



ADAPTATION FUND

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Adaptation Fund Board
Project and Programme Review Committee
Thirty-eighth Meeting
Bonn, Germany, 19-23 October 2026

PROPOSAL FOR INDONESIA (1)



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT
TECHNICAL REVIEW OF PROJECT PROPOSAL FOR
"ECOSYSTEM-BASED ADAPTATION TO SUPPORT CLIMATE RESILIENCE OF COASTAL AND
SMALL ISLANDS OF ROTE AND SABU IN SAVU SEA"

Project Title	Ecosystem-based Adaptation to Support Climate Resilience of Coastal and Small Islands of Rote and Sabu in Savu Sea
Project ID	AF00000301
Category	Small size project (up to \$1 million)
Type	Single country project
Stage	Fully-developed project
Country	Indonesia
Implementing Entity	Kemitran
Financing Requested	USD 996,358.00
Reviewer	Una May Gordon
Co-reviewer(s)	Hugo Paul Bernard Remaury
IE Contact Person	Cadinda Festa Martha,Hasbi Berliani,Inda Loekman,Willy Wicaksono

Secretariat's Overall Comment

The project “Ecosystem-based Adaptation to Support Climate Resilience of Coastal and Small Islands of Rote and Sabu in Savu Sea” aims to improve the resilience of coastal areas and small islands of Savu Sea against extreme weather events and climate variability by strengthening the knowledge management and capacity of local government and communities in Ecosystem-based Adaptation (EbA) and sustainable livelihoods. The initial technical review raises several issues, such as the need for further details on the project activities, the eligibility criterion of selected beneficiaries, quantification of the economic, social

and environmental benefits, the justification of cost-effectiveness and sustainability of the proposed measures, compliance with ESP and GP, and strengthening of the project's Results Framework, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review. The second technical review raises several issues, such as sequencing of activities under each component and formulation of the outcomes, outputs and activities, quantification of the economic, social and environmental benefits, the justification of cost-effectiveness and sustainability of the proposed measures, compliance with ESP and GP, how USPs will be addressed, and strengthening of the project's Results Framework and M&E plan, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.

Country Eligibility

Is the country party to the Kyoto Protocol or the Paris Agreement?

Response: Yes

Secretariat: Yes.

Is the country a developing country particularly vulnerable to the adverse effects of climate change?

Response: Yes

Secretariat: Yes. Indonesia is experiencing the impacts of temperature warming, increase in sea surface temperature (SST), tropical cyclones of greater intensity; mean rise in sea-level, and increased intensity of El Niño and La Niña events, with damaging effects on coastal ecosystems and on the socio-economic conditions of vulnerable communities. The country records loss in millions of dollars, including destruction to coastal ecosystems affecting socio-economic conditions of coastal communities.

Project Eligibility

Has the designated government authority for the Adaptation Fund endorsed the project/programme?

Response: Yes

Secretariat: Yes. As per the Endorsement letter dated August 05, 2022.

Does the length of the proposal amount to no more than One hundred (100) pages for the fully-developed project document, and one hundred (100) pages for its annexes?

Response: Cleared

Secretariat: Yes. The proposal is 100 pages long, with the main proposal 95 pages, and the Annexes 5 pages.

Response: Cleared

Secretariat: Editorial issues The proposal has a number of editorial issues: i. Please ensure all tables are correctly referenced in the report, including references for the Annexes. For example, Part II.H refers to Annex 13 which does not exist according to the List of Annexes. ii. Please include a Table of Contents, along with a List of Tables and List of Figures

Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?

Response: Pending

Secretariat: Not cleared. The project targets 5 target coastal villages (3 villages in Rote Island and 2 villages in Sabu Island) in the Rote Ndao and Sabu Raijua districts, with some project interventions at provincial level (NTT Province). Most of the concrete adaptation actions at the community level are under Component 2. Overall, many of the activities described in Part II- Section A are not detailed to a sufficient level for a fully developed proposal. Further details are required, including a stronger justification on the selection of the project's location, and alignment and cohesiveness across components towards the achievement of ecosystem-based adaptation (EbA) outcomes, as per the focus reflected in the project's title. CR1: The discussion of climate change risks is limited. Please elaborate on the risks of climate change based on a more comprehensive review of the available literature. Please reference the studies and assessments reviewed. Please provide an overview of climate risks, including projected risks, across different sectors and themes. The risks should be described in terms of which hazards affect and are expected to affect the area (including intensity), what is the exposure of the local populations and assets (how many people are exposed, and value of the assets), and the vulnerability of the population and assets (specific features/characteristics and how they relate to the area's vulnerabilities, and capacities as relevant). The proposal should provide sound justifications on the proposed adaptation measures, based on a thorough review of climate risks. The Theory of Change should be structured in a way that logically links climate risks and identified challenges to increasing resilience to the proposed response measures. CR2: Please include further justification of the project's location, in particular the 5 villages selected, using maps and evidence of climate vulnerability/sources as relevant. CR3: The activities planned in the proposal lack sufficient detail for a fully developed proposal. For instance, the descriptions of key activities, which include ecosystems-based adaptation (EbA) interventions and community capacity building efforts, should also be further elaborated by outlining the sequence of activities to be carried out. For example, pp. 11-13 of the proposal could present ways for ecosystem restoration or community outreach; specifying who will be responsible at each stage and how activities will be monitored for effectiveness. Furthermore, the proposal does not clearly articulate the roles and responsibilities of the various stakeholders involved in the project activities. CR4: Please specify how the project ensure each activity not only been in line with the desired outcome, but also achieving the wider purpose of mainstreaming climate change adaptation to local governance and invest provision at community level.

Response: Pending

Secretariat: CR1: Not Cleared The discussion on climate risks has been improved. The climate projections are not sufficiently localized or supported by scenarios, exposed populations and assets have not been quantified. Please address the following: i. Include a paragraph or two of the geographic contexts starting at the national level (Indonesia) and then reflect on the two islands. ii. Please state under which climate scenario the change is projected i.e. 2030, 2050, or 2100. iii. Please include the exposed populations, particularly the number of people exposed to each major hazard. More specifically the major hazards should be consolidated. iv. While the proposal notes exposed assets, it does not speak to the economic or replacement value. CR2: Cleared. Additional

maps and evidence of climate vulnerability/sources have been included to justify the locations. CR3: Not Cleared. As per Part II. A, the description of activities have improved but implementation design remains incomplete. The original comment has not been fully addressed. Please clarify the sequence from site assessment, community consultation through technical design, safeguard screening and implementation supervision in Part II. A For example, Table 6- EbA Protection and Rehabilitation of Coastal Ecosystem, the mangrove restoration activity should clearly describe the implementation sequence: site suitability assessment, technical approval, site preparation, planting supervision, maintenance and monitoring The coral reef rehabilitation activity should highlight reef site assessment and selection, coral source, technical design and approval, installation etc and the entities responsible for different parts of the process, including the monitoring. CR3.1 (NEW): Please revise the formulation and consistency of the project results framework (activities, outputs and outcomes). Please also ensure the Theory of Change reflects the changes. Regarding Outcome 1, awareness on its own, is insufficient to demonstrate intended change in adaptive capacity. The outcome should reflect how increased knowledge results in increased participation, ownership preparedness and adoption of practices. Please amend. Outputs should remain with the project's control. Please note Output 1.2 News outlets in the local press and media that have covered Climate Change and EbA topics" depends on external entity editorial decisions and therefore not under the project's control. Please revise this Output. Please consider revising to state "Evidence-based climate-risk and EbA knowledge is disseminated through local and national media, with the experiences and perspectives of target communities, women and vulnerable groups represented." The digital platform is included in Output 1.1 but there is no clearly identifiable activity for its design, development, testing and launch. Please explicitly address this. The above are examples, therefore please review all activities, outputs and outcomes to ensure they are well structured and grammatically correct. CR4: Not Cleared Though the revised proposal provides additional information to adapt to mainstream climate change adaptation and includes community level investments (e.g. nurseries etc). Please explain in Part II. A how these community-level actions are converted into governance and investment decisions. For example, how will registration under PROKLIM will lead to funded adaptation actions in the future through village/district planning and budgeting processes. Not long-term financing should be detailed in the Sustainability section.

Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Pending

Secretariat: Not cleared. The proposal provides a table with a brief qualitative outline of the economic, social and environmental benefits expected to be delivered for each project output. However, the level of detail in this section is not sufficient for a fully-developed proposal. CAR1: To ensure equitable Distribution of Benefits to Vulnerable Groups; paragraph 41, Page 20, please provide detailed information on the marginalized and vulnerable groups in the target areas (e.g., 'disadvantaged dryland farmers'). Kindly clarify the specific benefits that the project will deliver to these groups. CAR2: Although the proposal includes economic, social, and environmental benefits, it lacks sufficient quantification of these benefits. Kindly provide specific quantified numerical estimates for the different outcomes, and how would these align with Adaptation Fund ESP and gender policy. Please clarify how the numbers for direct and indirect beneficiaries were estimated. CAR3: The Assessment of Gender and Social Inclusion and Gender Action Plan should be included as an Annex. Please note that the preparation for a fully-developed proposal is expected to already have undertaken a detailed gender-responsive consultation and more in depth-recommendations specific gender-responsive activities are expected to be included in the project design. Please revise the proposal accordingly and outline how these recommendations have been integrated in the project activities.

Response: Pending

Secretariat: CAR1: Not Cleared Para 56 in the proposal notes the number of direct and indirect beneficiaries, it does not clearly state how it will ensure equitable distribution of benefits. The benefits outlined in Table 10 are too broad. Please clarify the specific benefits each group and the mechanisms for ensuring equitable selection of beneficiaries and benefit distribution. For example, what criteria will be used for selection of beneficiaries, how will you prioritise those exposed? What is the minimum participation targets (e.g. for women)? How will you address socio-cultural barriers e.g. literacy, disability? How will the distribution of livelihood support be done? How will you ensure women and youth are part of the decision-making process and not only attend workshops. Note The narrative states that 479 direct beneficiaries represent 66% of the total population. However, 479 is approximately 6.6% of 7,254, not 66%. Please clarify and adjust. CAR2: Not Cleared Part II.B should focus on qualitative and quantitative estimated benefits. While the number of direct and indirect beneficiaries have been shared for the social benefits, the economic and environmental benefits remain qualitative. Note Table 10 does not provide measurable outcome targets. Additionally, the calculation methodology needs to be fully explained. Please clarify the 300 individuals benefiting from training activities in para. 56 and how these relate to 479. Please provide quantified benefits and the respective calculations that will prevent double counting. For example: Environmental benefits: Number of hectares of mangrove restored while Economic benefits: What's the number of jobs or livelihood opportunities created Please differentiate between benefits at outcome and output level Please indicate the source of the population data ie census, village records etc and how sex-disaggregated data were validated. CAR3: Not Cleared The proposal includes a Gender and Social Inclusion Assessment Report (Annex 3). And a Gender and Social Inclusion Plan (Annex 4). Please update the paragraph 60/62 to reflect how the findings and recommendations of the Gender and Social Inclusion Assessment and Action Plan have been included in the proposal. Please also reference the reports ie state See Annex 3 and 4 and also the consultation evidence in the proposal. Also ensure specific gender-responsive activities.

Is the project / programme cost effective?

Response: Pending

Secretariat: Not cleared. The proposal addresses cost considerations but falls short of clearly illustrating cost-effectiveness regarding long-term sustainability. To better meet Adaptation Fund standards, it would be beneficial to include a comparison of expected long-term benefits in relation to costs, along with an explanation of how the selected interventions provide sustainable and cost-effective results. CAR4: Please provide a comprehensive demonstration of cost-effectiveness from a long-term sustainability perspective, including a detailed analysis of long-term benefits that compares anticipated project advantages against costs.

