaster assessment/early warning/land management/pollution control.	1			
C	My organization has somehow improved service delivery through the systematic employ of GIT/GIS-based solutions for disaster assessment/early warning/land management/pollution control.	2			
D	My organization has significantly improved service delivery through the systematic employ of GIT/GIS-based solutions for disaster assessment/early warning/land management/pollution control.	3			
Clarifications to the answers above and link to project activities					

Score	**0**	**0**	**0**

Score	**0**	**0**	**0**

Indicator 2: % of high-level stakeholders agreeing to having internalize capacity in sustainable manner

3 Imbedded capacity development

A	My organization has no capacity development activities for GIS/GIT.	0	
B	My organization has some capacity development activities for GIS/GIT.	1	
C	My organization has an internal capacity development programme for GIT/GIS, but it does not completely cover our needs.	2	
D	My organization has a satisfactory internal capacity development programme for GIT/GIS.	3	

Clarifications to the answers above and link to project activities

Score	**0**	**0**	**0**

4 Resources

A	My organization doesn't have adequate resources to maintain a GIS/GIT programme or the requirements have not been assessed.	0	
B	My organization knows the budgetary needs for maintaining a GIS/GIT programme but resources are insufficient.	1	
C	My organization has identified funding sources for maintaining a GIS/GIT programme but they are insufficient.	2	
D	My organization has access to adequate resources to maintain a GIS/GIT programme.	3	

Clarifications to the answers above and link to project activities

Score	**0**	**0**	**0**

Indicator 3: % of high-level stakeholders agreeing to increased climate finance likelihood

5 Capacity to prepare informed proposals

A	Proposals for climate finance are prepared by external help (consultants) at the donor's request or no proposals are being prepared.	0
B	My organization proactively seeks finance but requires hiring external help (consultant) to prepare proposals.	1
C	My organization proactively seeks finance and prepares proposals, but without systematic use of risk/GIS/GIT data.	2
D	My organization proactively seeks finance and prepares proposals, with systematic use of risk/GIS/GIT data.	3

Clarifications to the answers above and link to project activities

Score	**0**	**0**	**0**

Institutional outcome: Stakeholders in member states and regional institutions using geospatial applications for decision-making related to improving resilience

Indicator 3: Percentage of high-level stakeholders agreeing to increased climate finance likelihood

6 Use of GIT for decision-making and planning for improved resilience

A	My organization is not using geospatial applications for decision-making related to improving resilience.	0
B	My organization has started using geospatial applications for decision-making related to improving resilience.	1
C	My organization is using geospatial applications for decision-making related to improving resilience but we have some limitations in implementing GIT-based solutions.	2
D	My organization is efficiently using geospatial applications for decision-making related to improving resilience.	3

Clarifications to the answers above and link to project activities

Score	**0**	**0**	**0**

Institutional outcome: Stakeholders in member states and regional institutions using geospatial applications for decision-making related to improving resilience

Indicator: Percentage of high-level stakeholders agreeing to gender mainstreaming (equal opportunities and disaggregated data)

Gender and vulnerable groups (indigenous peoples/forest dwellers/subsistence farmers/slum dwellers, etc., following national classifications)

7 Collection and application of gender/ vulnerable groups disaggregated data

A	Data in my organization is not disaggregated by gender and it is not considered a priority.	0	
B	Data in my organization is not disaggregated by gender/vulnerable groups but there is awareness on its importance.	1	
C	Data is sometimes disaggregated by gender/vulnerable groups in my organization but not systematically.	2	
D	My organization disaggregates data by gender/vulnerable groups systematically.	3	

Clarifications to the answers above and link to project activities

Score	**0**	**0**	**0**

8 Gender/vulnerable groups issues have been incorporated into climate risk and DRR strategies in climate finance proposals

A	Gender issues are not incorporated in plans and strategies in my organization.	0	
B	Gender issues have somewhat been incorporated in my organization, but not systematically.	1	
C	Gender issues along with other socially vulnerable groups have been take into consideration in planning and strategies in my organization.	2	

D	Gender issues along with other socially vulnerable groups are fully incorporated into plans and strategies in my organization.	3	

Clarifications to the answers above and link to project activities

Score	**0**	**0**	**0**

Annex VII. List of People Consulted

Mr.	Mohammad Hafizur Rahman	Assistant Director, Department of Disaster Management (DDM), Ministry of Disaster Management and Relief (MoDMR), Bangladesh
Mr.	Kushaal Raj	Head of Climate Change & International Cooperation, Ministry of Economy (MoE), Fiji
Mr.	Barnabas Bago	National Programme Coordinator, Programme Management and Coordination Unit (PMCU), Ministry of Environment, Climate Change, Disaster Management & Meteorology (MECDM), Solomon Islands
Ms.	Julia Salerua Marango	Project Development Officer, National Advisory Board Secretariat, Ministry of Climate Change, Vanuatu
Mr.	Lobzang Tobgye	Deputy Chief Survey Engineer, Department of Survey & Mapping, Bhutan
Mr.	Phonesavanh Saysompheng	Director, National Land Commission (NLCS), Lao PDR
Mr.	John I. Ogwuche	Assistant Director, Federal Ministry of Environment, Nigeria
Mr.	Unnikrishnan Nair	Head, Climate Change Section, Commonwealth Secretariat
Mr.	Luca Dell'Oro	Chief, Disaster Risk Management and Climate Resilience Section, United Nations Satellite Centre (UNOSAT), UNITAR
Mr.	Khaled Mashfiq	Regional Liaison for Asia and the Pacific, DRM Programme Specialist, Disaster Risk Management and Climate Resilience Section, United Nations Satellite Centre (UNOSAT), UNITAR
Mr.	Olivier Vandamme	Chief, Business Exploration, Strategic Planning and Coordination Section, United Nations Satellite Centre (UNOSAT), UNITAR
Ms.	Jelinke Wijnen	Monitoring & Evaluation, Business Exploration, Strategic Planning and Coordination Section, United Nations Satellite Centre (UNOSAT), UNITAR
Mr.	Tashi	In-country expert, Bhutan
		Other in-country experts consulted online

Annex VIII. List of Documents Reviewed

- Project document
- Project agreement
- Inception report Bangladesh
- Inception report Bhutan
- Inception report Lao PDR
- Inception report Nigeria
- Inception report Uganda
- Inception report Fiji
- Inception report Solomon Islands
- Inception report Vanuatu
- Midline update PowerPoint presentations on country progress
- Monitoring Dashboard
- Training Evaluation Reports
- Memorandum of Understanding for seven out of the eight countries
- Grant-out agreement Commonwealth Secretariat
- Grant-out agreement Bhutan
- Grant-out agreement Lao PDR
- Revised logical framework
- Project narrative report year 1
- Country progress updates
- Training event list of participants
- Project baseline evaluation report