Response: Pending

Secretariat: CAR4: Not Cleared As per Part II. C (Table 11), though the proposal shares a cost comparison between EbA instruments and hard infrastructure -Geotube- as well as projected ecological and livelihood benefits over five years, it does not specify a comprehensive long-term cost effectiveness analysis. Please update Table 11 to include i. Four comparison (EbA, Hard infrastructure (Geo Tube), a Hybrid option and No-project scenario. ii. Life cycle costs (inclusive of initial construction costs, O&M, repairs/replacement etc) should be included iii. The five year projection should include measurable benefits and should be under Part II.B iv. Note the section should state conclusively that EbA is the preferred option because its lifecycle costs is lower compared to the alternatives and it generates additional ecosystem, livelihood and social benefits. v. Long-term sustainability should be reflected in tandem with lifecycle costs and appropriately linked to Part II which would have greater detail on sustainability.

Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?

Response: Pending

Secretariat: Yes. The project is aligned with all relevant national policies and strategies, including the NDC and Indonesia's National Climate Adaption Plan, and various sector-specific, province and district-level plans relevant to the proposal.

Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?

Response: Pending

Secretariat: Not cleared. The proposal lists a number of national technical standards that the project needs to comply with on multiple aspects that are key for the implementation. However, the proposal does not outline how the project will comply with specific technical standards. CAR5: Please detail how the project will ensure compliance with the relevant technical standards, as required by national legislation: i.e. outline the steps taken to comply with the standards and the nature of the authorization/clearance granted for the project to be implemented.

Response: Pending

Secretariat: CAR5: Not Cleared. This comment has not been adequately addressed in Part II. E. To comprehensively address the comment, kindly provide a comprehensive table listing of all specific national technical standards applicable to the proposed project rather than a narrative. The columns in the table should include: (i) specific name/number of the standard/regulation, (ii) goals/objectives, (iii) how it is related to the proposed project and the project's compliance status, and (iv) the steps involved to comply, along with the name of the competent authority that will review and issue approvals.

Is there duplication of project / programme with other funding sources?

Response: Pending

Secretariat: Not cleared. The proposal demonstrates thoughtful identification of relevant projects but would benefit from a more detailed analysis of complementarities and the inclusion of actionable lessons learned. CR5: Please include lessons that can be used to inform the project's design from the Coral Reef Rehabilitation and Management (COREMAP) project in Savu Sea (in which YAPEKA was involved), and from the awareness raising and stakeholder engagement in the Voices for Just Climate (VCA) project. Please also identify other potential national or regional projects that could be useful to build on lessons learned and strengthen implementation. Consider, for example, the National Mangrove Rehabilitation Program, Oceans for Prosperity Project, Coastal Resilience Villages Development Program (Pengembangan Kawasan Pesisir Tangguh, PKPT), Building with Nature - Towards resilient coasts in Indonesia project, among other. In addition, please describe the framework the project will establish to coordinate with such initiatives. CR6: Kindly analyze overlaps and complementarities by assessing how the proposed project aligns with or differs from these existing efforts, by highlighting opportunities for collaboration or differentiation.

Response: Pending

Secretariat: CR5: Not Cleared In Part II. F (Table 14), the proposal does not clearly describe the specific lessons incorporated into the project's design. Please address the following in Table 14: i. Please rename the column 'Relevance to the proposed project' to "Complementarity, Potential Synergies and Lessons Learned". ii. The proposal does not explicitly state in any of the columns in Table 14 what was learned and how those lessons have influenced project design. In the Table 114, please provide more specific lessons from COREMAP and VCA The proposal notes some lessons in the final sentence and refers to para 32-39. However please ensure lessons are inserted in Table 14. For each lesson, explain which project activity, implementation approach or coordination arrangement has been revised or designed based on that experience. iii. For ATSEA, the brief description (oil spill and disaster preparedness training) does not clearly support the stated relevance (baseline data on climate resilience data). Please clearly clarify the linkage between the previous project and the proposed use of its outputs. Please also specify if ATSEA generated climate data iv. Please also amend the column from "Brief Description of Project" to "Brief Description of Project and Key interventions". Under the column list the main interventions/outputs in bullet points for each project. This will allow a clearer understanding of how the proposed project builds on previous initiatives so they can be easily verified. CR5.1 (NEW): Please include the lead organisation and donors in Table 14 by inserting a column between Project Name and Location. CR6: Not Cleared. Table 14 in Part II. F does not sufficiently provide systematic analysis of geographic overlaps, how duplication is prevented and opportunities for collaboration

Does the project / programme have a learning and knowledge management component to capture and feedback lessons?

Response: Pending

Secretariat: Not cleared. More information is required. The project has several activities related to knowledge management (KM) and awareness raising under Component 1, highlighting the project's commitment to learning and scaling. The proposal could clarify how the project will keep track of lessons learned, how knowledge and experiences will be shared with other villages, and how the project's experience will be used to inform/scale up resilience and EbA initiatives at the national, regional, and /or global level. CAR6: Please further elaborate on details of the knowledge management strategy, in particular how will the project collect, and distribute data and lessons learned, specifying how will lessons be collected, systematized and shared from the implementation of Components 2 and 3. CR7: Please provide a specific plan for monitoring and evaluation of the effectiveness of KM activities that will allow to assess how well lessons learned are being shared and applied among stakeholders.

Response: Pending

Secretariat: CAR6: Not Cleared Please explicitly state in Part III. G the title of the position responsible for tracking the experiences gained and how often tracking will be undertaken (i.e. monthly, quarterly etc) CR7: Not Cleared If the Monitoring and Evaluation Manager/ Specialist will be responsible for knowledge management and ensure this is reflected in Part II. G Please ensure terms are consistent. Organogram states M&E Manager but the budget states M&E Specialist.

Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Pending

Secretariat: Not cleared. A consultative process took place between May-July 2022, including government agencies at national and sub national levels, as well as women's groups and vulnerable communities. While the proposal includes a synopsis of the concerns, needs, inputs and opinion, and incorporation of findings into the projects design (section II.H), there are no details provided on the specific stakeholders (including gender disaggregation) that participated in the consultation. CAR7: As part of the Implementation Arrangements, please provide a framework allowing for stakeholders' views to be heard and addressed during project implementation. CAR8: Kindly provide the list of stakeholders consulted (principles of choice, role ascription), including the number of women consulted. Please indicate if particular techniques were used or tailored as part of the consultations with women and other vulnerable or marginalized groups. CR8. Please include a detailed stakeholder engagement plan that outlines the specific roles of each partner, the communication strategies to be conducted, and how stakeholder feedback will be incorporated throughout project implementation. CR9: To improve clarity, please include evidence that the consultation process addressed safeguard measures and potential impacts, especially for vulnerable groups. Please provide clear documentation of these discussions would demonstrate a commitment to transparency and risk management.

Response: Pending

Secretariat: CAR7: Not Cleared. As per the Annexes, A Grievance Mechanism has been developed. However please ensure that the mechanism is referenced in Part III. A, clearly stating it was developed to allow for stakeholders' views to be heard and addressed during project implementation. CAR8: Not Cleared Please clarify the number of people consulted. For example, in the Women's Group consultation, 14 males and only 6 females were consulted. This appears to be a discussion about women with women and men. CR8: Cleared. As noted in Part II.H para 89, in the Annex is a stakeholder engagement plan that outlines the roles of each partner, communication strategies and how stakeholder feedback will be incorporated throughout implementation. However please ensure that the Annex is correctly referenced in the narrative. Refer to editorial note. CR9: Not Cleared. The Gender and Social Inclusion Assessment in the Annex outlines consultations with vulnerable groups held between 12-22 August 2023. However, the other consultation reports for meetings held in 2022 are not provided to complement table 15 in Part II.H. Please provide a Stakeholder Consultation Report which documents these consultations, including the list of stakeholders.

Is the requested financing justified on the basis of full cost of adaptation reasoning?

Response: Pending

Secretariat: Not cleared. More information is required. The proposal provides a table describing the adaptation reasoning by highlighting the differences between 'with' and 'without' project scenarios. While the proposal outlines several climate adaptation activities, it lacks clear links demonstrating how each activity independently contributes to achieving the project's stated objectives. CR10: To strengthen the proposal's relevance, please provide a more explicit alignment between individual activities and the project's overall adaptation goals and clarify how each activity independently supports these goals, along with justification for the adequacy of allocated resources. CR11: Although the proposal mentions co-financing, it does not sufficiently show that project outcomes and outputs can be fully achieved without relying on additional funding sources. Please clarify how each outcome will be met independently of co-financed projects, as this would reinforce the project's robustness. CR12: Please confirm that the project can deliver its intended outcomes on its own, ensuring that co-financing, if present, supports rather than defines project success requirements. CR13: Please clarify the reference to 'the other project' at the beginning of paragraph 70, as it is not clear what it means.

Response: Pending

Secretariat: CR 10: Not Cleared To adequately address the comment in Part II. I, please address the following i. In the narrative preceding the table 16, please state the programme components, outcomes and outputs fully align with 1) the adaptation goal, 2) identified community and vulnerable groups needs and 3) with the Adaptation Fund outcomes. ii. Please include five columns in Table 16 with the following headings: • Component • Baseline Scenario/Without AF financing • Climate Risk and Adaptation Gap • With Project Scenario (i.e. specific AF finance response) • Expected adaptation outcome iii. Under the “Baseline Scenario/Without AF financing” state what happens now and what would continue without the project/AF funding. iv. Under “Climate Risk and Adaptation Gap”, state the climate hazard, vulnerability or exposure that remains unaddressed and explicitly state the need for AF financing i.e. why government funding is insufficient and what it could possibly do. v. Under the “With Project Scenario (i.e. specific AF finance response)”, identify the activities to close the adaptation gap/ what activities will AF fund and at what cost. Here you state the Adaptation fund will finance a list of activities, please use bullet points. State the AF allocation, using the component/output budget. vi. Under “Expected Adaptation Outcome”, indicate the measurable reduction in vulnerability, exposure and climate results will result. For example, approximately 30.3 km of coastal will be better managed through EbA interventions etc CR11: Not Cleared. Para. 92 mentions AF funding is needed as budgets are limited but does not explain whether project cover full costs of activities nor speak to co-financing. Please refer to CR12 for guidance to explicitly state no co-financing is required in the proposal document in Part II. I. CR12: Not Cleared The proposal does not explicitly confirm AF funded project can be implemented and sustained independently without relying on other funding source/external operational support. If there is no co-financing, please include an introductory or concluding narrative of Part II. I to state explicitly that “the requested financing represents the full cost of adaptation measures proposed under the project. The project is designed to deliver intended outcomes and outputs independently, without reliance on additional donor funding or co-financing (including parallel funding). The AF-financed activities, taken on their own, are sufficient to deliver the proposed adaptation results.” CR13: Not Cleared Part II. J (para 97) states: ‘The other project’ will integrate climate change adaptation framework into relevant policies.’ The sentence structure indicates that this is an activity to be undertaken. Please clarify in the proposal document.

Is the project / program aligned with AF's results framework?

Response: Pending

Secretariat: Not cleared. The proposal currently lacks a clear alignment with the Adaptation Fund's revised Strategic Results Framework (SRF). CR14: Please provide a clear mapping of project objectives and activities to specific outcomes and outputs defined in the Adaptation Fund's SRF. For example, aligning project components with outcomes like "Reduced exposure to climate-related hazards and threats" or "Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses" would reinforce the project's strategic alignment. CR15: Please ensure that the alignment at the output level is indicated as only one part of the table is completed, there is no alignment at the output level. CR16: Please also include a core impact indicator able for the relevant core impact indicators as per the AF template available at: Methodologies for reporting Adaptation Fund core impact indicators (For fully-developed proposals) (152 kB, PDF)

Response: Pending

Secretariat: CR 14 and 15: Not cleared. The alignment table presented in part III.F must follow the template available at: <https://www.adaptation-fund.org/apply-funding/project-funding/project-proposal-materials/>. Please revise the alignment table as follows: - Upper section of the table: i) for each Project Objective indicator

listed, select only the most appropriate Fund Outcome and enter it in the "Adaptation Fund Outcome" column; ii) for each Adaptation Fund Outcome listed, identify only the most relevant Adaptation Fund Outcome Indicator and enter it in the "Adaptation Fund Outcome Indicator" column; iii) enter the grant amount for each Adaptation Fund Outcome selected in the "Grant Amount (USD)" column, ensuring that the total equals the project activity cost (USD 743,825); - Lower section of the table: i) List each project outcomes from the project results framework in the "Project Outcome" column; ii) list the Project Outcome indicators from the project results framework in the "Project Outcome indicator(s)" column ; iii) for each Project Outcome indicator, select only the most relevant corresponding Adaptation Fund Output and enter it in the "Adaptation Fund Output" column; iv) for each Adaptation Fund Output selected, identify only the most relevant Adaptation Fund Output Indicator and enter it in the "Adaptation Fund Output Indicator" column; and iv) enter the grant amount for each Adaptation Fund Output in the "Grant Amount (USD)" column, ensuring that the total equals the project activity cost of USD 743,825. Lastly, for consistency, please ensure that the all Fund Outcomes associated with the listed Fund outputs in the lower section of the table are reflected in the upper section. CR16: Not Cleared. i. Tables 23-24 focuses on Core Impact Indicators. However, the proposal should only include relevant Core Impact Indicators. For example, the proposal includes Early Warning Systems, but the project is not aligned to this thematic area. Please remove the AF Core Indicators: "Early Warning Systems" ii. Note the AF Core Indicators: "Number of Beneficiaries" should also focus on all beneficiaries. It currently does not include male beneficiaries. Please add a row as needed for male beneficiaries. Please refer to the "Methodologies For Reporting Adaptation Fund Core Impact Indicators" for guidance.

Has the sustainability of the project/programme outcomes been taken into account when designing the project?

Response: Pending

Secretariat: Not cleared. The proposal includes general measures related to each of the components that the project will implement to ensure sustainability. However, no specific details are provided to substantiate the sustainability of EbA practices and small-scale infrastructure to be supported as part of the project, including a more detailed analysis on what would be needed to sustain them over time. CR17: Please provide more details on the proposed measures to ensure sustainability of the project considering economic, social, environmental, institutional, and financial sustainability areas. CR18: Please also further demonstrate the sustainability of the EbA instruments (small-scale green/grey infrastructure) in view of the increasing climate impacts, and which considerations would need to be included as part of a (resilient) design. Further details would be useful regarding how sustainability considerations will be integrated as part of output 3.1. and 3.2. towards improved and diversified livelihoods.

Response: Pending

Secretariat: CR17: Not Cleared Part II.J should have sub-sections reflecting the different types of sustainability (economic, social, environmental, institutional, and financial) Please revise Part II. J to reflect this. Note also that:

- Social sustainability should look at how vulnerable groups and communities will remain involved (community ownership, participation in decision-making)
- Economic sustainability should focus on how the activities will continue to provide economic benefits (e.g. how will livelihoods remain viable?)
- Environmental sustainability focuses on how restored ecosystems will be protected after project (what long-term management arrangements will be in place, monitoring mechanisms etc?)
- Institutional sustainability focuses on who will take responsibility for continuing activities.
- Financial sustainability focuses on where the money needed to continue activities will come from (e.g. partnerships, government budget, user fees etc). Please consider how recurrent costs will be covered.
- Operation and Maintenance arrangements for any assets, systems and platforms should be identified

CR18: Not Cleared. Please address under the Environmental Sustainability sub-section in Part III. J,

Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Pending

Secretariat: Not cleared. Further information is required. The proposal includes a project self-assessment of compliance with the AF Environmental and Social Policy, including measures for environmental and social risk management. Annex 4 provides a table with the project's 'environmental and Social Management Plan', based on risk and risk rating, mitigation measures, cost estimate and timeline. However, some clarifications are still required. Project is classified Category B in line with the AF ESP. CAR9: Please note that Environmental and Social Impact Assessment (ESIA) for the wave breaker construction should be carried out, in compliance with the Fund's Environmental and Social Policy. Such assessment should consider (i) all potential direct, indirect, transboundary, and cumulative impacts that could result from the proposed wave breaker intervention; (iii) assess alternatives to this intervention; (iii) identify possible measures to avoid, minimize, manage or mitigate environmental and social impacts of the proposed intervention; and iv) be submitted for public review. Outcomes of the ESIA should be reflected in the project ESMP. CAR10: Could the proposal specify measures on pages 12-14 of Annex 4, to ensure that USPs meet ESP requirements, by including a structured framework for assessing and managing potential environmental and social risks associated with USPs would reinforce adherence to the Fund's standards.

Response: Pending

Secretariat: CAR9: Not Cleared. This has not been addressed. Notably Part II.K does not include a completed E&S Principle checklist table. Please reassess each ESP principle based on the actual project interventions and locations, provide a justification for each risk rating, and reflect all identified risks, mitigation measures, responsibilities, budgets and monitoring indicators in the ESMP in Annex 2. For example, the E&S Principle on Conservation of Biological Diversity may be relevant to mangrove rehabilitation. The proposal should specify that locally appropriate native species will be selected based on ecological and site assessments. The E&S Principle on Compliance with the Law may also present risks if required environmental, coastal, marine, construction, land-use, consultation, permitting or approval procedures are not properly identified and completed. CAR9.1 (NEW): It is unclear what the orange shaded cell implies. Please note that Table 17 in Part II. K should be updated as follows: • Please review table in Part II.K and in the third column "Potential impacts and risks" state and expand, - all potential impacts (direct, indirect, transboundary and cumulative), state whether the risk is low, medium or high, and include how it is planned to mitigate and manage each risk. Such risks should be described in the third column along with the corresponding mitigation measures. In addition, please take into account the following guidance: • i) In the third column, risks should be stated and properly write down for all relevant principles by starting the statement as "There is a risk of ...". • ii) If no risk is identified for a given principle, then state 'no risk' but a clear justification must be provided. • iii) Column 2 should have a tick if no further assessment is needed. These typically have low to no risks. • Please note that Adaptation Fund Principles 1, 4 and 6 always apply. For more information, please visit: AF's ESP guidance. . CAR10: Not Cleared Please indicate where this has been addressed in Annex 2: ESMP. The ESMP should contain an operational procedure showing exactly how each USP will be screened, assessed, approved, managed and monitored before it is implemented. Additionally please identify the USP and the justification for USP, eligible USPs and exclusion criteria, screening procedure and checklist, along with how these would these risks will be managed, approved and who will be responsible.

Resource Availability

Is the requested project / programme funding within the cap of the country?

Response: Cleared

Secretariat: YES

Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?

Response: Cleared

Secretariat: Yes

Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?

Response: Pending

Secretariat: Not cleared. The proposal includes a Project Budget in section III.G, including an amount for project execution costs of \$87,239 that is below 9.5% of the total budget. However, the detailed project budget shows that there are a number of budget items (e.g., consultants, travel, office facilities) that have not been categorized under the Project Execution Cost (section B of the budget) CAR11: Please check that consultants, travel and office facilities have been adequately grouped as part of the project's execution costs, as opposed to under the costs of activities.

Response: Pending

Secretariat: CAR11: Not Cleared In the proposal Part III. G, please also provide the breakdown of the EE costs to ensure all key eligible costs are included. Is A Gender Consultant note included? The Excel sheet and proposal should be aligned.

Eligibility of IE

Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?

Response: Pending

Secretariat: Yes Accreditation Expiration Date: 29 September 2026

Implementation Arrangements

Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?

Response: Pending

Secretariat: Not cleared. Section III, A provides a description of the roles and responsibilities of the Executing entity, Steering Committee and Project Execution Unit (PEU) as well as an organization chart. Further details on the role of key Specialists could be provided. CR19: Please specify the specialists and consultants that will be engaged as part of the PEU. Please ensure consistency and alignment between the proposed PEU roles, the proposed activities, and the budget.

Response: Pending

Secretariat: CR19: Not Cleared. In Part III. A, please include the following specialist under PEU and associated roles within the organogram and narrative: • Knowledge Management • Communication Specialist • Gender Specialist • E&S Specialist Note that the first two are mentioned in the report, particularly under Activity 1.1.2. Note the last two are critical for the monitoring of the GAP and ESMP.

Are there measures for financial and project/programme risk management?

Response: Pending

Secretariat: Yes

Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?

Response: Pending

Secretariat: Not cleared. The proposal identifies major risks and mitigation measures, but further detail can be added to adequately align with Adaptation Fund standards. CR20: Kindly ensure that the ESMP contains clearly allocated roles and responsibilities for its implementation, opportunities for consultation and adaptive management, credible budget provisions, as needed. CR21: Please provide a detailed description of the grievance mechanism, including how it will be accessible, meaningful, and known to all stakeholders.

Response: Not Cleared

Secretariat: CR20: Not Cleared. Please note that Annex 2: Environmental and Social Management Plan does not include a budget in Table A. Please insert a column with the heading budget and include budget estimates, ensuring alignment across the proposal. Please also ensure alignment with Part III. C, Table 20 CR21: Cleared Please note that Grievance Mechanism has been included as Annex 6 which includes accessibility, the process of submitting a complaint and the necessary contact details. It also includes a Grievance Mechanism Register. It acknowledges that matters will be dealt with confidentially.

Is a budget on the Implementing Entity Management Fee use included?

Response: Pending

Secretariat: No. CAR12: Please include in the budget a breakdown of the Implementing Entity Management Fee.

Response: Pending

Secretariat: CAR12: Not Cleared. (i) Please remove the row Implementing Entity Activities from the Components and Financing Table in Part I. A. The figure of US\$78,056 should be for "Project/Programme Cycle Management Fee charged by the Implementing Entity. (ii) Please note that this IE fee in the Components and Financing Table should align with the Disbursement Schedule Table which currently shows US\$78,055. (iii) A breakdown is required regarding how the IE fee would be spent. Please include a breakdown of IE costs such as Audit, Mid-Term Evaluation, Final Evaluation, Baseline Studies, Project Supervision Missions and Steering Committee meetings, and other eligible IE costs. The breakdown should be reflected in the project budget section and budget notes. Please ensure these are aligned with the budget in the Excel sheet.

Is an explanation and a breakdown of the execution costs included?

Response: Pending

Secretariat: Not cleared. CAR13: The budget includes a breakdown of the Execution costs, however, there are a series of applicable Execution costs (including consultant services, travel, workshops, M&E, office facilities, etc.) that have not been included in this breakdown.

Response: Pending

Secretariat: CAR13: Not Cleared As noted in the initial review, the Excel sheet includes a breakdown of EE costs comprising staff, office space/facilities and audit. Kindly take note of other key eligible costs for EE such as travel related to project execution, results-based monitoring costs. Note that audits are the responsibility of the IE. Please update the budget and ensure both the Excel sheet and the proposal budget are updated for consistency in Part III. G

Is a detailed budget including budget notes included?

Response: Pending

Secretariat: Not cleared. Further information is required. A detailed budget was included as part of the proposal, but there are no budget notes. CAR14: Please ensure that the budget includes budget notes, as well as a breakdown of the Implementing Entity Management Fee. Kindly check that all the figures add up in the detailed budget (Excel).

Response: Pending

Secretariat: CAR14: Not Cleared. Part III. G (Table 26) reflects the budget notes without figures, and the notes do not include explanation for IE or EE fees. The layout of the budget and budget notes in the proposal require improvement to ensure alignment and readability i. Please update the budget and ensure there is a breakdown of IE and EE costs in the detailed budget and budget notes ii. Please revise the budget notes section. It should breakdown how the activity funding will be spent. For example, Activity: KAP baseline survey and endline survey

Budget notes should state: • Expert fees on KAP surveys: US\$20,000 • Fee for enumerators: US\$1944 • FGD: US\$5000. Note this is only an example. This breakdown should be done for each activity. In the budget notes.

Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?

Response: Pending

Secretariat: Not cleared. Further information is required. The proposal outlines preliminary arrangements for monitoring and evaluation, in Part III section D, as well as a tentative budget for monitoring M&E (page 41) with provision for mid-term evaluation. It is unclear however how the ESMP implementation will be funded. CAR15: Please include a more detailed M&E plan that follows the AF M&E guidelines and is in compliance with the Gender Policy. The M&E plan should also specify how it will address the management of the environmental and social risks identified.

Response: Pending

Secretariat: CAR15: Not Cleared The M&E arrangements have not been adequately addressed in Part III. D (Table 21). The description of the monitoring and evaluation (M&E) arrangements in Section III.D remains insufficiently structured and is not yet fully aligned with Adaptation Fund requirements. Please revise this section as follows: i. The current text refers to the preparation of the Environmental and Social Management Plan (ESMP), Stakeholder Engagement Plan (SEP), Gender Action Plan (GAP), and Grievance Redress Mechanism (GRM). As these documents have already been prepared and are included in the funding proposal, please revise the text to reflect their implementation, monitoring, and periodic review during project implementation. ii. Include a clear description of the respective roles and responsibilities of the Implementing Entity (IE) and Executing Entity (EE) for ensuring compliance with the Adaptation Fund Gender Policy and Environmental and Social Policy (ESP), including the monitoring and implementation of the ESMP, GAP, SEP, and GRM throughout the project lifecycle. iii. Revise the list of M&E activities to ensure it is comprehensive, uses Adaptation Fund terminology consistently, and reflects all mandatory reporting requirements (e.g. Baseline Data Report, Project Performance Reports (PPRs), Mid-Term Review (MTR), Project Completion Summary (PCS), Final Evaluation, and final Audited Financial Statements). iv. Ensure that all mandatory M&E activities are adequately budgeted, including the monitoring and implementation of the ESMP, GAP, SEP, and GRM. v. Ensure that the budget allocated to evaluation activities (i.e. the Baseline Data Report, Mid-Term Review, and Final Evaluation) represents 1 - 5% of the total project budget.

Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?

Response: Pending

Secretariat: Yes

Response: Pending

Secretariat: CAR20(NEW): Note for the Project/Programme Components and Financing Table, the Terminal Evaluation should be completed nine months after the Project/Programme Closing. Please revise accordingly.

Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?

Response: Pending

Secretariat: Not cleared. The proposal includes a results framework (Section III.E.); however, several indicators and targets need to be adjusted, including gender responsive and disaggregated by sex as appropriate. While the proposal also provides a useful table showing the alignment between the project objective indicators, budget, and the AF outcome indicators (Section III.F), not all the AF indicators are included in the Results' Framework (for objectives 2 and 3). CAR16: Please amend to include the required indicators. In addition, please note that the project result framework must include at least the core impact indicator "Number of beneficiaries" including estimations for direct and indirect beneficiaries. A second core indicator must be added if the project includes activities targeting the areas identified in AF results framework, namely (1) Early Warning System; (2) Assets Produced, Developed; Improved, or Strengthened; (3) Increased income, or avoided decrease in income or (4) Natural Assets Protected or Rehabilitated. Please refer to this document for guidance <https://www.adaptation-fund.org/wp-content/uploads/2016/04/AF-Core-Indicator-Methodologies.pdf> CAR17: When revising the results framework, kindly ensure that the indicators are SMAART: Specific, Measurable, Achievable, Attributable, Relevant, and Time-based. Include disaggregated data by sex, as appropriate, and ensure not to repeat indicators between outcome and output levels to avoid redundancy.

Response: Pending

Secretariat: CAR16: Not Cleared Table 23 &24 provides AF Core Impact Indicators. Please provide the total number of direct and indirect beneficiaries in the core indicator table on "Number of beneficiaries" as, at the moment, figures are only provided for female and youth. Please consolidate the information included in table 23 into the table 24 "Adaptation Fund Core Impact Indicator "Natural Assets Protected or Rehabilitated". Please refer to the "Methodologies For Reporting Adaptation Fund Core Impact Indicators" for guidance in completing the tables. Refer to CR16 which highlights the inclusion of Early Warning Systems even though this is not part of the project design. Please remove this core indicator as it is not relevant to the project. CAR17: Not Cleared. The indicators and targets are not aligned. Disaggregated data by sex has been included in Table 22 (Project Results Framework) but there are areas where two different things are being measured. The Project Results Framework (table 22) should be revised as follows: i) For each indicator, please ensure that there is a clear correlation between the units used and the associated targets throughout the entire framework. For instance, although a percentage is expected for Outcome 1 indicator, some targets are expressed in a different unit (# of individuals).; ii) ensure that each indicator has a corresponding target and vice-versa (currently, output 1.1 provides some targets as # of individuals, although the indicator refers to the number of IEC tools); iii) ensure that baseline values are provided for each indicator; iv) Ensure that the number of direct and indirect beneficiaries are consistent through the different sections of the proposal; iv) ensure that all indicators meet the SMART criteria (i.e., that they are Specific, Measurable, Achievable, Relevant, and Time-Bound) as several indicators in the current framework do not meet this standard; by way of example, "Number of villages are facilitated" is not specific enough as currently formulated. Additionally, the phrase 'addressing gender and social issues' makes it a bit more complex. Please add a qualifying indicator. For example, Percentage of IEC tools reviewed and validated as gender-responsive, socially inclusive and accessible to vulnerable groups. Therefore, target could be 100% of the five IEC tools. Note this is an example as the gender-responsive indicators should ideally be aligned with the GAP. Please update the Table 22 accordingly.

Is a disbursement schedule with time-bound milestones included?

Response: Pending

Secretariat: Not cleared. The proposal includes a disbursement schedule (page 51), however, it does not include time-bound milestones relative to project inception and the annual reporting requirement. CAR18: Please include a description of milestones relative to project inception and the annual reporting requirement in compliance with the template available at Disbursement Schedule Template (For fully-developed proposals) (18 kB, XLS)

Response: Pending

Secretariat: CAR18: Not Cleared As there will be two disbursements to cover Inception and Annual Performance Report, please remove the columns labelled Year 2, 3 and 4 which are blank.



FULLY DEVELOPED PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Ecosystem-based Adaptation to Support Climate Resilience of Coastal and Small Islands of Rote and Sabu in Savu Sea

Country: Indonesia

Thematic Focal Area:

Type of Implementing Entity: National Implementing Entity

Implementing Entity: Kemitraan (Partnership for Governance Reform)

Executing Entities: YAPEKA Consortium (YAPEKA, Penabulu Foundation and CTSS-IPB)

Amount of Financing Requested: USD **996,358** (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes ☐ ☐ No ☐ ☐

NOTE: The LOE should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>

Stage of Submission:

☒ This proposal has been submitted before including at a different stage (concept, fully-developed proposal)

☐ This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date:

Please note that fully-developed proposal documents should not exceed 100 pages for the main document, and 100 pages for the annexes.

Project/Programme Background and Context:

1. The project will focus on coastal areas and small islands of Rote Ndao and Sabu Raijua districts in the Savu Sea (see Annex 1). Rote islands (total area of 1.280,10 km²; under the administration of Rote Ndao district) and Sabu-Raijua islands (area: 459.6km²; under the administration of Sabu Raijua district) are located in the Savu Sea Seascape in the most southern province of Indonesia, in the Nusa Tenggara Timor (NTT) Province. The Savu Sea is currently managed as the largest national marine protected area in Indonesia (more than 3.5 million Ha). The Savu Sea is part of the global epicenter of tropical marine biodiversity, lying within the Coral Triangle in Indonesia. Rote and Sabu islands have been identified as islands with a high vulnerability index (SIDIK, 2015)¹ in the Savu Seascape. Furthermore, in 2021 Bappenas also identified the two islands as top priorities for climate resilience actions².
2. Global warming resulting from the atmospheric builds up of greenhouse gases has an important effect on coastal and marine waters. Over the next century, the Asia-Pacific region is likely to experience warming and increases in precipitation, with projected increases in sea surface temperature (SST) ranging from 1.0 to 3.4 1C in South-east Asia. The region is also expected to experience increased and more variable precipitation throughout the equatorial Pacific; an increase in winds over Indonesia; tropical cyclones of greater intensity; mean rise in sea-level of 0.4 to 0.6 m - although even greater increases may occur according to some models; and increases in ocean acidification of up to 0.3 pH units³.
3. Existing data indicates the average rate of SST rise in Indonesian waters has ranged from 0.02°C to 0.023°C per year over the last century. SST rise will affect the potential fishing ground and the damage of coral reefs and associated ecosystems. Warming of the surface ocean from climate change will fuel more powerful tropical cyclones (TCs). In addition, scientists predict that with the increasing intensity of global warming, the intensity of extreme climate variability events such as El Niño and La Niña (usually known as ENSO, or the El Niño-Southern Oscillation, comprising both El Niño and La Niña) will also increase. Analysis of extreme ENSO events up to 2100 that incorporate sea surface temperatures shows an increase of frequency of ENSO events from once every three to seven years to once every two years. ENSO can also contribute to more intense and frequent tidal waves and tropical storms (ICCSR, 2010)⁴

Impact of changes to coastal and marine ecosystems of Rote and Sabu islands in Savu Sea

4. Using NOAA SSTA (Sea Surface Temperature Anomaly) data from 2015-2021 our heatmap analysis indicates Rote and Sabu islands (within the Savu Seascape in the south-eastern part of Indonesia) have undergone frequent and high sea surface temperature anomalies (Figure 02) with sea surface anomalies ranging from 2°C up to 3°C maximum from 2015.

¹ Ditjen PPI KLHK, 2015. Sistem Informasi Data Indeks Kerentanan.

² Bappenas, 2021. Daftar Lokasi & Aksi Ketahanan Iklim.

³ Adel Heenan, Robert Pomeroy, Johann Bell, Philip L. Munday, William Cheung, Cheryl Logan, Russell Brainard, Affendi Yang Amri, Porfirio Aliño, Nygiel Armada, Laura David, Rebecca Rivera-Guieb, Stuart Green, Jamaluddin Jompa, Teresa Leonardo, Samuel Mamauag, Britt Parker, Janna Shackeroff, Zulfigar Yasin. 2015. A climate-informed, ecosystem approach to fisheries management. Marine Policy 57 (2015) 182–192.

⁴ Indonesia Climate Change Sectoral Roadmap, 2010.

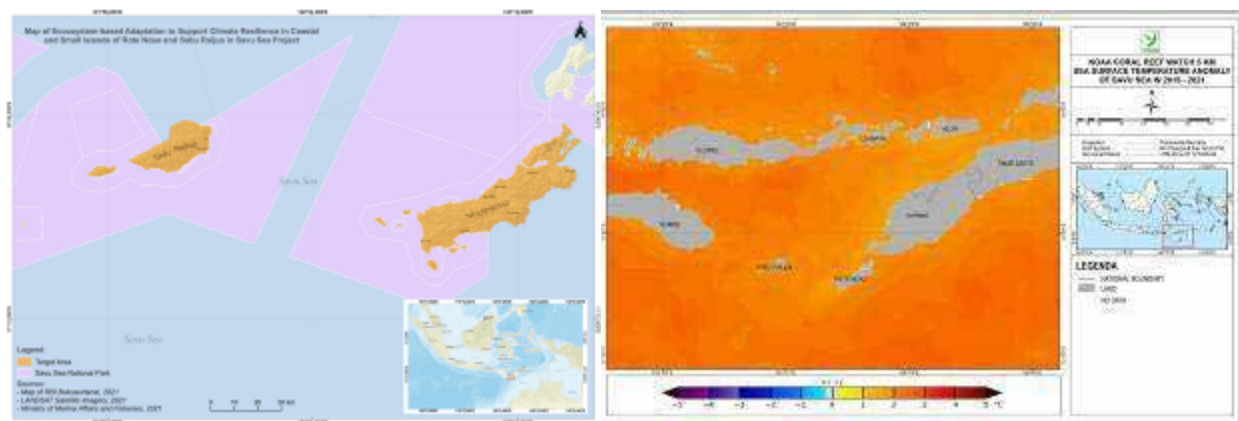


Figure 01 (left) Location in Rote and Sabu Island in Savu Seascape. Figure 02 (right). Distribution of temperature anomalies at Savu Sea, around Rote and Sabu, NTT (NOAA SSTA data 2015-2021, further analyzed and processed by YAPEKA).

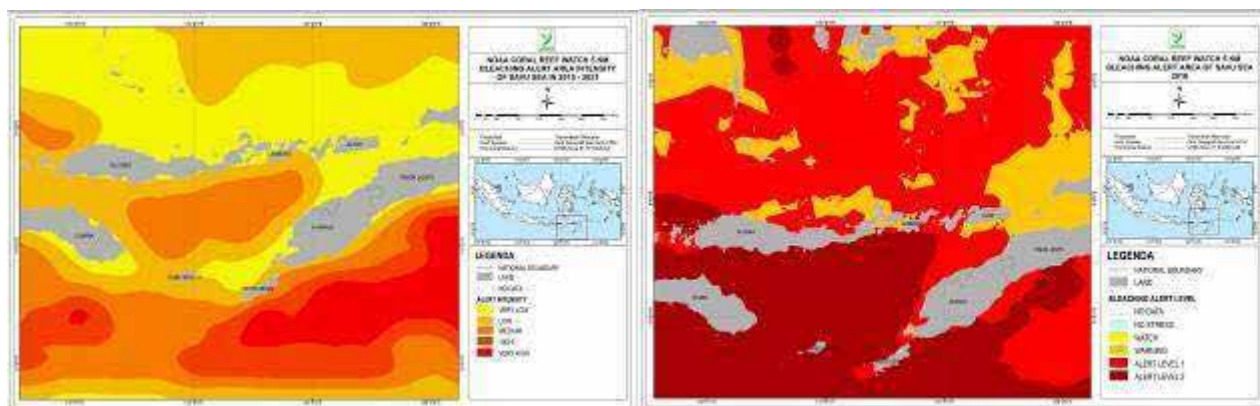


Figure 03 (left) Cumulative distribution and intensity of Coral Bleaching Alert (NOAA Bleaching Alert data 2015-2021, further analyzed by YAPEKA); and Figure 04 (right) Coral Bleaching Alert 2106 during strong El Niño event (Data: NOAA, processed by YAPEKA)

5. As a consequence, the Savu Sea area is prone to substantial coral bleaching. Figure 03 (left) demonstrates that the pattern of coral bleaching alerts (comprising Alert 1 and Alert 2 levels - the highest bleaching threat probability) are closely related to temperature anomalies literally surrounding the Rote and Sabu islands. During a strong ENSO event in 2016 (Figure 03 right), almost all of the seascape was covered by an Alert 2 status where the probability of coral bleaching was very likely. Although the Sabu and Rote islands seem to be out of the hottest zone, the overall seascape fecundity and resilience of coral reefs and reef fishes is heavily compromised because of mass coral bleaching. Therefore, pockets of “surviving reefs” that suffer less stress in the Sabu and Rote islands are becoming even more valuable as sources of coral larvae and fish spawning sources.

6. An increase in sea surface temperatures will also cause the growth and development of mangroves to be affected. A decrease in rainfall by more than 15% and an increase in SST above 0.1°C increases the risk of damage to mangrove ecosystem areas; and worryingly the decrease of rainfall is currently 8.7% and SST is 0.49°C in the NTT Province (including the Savu Sea). Higher sea surface temperature not only affects coral reefs and mangroves but will also cause cascading effects to the connected ecosystems through a chain of hydro-meteorology connectivity and marine chemistry dependence, and in turn increase the vulnerability of seagrass ecosystems.
7. In April 2021, Tropical Cyclone (TC) Seroja formed over the Savu Sea and made landfall on the Rote and Sabu Islands. The storm was estimated to have caused over \$490.7 million in damages⁵. The storm surge was destructive to coastal ecosystems and affected socio-economic conditions of coastal communities. TC Seroja generated extreme rainfall and high sea waves that caused coastal erosion and ecosystem changes, coastal flooding and infrastructure damage (Kurniawan, 2021)⁶. A survey conducted by BKKPN Kupang in 2021 revealed that some coral reefs were also affected by TC Seroja. New land areas were created, caused by strong waves along the coast of Rote Island. TC Seroja also impacted the livelihood of coastal communities in Rote and Sabu Islands: most of the seaweed farms and small-scale fishermen, comprising more than 147 fishing boats and 16 different fishing gears, were destroyed because of TC Seroja⁷.
8. Climate change also causes more frequent severe weather conditions. Both Rote and Sabu islands are exposed to prolonged drought on top of their drier characteristics. Based on Village Vulnerability and Climate Risk index in NTT Province conducted by SPARC Project, In Sabu Raijua District, currently out of 102 villages, no village is found to have high to very high risk for flooding, while for drought 26% and for landslides and high winds respectively 18% and 32%. In the future (2011-2040), the flooding risk level will tend to decrease, while on the other hand drought risk is projected to increase⁸. Nonetheless, the coastal-based risks are relatively undocumented before severe ENSO 2021 and Cyclone Seroja.
9. Climate driven coastal hazards, such as severe weather and sea-surface temperature anomaly have been triggering coastal and marine ecosystem damage which could leads to consequences of ecosystem service losses and trigger negative cascading impacts on the socio-economic condition of coastal communities. This could include livelihood system disruption which may also impair progress of reducing stunting phenomenon⁹ in the two Rote and Sabu islands. The two districts face high prevalence of stunting (above 30%) and the local governments are also currently trying to reduce the high stunting prevalence status¹⁰.
10. To illustrate the condition due to climate-driven coastal hazards, Figure 5 shows the results of a composite spatial analysis of the risk of bleaching at a depth of 3-10 meters in the oceanic area and tropical cyclone risk in the terrestrial area in East Nusa Tenggara. A composite analysis of the risk of

⁵ "Kerugian Sementara akibat Badai Siklon Tropis Seroja di NTT Rp 3,4 Triliun". *kompas.id*. 5 May 2021. [Archived](#) from the original on 5 May 2021.

⁶ R Kurniawan*, H Harsa, M H Nurrahmat, A Sasmito, N Florida , E E S Makmur, Y S Swarinoto, M N Habibie, T F Hutapea, Hendri, R S Sudewi, W Fitria, A S Praja, F Adrianita. 2021. The impact of TC Seroja to rainfall and sea wave height in East Nusa Tenggara. IOP Conf. Series: Earth and Environmental Science **925** (2021) 012049

⁷ Data from the district government of Rote Ndao [berikut-data-sementara-hasil-rekapan-akibat-badai-seroja.php](#).

⁸ Boer, R., Rakhman, A., Faqih, A., Perdinan., and Situmorang, A.P., 2015. Indeks Vulnerability and Climate risk Nusa Tenggara Timur. UNDP-SPARC Project. Kementerian Lingkungan Hidup and Kehutanan. Jakarta

⁹ Charles W Schmidt. 2019. The Future of Stunting: Potential Scenario of Climate Change. [EHP5049](#)

¹⁰ [prevalensi-stunting-di-atas-30-persen-15-kabupaten-di-ntt-berkategori-merah](#).

extreme weather (including drought) and high waves (including coastal abrasion) with details of the target village in the Rote Islands (Figure 06) and in Sabu Raijua (Figure 07).

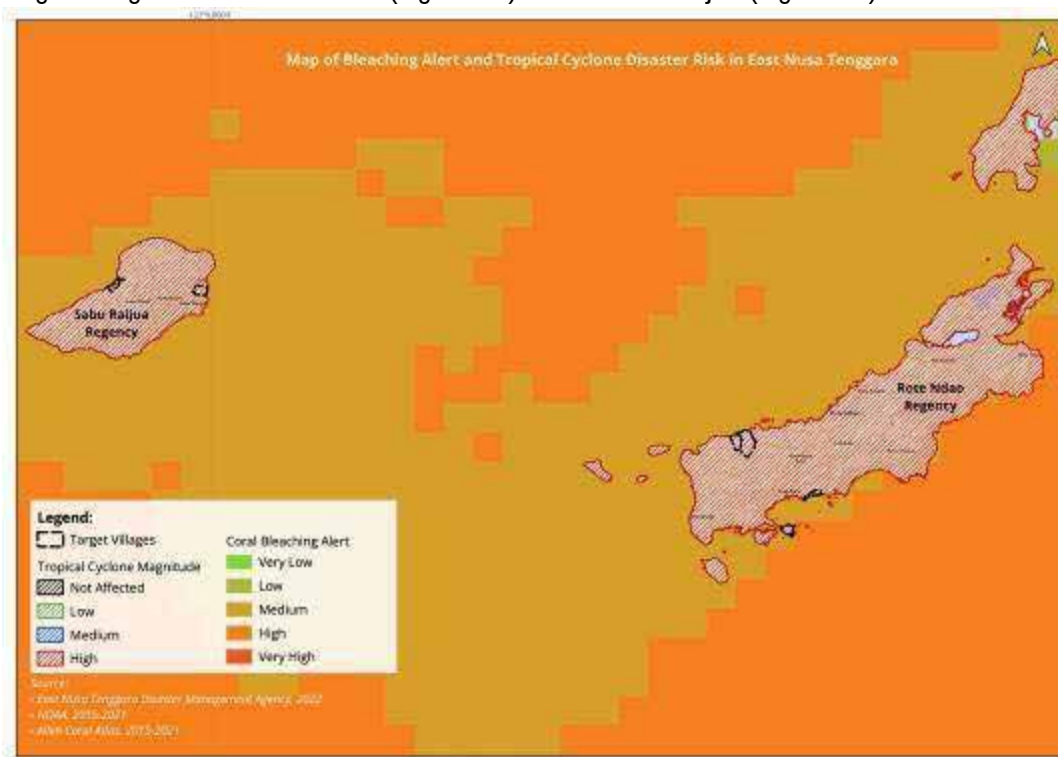


Figure 05. Composite spatial analysis of Bleaching Risk at 3-10 meters depth in oceanic area and Tropical Cyclone Risk in Terrestrial area. (Source: NTT Disaster Management Agency, 2022; NOAA, 2015-2021; Allen Coral Atlas, 2015-2021)

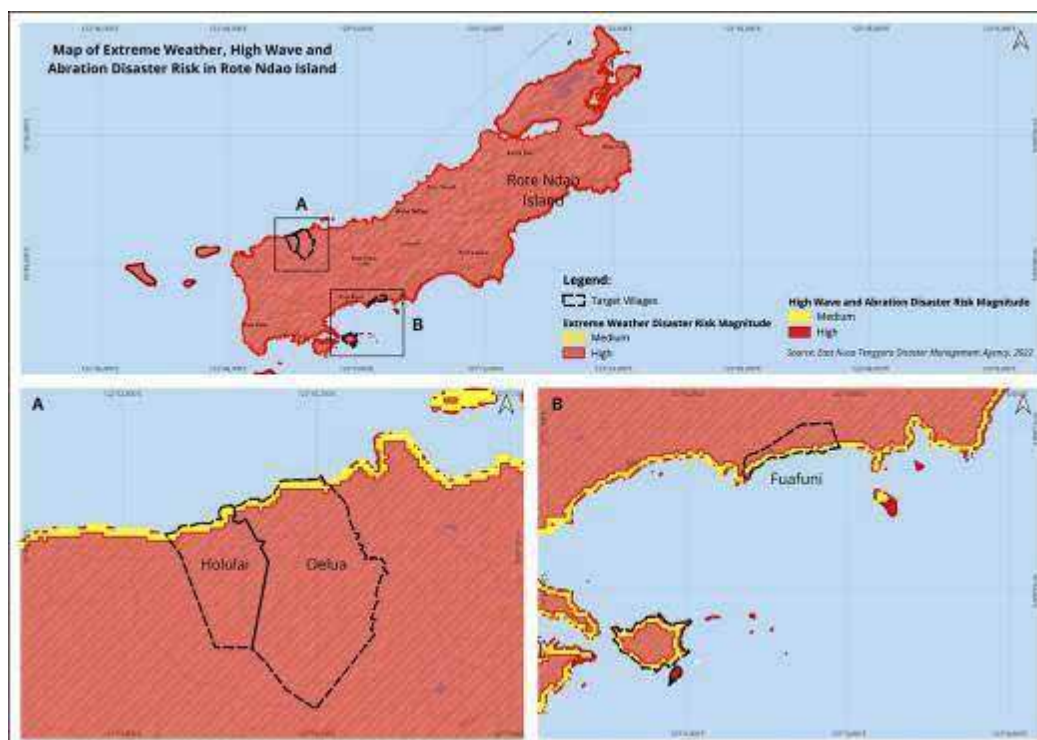


Figure 06. Composite analysis of extreme weather risks (including drought) and high wave (including coastal abrasion) in Rote Islands, with details in targeted villages. (Source: NTT Disaster Management Agency, 2022)

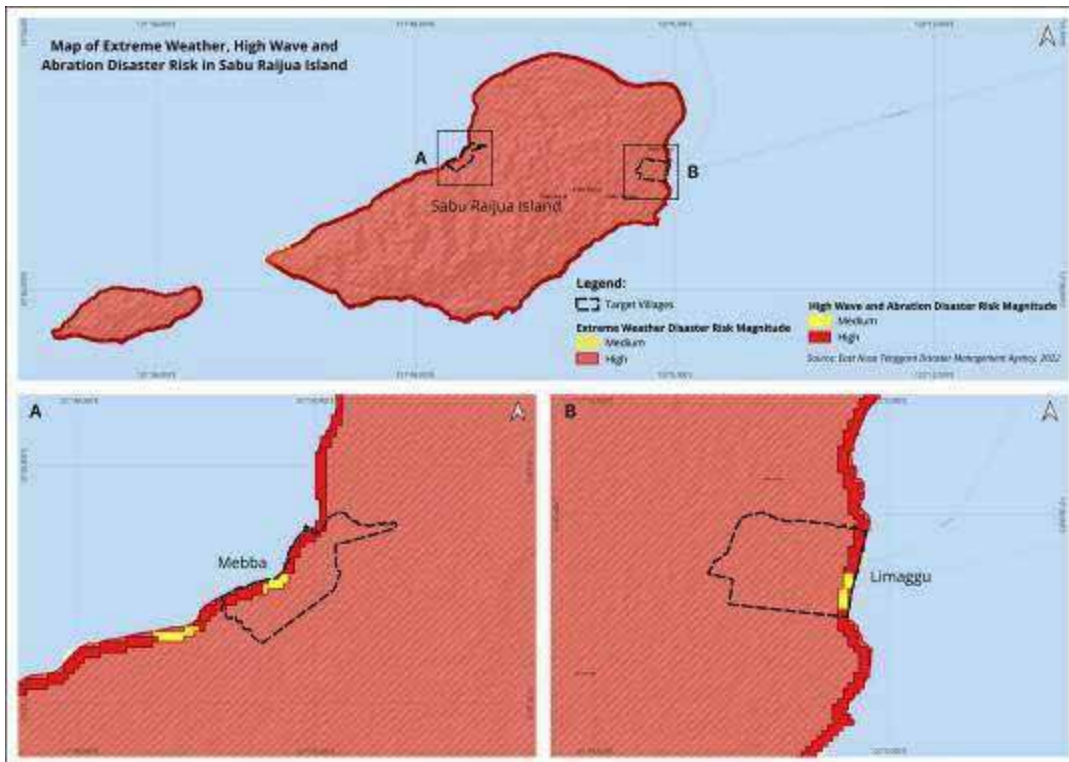


Figure 07. Composite analysis of extreme weather risks (including drought) and high wave (including coastal abrasion) in Rote Islands, with details in targeted villages. (Source: NTT Disaster Management Agency, 2022)

Table 01. Climate change risks in each villages and projection

No.	Climate Hazard	Villages					Estimation Projection Climate Hazard Magnitude
		Current Magnitude					
		Oelua	Holulai	Fuafuni	Mebba	Limaggu	
1	Drought	High	High	High	High	High	Increasing severity; same coverage
2	Extreme Coastal Weather	High	High	High	High	High	Increasing severity; same coverage
3	Tropical Cyclone (TC Seroja)	High	High	High	High	High	Increasing probability; same coverage
4	Coral Bleaching at 3 m depth	Medium	Medium	High	Medium	Medium	Increasing severity; increasing coverage
5	Coastal Abrasion	Medium	Medium	Medium	High	High	Increasing severity; increasing coverage

11. In addition to climate impact as described above, anthropogenic factors such as sand quarry, destructive fishing, and coastal resource use, as well as overlapping land use on coastal areas have triggered more risks for coastal ecosystems and communities. Limited literacy and access to climate information of coastal communities are also other factors that increase the impact. Therefore, any damage and other anthropogenic stresses are in dire need to be compensated and there is an urgency to implement strategies that can improve socio-ecological resilience of coastal areas of Rote and Sabu Islands in Savu sea.
12. Figure 08 shows a general model of the climate impact chain that helps us understand how climate drivers lead to climate risks and, in turn, general vulnerability at the Savu Sea seascape level. However, these large drivers and hazards can cause site-specific effects and require specific climate adaptation actions based on the local social-ecological characteristics. Table 1 indicates the specific vulnerability of each location in Rote Ndao and Sabu Raijua.

Figure 08. General Climate Impact Chain Model for Savu Sea Seascape. Green boxes indicate how the project is designed to respond to overall climate change factors.

Location-Specific Climate Risks and Vulnerability

Rote Islands

13. Rote Island (ca. 1,280.10 km²), Indonesia's southernmost inhabited island, faces increasingly adverse climate risks and vulnerabilities due to its exposure to extreme weather events, rising sea levels, and ecosystem degradation, including ENSO escalation. These climate stressors impact local livelihoods, particularly for communities dependent on fishing, mixed garden agroforestry, and marine-based economies. It is also under a lot of environmental stress because of overfishing, coral reef degradation, and the loss of seagrass meadows, which are important places for marine life and local fisheries. Mangrove, seagrass, and coral reef flats are particularly important for the locals to sustain their livelihood; at least six mangrove species and nine seagrass species become the fundamental part of their food system and maritime culture. In 2024, a new species of seagrass, *Ruppia*

brevipendunculata, was identified in the Rote Islands, indicating high marine biodiversity potentials¹¹. Rote island also known for productive small scale fisheries, including sea cucumbers such as *Holothuria scabra*, *H. arata* and *H. leucospilota*¹² and seaweed.

14. One of the most urgent concerns is coastal erosion associated with extreme weather events, which threaten low-lying coastal settlements, critical coastal ecosystems, and small-scale traditional fisheries. TC Seroja in 2021 has caused severe impacts to coastal infrastructure, particularly Holulai and Fuafuni villages. Although Holulai and Oelua are relatively protected by patches of mangroves and seagrass beds, they are constantly impacted by erratic winds and oceanic waves because their village is facing directly toward the monsoon wind direction, amplifying the impacts. Although there are ongoing efforts to restore degraded mangrove and seagrass beds, the success rates are highly varied, and some are not successful because of failure to anticipate the aforementioned factors.
15. A major but often overlooked risk of climate change in Rote is the loss of traditional maritime culture, including gleaning (*makan meting*) and *Deak Batu* fish weirs in Fuafuni village. *Deak Batu*, a centuries-old method of sustainable fishing that relies on stone tidal traps, is embedded in Rote's cultural heritage and village coastal resource governance systems. However, multiple climate and socio-economic stressors threaten its continuation. The decline of seagrass beds and coral reefs—which support fish populations caught in these methods—reduces *Makan Meting* (gleaning) and *Deak Batu* ecological viability. Many forms of gleaning (i.e., *makan meting*) are common small-scale fisheries practices in Indonesia, which can provide accessible protein sources from seagrass-associated arthropods, bivalves, gastropods, and fishes, especially during the rough sea seasons. In a good day gleaning can yield as high as IDR 145,000, or equivalent to 20-25 kg of catches (around USD 10)—the value of catches that goes directly to the households.¹³ On the other hand, *Deak batu* is hardly documented, which makes them more susceptible to knowledge losses. Our interview indicated that in a good day, *Deak Batu* can yield up to 30 kg fish catches, for example *Sardinella* spp (local: Tembang), *Ariidae* family (Local: lele laut, catfish), and other opportunistic catches, like bigeye *Priacanthus macracanthus*.

Sabu Raijua

16. Sabu Raijua consists of Sabu Island, Raijua Island, and the uninhabited Rai Dana Island. With a total area of ca. 459.58 km² it is roughly only a third of the Rote Islands. The coastal areas of Sabu Raijua contain critical ecosystems like seagrass meadows, coral reefs, and patches of mangroves that provide food, protect shorelines, offer living spaces, and support livelihoods such as small-scale fisheries. Nine species of mangrove and eight species of seagrass can be found on this island^{14,15}, sustaining its local community's livelihood. Inland farming land in Sabu Island produces short-term crops such as rice, corn, and soybeans as well as longer-term products such as coconut, cashew nut, betel nut, and lontar. The island's relatively small size makes its ecosystem less resilient and more susceptible to any large-scale shocks, such as during TC Seroja. The island's hydrological system is much more vulnerable, prone to dry seasons and saline water intrusion.

¹¹ Kurniawan, F., Digdo A.A., et.al. 2024. First record of *Ruppia brevipedunculata* in Indonesia. *Aquatic Botany* 195 (2024) 103806. DOI: 10.1016/j.aquabot.2024.103806

¹² Hendrik, Arnold & Ndun, Alefane & Daud, Yanti. (2021). Keanekaragaman Dan Kelimpahan Jenis Teripang Di Pantai Landu, Pulau Landu, Kabupaten Rote Ndao. *Biocelbes*. 15. 30-40. 10.22487/bioceb.v15i1.15487.

¹³ Digdo, A.A. et al 2023 Humans and seagrass: a complex and intertwining links - an illustration from North Sulawesi, Indonesia *IOP Conf. Ser.: Earth Environ. Sci.* 1220 012027 DOI: 10.1088/1755-1315/1220/1/012027

¹⁴ Fakhurrozi et al., 2023. Community Structure and Health Conditions of Mangrove in Sabu Raijua. *Jurnal Biologi Tropis*, 23 (2): 105 – 111 DOI: <http://dx.doi.org/10.29303/jbt.v23i2.4626>

¹⁵ Silaban et al., Diversity of Seagrass Species in The Conservation Area of The Sawu Sea Marine National Park,. *Jurnal Biologi Tropis*, 23 (4): 323 – 329 DOI: <http://dx.doi.org/10.29303/jbt.v23i4.5268>

17. Water availability across the island is relatively limited, and thus only several areas are productive for croplands, such as paddy fields and horticulture gardens. Well-vegetated areas with complex canopies are restricted around areas with sufficient groundwater or surface streams. Logically, settlements are also located in these areas, where key elements of ecosystems can support livelihoods as well as accessibility. Some of these important settlement locations are located in the coastal area, such as in Mebba village.
18. Sabu Raijua also faces risks inland, particularly in its farmlands, many of which are located near the coast, such as in Limaggu village. These productive agricultural lands, crucial for growing staple crops, are increasingly exposed to saline water intrusion, flooding, and erosion caused by storm surges. Saltwater contamination of soil and freshwater sources reduces crop yields, making farming less viable and increasing food insecurity.
19. Sabu Raijua's geographic isolation exacerbates its vulnerabilities. Located in the middle of the Savu Sea, the regency is located far from major distribution and logistics centers, with limited transportation access to neighboring islands such as Timor, Rote, and Flores. Storms or high waves can disrupt ferry transportation, food supply chains, and essential goods and services, thereby exacerbating local challenges.

Community Livelihoods

20. The livelihood of coastal and small island communities in Rote and Sabu islands in the Savu Seascape depends on both coastal and marine ecosystem resources as well as agriculture activities. With a population of 143,764 in Rote (2021) and 43,984 in Sabu (2015), about 28% are poor families, respectively. Coastal communities in Rote and Sabu islands depend on small-scale fishery activities including seaweed managed via traditional wisdom and practices such as *Hoholok/Papadak* (traditional wisdom in utilizing natural resources), *makan meting* (gleaning on the coral reef flat area collecting small fishes and mollusks during low tide), and *Deak Batu* (traditional method of collecting fishes trapped by stone weirs on the coastal areas utilizing tidal force). Communities on the Rote and Sabu islands are also dependent on dry land agriculture practices. They utilize land for short and medium crops to fulfil their needs and supplement their family income. Communities utilize their land more intensively when they cannot go to the sea to fish due to bad weather.
21. Project interventions will be at Rote Ndao and Sabu Raijua Regency, and also at provincial level (NTT Province), as coastal and small islands as well as marine sectors are within coordination of the provincial government. The project will include 5 target coastal villages (3 villages in Rote Island and 2 villages in Sabu Island) to focus its activities at the community level. Selection of the target villages is based on coastal vulnerability and risk data and information, as well as based on coordination with the district government. In addition to the previously mentioned factors, we also consider the community supports, EbA actions suitability and urgency of actions, as well as the potential for replication and adoption beyond the project lifetime.
22. To understand the conditions in the project intervention areas, a specific analysis of the risks and vulnerabilities in the five villages based on the data from Government Agencies (Statistical Bureau, BPBD), Allen Coral Atlas Benthic Map, and direct observation is explained in Table 02 and the EbA measures in each targeted location, corresponding to specific vulnerabilities is explained in Table 03.

Table 02. Specific Risks for targeted villages (Processed from Statistical Bureau, BPBD, Allen Coral Atlas Benthic Map, direct observation)

Village	Specific Risks	Specific Vulnerabilities
Holulai, Rote Ndao	Seagrass and mangrove ecosystem damage Living space & infrastructure damage (boardwalk, jetty) Livelihood loss (gleaning/makan meting)	6 hectares of mixed ecosystem of seagrass and mangrove are heavily fragmented, caused by sand extraction, TC Seroja and unsuccessful rehabilitation in the past; 22 Households are living in the coastal zones and are prone to extreme oceanic weather; at least 35 households are specifically dependent on gleaning in the intertidal areas; 150 m of boardwalk jetty are prone to damage during extreme oceanic weather
Oelua, Rote Ndao	Seagrass and mangrove ecosystem damage Loss of Living space & infrastructure damage (boat anchoring & passage way) Livelihood loss (gleaning/makan meting)	10.5 hectares of mangroves are degraded, caused by wood extraction in the past and very slow to recover without systematic intervention; 33 households are living in the coastal zones and are prone to extreme oceanic weather and estuary surge; 45 households are specific small-scale fishermen and facultative gleaners; two boat anchoring zones and boat passageways are prone to damage from extreme oceanic weather.
Fuafuni, Rote Ndao	Seagrass & coral reefs damage Loss of maritime tradition (Deak Batu) Loss of livelihood (makan meting) Part of the village are small islands of Nusa Manuk, which are more susceptible to resource depletion	Four Ha of seagrass and coral reefs are degraded due to extreme Wheater and over fishing 16 households are living in an island, more susceptible to resource limitation and isolation, particularly during severe weather 25 households are specific small-scale fishermen, gleaners and implementor of Deak Batu Extreme oceanic weather is more likely to affect at least three Deak Batu locations. Simultaneously, the deak batu may become inefficient as a result of the declining seagrass and coral reef ecosystems.
Mebba, Sabu Raijua	Mangrove damage Loss of living space Loss of livelihood (makan meting, crab harvesting)	30 households are dependent on 7 ha of mangrove for living space, protection, and gleaning, while 1.2 ha are degraded. Two important infrastructures: mangrove boardwalk and an ecosystem information & education center, are located in the area
Limaggu, Sabu Raijua	Coastal vegetation, seagrass & coral reef damage Loss of productive farmland due to saline water surge/intrusion	11 ha of productive farmlands, managed by 20 households, are located less than 350 m from the coastline, prone to saline water intrusion; 533 m of the farmlands directly face the coast, where they are subject to oceanic weather.

Table 03. EbA measures in the each targeted location, corresponding to specific vulnerabilities

Village	Specific Vulnerabilities	EbA Measures
Holulai, Rote Ndao	6 hectares of mixed ecosystem of seagrass and mangrove are heavily fragmented, caused by sand extraction, TC Seroja and unsuccessful rehabilitation in the past 22 Households are living in the	Seagrass and mangrove rehabilitation assisted with the Building with Nature approach: constructing sediment traps and wave protection using bamboo and nypa leaves/barks to minimize loss and damage by severe weather events; a seagrass nursery for vegetative propagation and preparation; and a mangrove nursery ground to prepare propagules before planting in the rehabilitation areas.

Village	Specific Vulnerabilities	EbA Measures
	coastal zones and are prone to extreme oceanic weather; at least 35 individuals are specifically dependent on gleaning in the intertidal areas 150 m of boardwalk jetty are prone to damage during extreme oceanic weather	Use of local seagrass species, mainly <i>Enhalus acoroides</i> , <i>Thalassia hemprichii</i> , <i>Cymodocea rotundata</i> . Use of local mangrove species, mainly <i>Rhizophora apiculata</i> , <i>R mucronata</i> , <i>R stylosa</i> and <i>Sonneratia alba</i>
Oelua, Rote Ndao	10.5 hectares of mangroves are degraded, caused by wood extraction in the past and very slow to recover without systematic intervention 33 households are living in the coastal zones and are prone to extreme oceanic weather 45 households are specific small-scale fishermen and facultative gleaners. two boat anchoring zones and boat passageways are prone to damage from extreme oceanic weather	Mangrove rehabilitation assisted with Building with Nature approach at critical areas: constructing sediment traps; nursery ground to prepare propagules before planting in the rehabilitation areas. Rehabilitation of landward areas that are occasionally inundated by saline water during storm surge and river swell, such as <i>nypa</i> and <i>lontar</i> . Use of local mangrove species, mainly <i>Rhizophora apiculata</i> , <i>R stylosa</i> , <i>Sonneratia alba</i> , <i>S caseolaris</i> , and <i>Ceriops decandra</i> . Implement climate-smart agriculture by promoting the use of the BMKG app to get better predictions of seasonal patterns and anticipate extreme weather . Field School Program to facilitate community capacity building process.
Fuafuni, Rote Ndao	16 households are living on an island, more susceptible to resource limitation and isolation, particularly during severe weather. 25 households are specific small-scale fishermen, gleaners and operate Deak Batu fish weirs in the mainland Extreme oceanic weather is more likely to affect at least four Deak Batu locations. Simultaneously, the deak batu may become inefficient as a result of the declining seagrass and coral reef ecosystems.	Establish a temporary closure (TC) LMMA marine area combined with a minimum size limitation agreement, targeting sea cucumbers to sustain abundance and growth in the seagrass ecosystem around Nusa Manuk. A semi-annual opening cycle will enable the sea cucumber to grow bigger and give it a better chances to multiply. Establish units of spiderframe coral rehabilitation frame at the seaward side of Deak Batu at ca 8-10 m under the sea surface to minimize risk of bleaching during SST anomaly, especially during ENSO event. Sea cucumbers species selected for the TC area: <i>Holothuria scabra</i> (most abundant in the area), <i>H arata</i> and <i>Bohadschia marmorata</i> Collect living coral fragments from healthy corals in or around the Savu Sea NP using the coral propagation protocol to minimize damage. Implement climate-smart agriculture by promoting the use of the BMKG app to get better predictions of seasonal patterns and anticipate extreme weather .

Village	Specific Vulnerabilities	EbA Measures
		Field School Program to facilitate community capacity building process.
Mebba, Sabu Raijua	30 households are dependent on 7 ha of mangrove for living space, protection, and gleaning, while 1.2 ha are degraded. Two important infrastructures: mangrove boardwalk and an Ecotourism information & education center, are located in the area	Mangrove rehabilitation assisted with Building with Nature approach at critical areas: constructing sediment traps; nursery ground to prepare propagules or seedlings before planting in the rehabilitation areas. Use of local mangrove species for mangrove rehabilitation, such as <i>Rhizophora apiculata</i>, <i>R mucronata</i>, <i>Sonneratia caseolaris</i>, <i>Ceriops tagal</i>, <i>Xylocarpus rumphii</i>, <i>Lumnitzera racemosa</i> Develop a mangrove crab <i>Scylla serrata</i> (local species) fishery to provide alternate livelihoods. Using semi-natural methods, like attracting young crabs and encouraging growth by improving food and water flow and keeping them from eating each other or being eaten by other animals, will be done by putting culture baskets or cages in mangrove areas. Use mangrove boardwalk and Ecotourism information & education center located there to boost awareness and capacity building for locals, particularly youth. Implement climate-smart agriculture by promoting the use of the BMKG app to get better predictions of seasonal patterns and anticipate extreme weather Field School Program to facilitate community capacity building process
Limaggu, Sabu Raijua	11 ha of productive farmlands, managed by 20 households, are located less than 350 m from the coastline, prone to saline water intrusion; 533 m of the farmlands directly face the coast, where they are subject to oceanic weather. At least two spring waters are located less than 1 km from the coastline	Develop and strengthen vegetation barriers using saline-tolerant and drought-tolerant vegetation species. Local species like <i>Arenga pinnata</i>, <i>Borassus flabellifer</i>, and <i>Pandanus fascicularis</i> are ideal for coastal barriers because these species are culturally significant and also sources for sugar, vinegar, food ingredients, and materials. the use of composting to improve productivity and improve water-resilient agriculture practices. Improve vegetation at riparian areas around springs and fresh reservoirs to improve water retention and prevent surface erosion. Implement climate-smart agriculture by promoting the use of the BMKG app to get better predictions of seasonal patterns and anticipate extreme weather. Field School Program to facilitate community capacity building process.

Underlying Causes and Barriers to Improve Climate Resilience in Rote and Sabu Coastal Areas

23. Climate vulnerability of the coastal and small islands of Rote and Sabu in the Savu Sea depends on adaptive capacity and sensitivity of the socio-ecological system¹⁶. YAPEKA and its consortium have worked in NTT since 2015, particularly at Rote Ndao and Sabu Raijua since 2020, where interventions have been focused on climate change-related topics. In these areas, YAPEKA has been focused on small island scenarios, where coastal and terrestrial landscape-seascapes are inseparable. Below are some factors influencing adaptive capacity and sensitivity of socio-economic systems in Rote and Sabu islands that have been identified that will be addressed in this project proposal:
24. **Limited capacity of local governments and coastal communities to make informed decisions about climate change-driven hazards affecting their specific locations.** Although some data and information on climate risks and vulnerability are available, these data are not detailed and specific to the islands. The government of Indonesia developed baseline data on a Coastal Vulnerability Index (CVI) at the national scale along the coastline of islands in the Coral Triangle in 2018. However, the CVI data did not indicate any significant changes during 2020-2030 and 2030-2045 due to limited and insufficiently detailed data as well as limited modelling analysis¹⁷. TC Seroja demonstrated that physical damage to coastal reefs and other associated ecosystems could indeed occur, which potentially changes the coastal vulnerability index and therefore there is a need to generate up-to-date coastal vulnerability data particularly in association with tropical cyclones which may occur more often in the Savu seascape. Poor knowledge management on climate vulnerability and risks, as well as knowledge on adaptation measures, also becomes a challenge for the local government and coastal communities in improving climate adaptive capacity of the socio-ecological systems.
25. **Degrading conditions of coastal ecosystems after the TC Seroja.** The TC Seroja has significant physical impact on the coral reefs in the coastal areas of Rote and Sabu islands¹⁸. New uplifted, exposed reefs were caused by TC's strong waves that lifted coral reef flats along the coast of Rote and Sabu. The damage to coral reefs and associated ecosystems can reduce adaptive capacity and increase sensitivity and resilience to future climate change. Therefore, coastal ecosystem rehabilitation is urgently required to improve climate resilience of these ecosystems. Ecosystem-based Adaptation (EbA) is one of the options that can improve adaptive capacity and can also help to reduce future climate hazards.
26. **Limited knowledge and practices of sustainable livelihood options.** Most coastal communities depend on small-scale fishery (SSF) for their livelihood with limited knowledge to sustainably manage and develop their businesses as well as develop other sustainable livelihood options, which can decrease their social system's long-term resilience. This project will support the development of livelihoods and community enterprises to improve sustainable livelihood opportunities and reduce the degradation pressure on coastal ecosystems.
27. **Limited coastal and marine ecosystem service management practices.** Although large parts of the coastal and marine systems of Rote and Sabu are managed as a Marine National Park, the extensive area of the marine national park (around 3.5 million Ha) and limited resources of the marine park authority have resulted in limited coastal and marine ecosystem service management efforts. At the

¹⁶ Whitney, C. K., N. J. Bennett, N. C. Ban, E. H. Allison, D. Armitage, J. L. Blythe, J. M. Burt, W. Cheung, E. M. Finkbeiner, M. Kaplan-Hallam, I. Perry, N. J. Turner, and L. Yumagulova. 2017. Adaptive capacity: from assessment to action in coastal social-ecological systems. *Ecology and Society* 22(2):22.

¹⁷ Ditjen PPI KLHK. 2021. Profil Kerentanan Perubahan Iklim Kawasan Segitiga Karang Indonesia.

¹⁸ BKKPN Kupang. 2021. Coral Reef Condition Survey in TNP Laut Sawu.

local level, the marine fishery as well as forestry sectors are also currently managed and coordinated under the provincial government, with very limited management authority at district level. These sectors and governance layers are often disconnected. At the village/community level, some local community groups have traditional wisdom to manage their coastal and marine resources. We envision the project will be in a position to improve coordination and information connectivity between layers of governance and improve the climate adaptation decision-making process, connecting communities of practices and wisdom to policy makers at each layer. These complexities of coastal and marine management systems require an integrated coastal and marine management (ICM) approach to improve adaptive capacity and climate resilience. At the provincial level a multi stakeholder forum (the Council on Marine Conservation of NTT Province [DKPP NTT]) has been formed to strengthen stakeholder involvement and vertical and horizontal integration among (national, regional and local) authorities, and this is already an aspect of the ICM process.

28. **Limited capacity of the local and village governments to reduce risks associated with climate-induced socio-economic and environmental losses.** This is reflected in the lack of adaptation action plans and climate adaptation measures implemented by local and village governments. Climate adaptation is also not sufficiently addressed by the local government's policies and development plans. Another challenge in implementing climate adaptation activities is the lack of local government and village capacity to allocate budgets for climate adaptation measures. The Covid-19 pandemic also shifted the allocation of the provincial, district and village budgets toward the health sector in the last two years. Based on the findings from consultations with the local government and the Directorate General of PPI, there is a need to find opportunities to close this financial support gap through alternative funding, including the Ecological Fiscal Transfer (EFT) mechanism.

Ecosystem-based Adaptation

29. Indonesia's commitment to climate adaptation is to increase economic resilience, social and livelihood resilience, as well as ecosystem and landscape resilience. This commitment is then translated into a viable concept in the NDC Roadmap on Adaptation (2020). One of Indonesia's Long-Term Strategy for Low Carbon and Climate Resilience (LTS-LCCR) key programs and actions is in the field of ecosystem which In ecosystem management, it is directed at air space, terrestrial, freshwater as well as coastal and marine ecosystems so that it can build eco-climate zoning for managing ecosystem functions and services, pursue Ecosystem-based Adaptation (EbA), and include public participation in sustainable ecosystem management¹⁹
30. Ecosystem-based Adaptation (EbA) is a nature-based solution that harnesses biodiversity and ecosystem services to reduce vulnerability and build resilience to climate change²⁰. It involves the conservation and restoration of natural ecosystems to maintain their ability to provide ecosystem services, such as water regulation, soil conservation, and climate regulation, which are essential for human well-being and adaptation to climate change. In the case of coastal and small islands in Sabu and Rote islands in Nusa Tenggara Timur (NTT) province, EbA can play a crucial role in improving their resilience by restoring and protecting coastal ecosystems such as mangroves, seagrasses, and coral reefs. These ecosystems act as natural barriers, reducing the intensity of waves, stabilizing shorelines, and buffering against the impacts of storm events. By enhancing the health and extent of these ecosystems, EbA contributes to improved coastal protection and resilience. EbA approaches can also help improve the sustainability and resiliency of fisheries by restoring and conserving critical fish

¹⁹ Adaptation Communication, Directorate General of Climate Change, Ministry of Environment and Forestry, Republic of Indonesia, October 2022.

²⁰ IUCN. 2017. IUCN issues brief: Ecosystem-based Adaptation.

habitats, such as seagrass beds and coral reefs. Protecting and managing these ecosystems ensures the long-term availability of fish stocks, maintaining the livelihoods of fishing communities and promoting food security. In addition, EbA can also contribute to improved water resource management by conserving and restoring watershed ecosystems and can support climate-smart agricultural practices that integrate ecosystem management and sustainable land use.

31. One of the key lessons from the ecosystem-based adaptation (EbA) approach in the Savu Sea National Park (NP) is the importance of integrating climate resilience strategies into coastal and marine resource management. The project demonstrated that restoring coastal ecosystems—such as seagrass beds, coral reefs, and mangroves—enhances both biodiversity and the adaptive capacity of local communities. However, these efforts must be complemented by sustainable livelihood programs, such as community-based ecotourism and low-impact fisheries, to reduce dependency on extractive practices. The initiative also underscored the significance of empowering multi-stakeholder platforms to ensure that conservation and climate adaptation policies are implemented effectively, with active involvement from local governments, marine protected area managers, and indigenous communities.

Results from the previous Indonesia Climate Change Trust Fund (ICCTF) project, 2020-2023

32. With support from ICCTF, the project has carried out activities related to the sustainable community management of marine protected area in the Savu Sera and achieved important results, such as series of training modules, ecotourism investment study document, ecotourism policy brief document, and SOP document for marine ecotourism. These documents have been used to train 19 certified tour guides in six tourism management groups supported by ecotourism infrastructure. At the community level, the project have facilitated seven villages to implement sustainable fisheries activities and renewable energy, implemented by 22 households and 40 trained community cadres..
33. The project is also fully supported by BKKPN Kupang, BAPPENAS, East Nusa Tenggara Provincial, District and Village Government, including the target beneficiaries. And also, the infrastructure built from this project (such as ecotourism infrastructure) was optimized for activities at the local level. The results from the ICCTF project previously were the foundation for scaling up and further prepare and improve coastal communities resilience.

Results from the ADAPTASI Consortium (2021- March 2025)

34. As a consortium member, YAPEKA has produced several important achievements in Rote Ndao in the program of amplifying voices for just climate actions. This project advocated coastal community rights to be empowered inclusively in climate change adaptation and mitigation. These approaches included supporting recognition process of traditional ecological knowledge both in terrestrial and coastal areas (*hohorok papadak*), and commitment of local governments to take sides on climate issues by budgeting funds for these activities.
35. As the follow-up to the commitment to climate change issues, the government has issued policies, including the Decree of the Rote Ndao Regent on the implementation team and secretariat of greenhouse gas emission control, mitigation, and adaptation to climate change activities; and the East Nusa Tenggara Governor Decree on the climate change working group. In addition, BKKPN Kupang is also committed to following up on the achievements from the previous project. The achievements are the fundamental capital to continue scaling up process and creating more robust connectivity between community and government layers.

Results from the Lifuleo Community-Based Coral Restoration Project (Blue Partnership Action Fund) (April 2023-December 2024)

36. The project in Lifuleo related to empowering the local communities in coral reef restoration and the achievements from this project, including installing 50 spider-web units and 30 bio-reef tech units in 1 hectare of Lifuleo waters. From this project, at least 20 people, who are representatives from communities, local government, tourism management group, BKKPN, DKP KCD, and NGOs, have been trained related to the coral reef restoration and monitoring, improved the capacity, produced training modules, and supported village regulation related to the coral reef restoration. Intervention has been tested, tried out, and has succeeded in its benefits to the coral reef ecosystem's structural diversity and complexity, and in increasing recruitment and settlement of reef-building organisms. A specific strategy for installing the spider-frame at 8-10 m depth was an effective measure to minimize coral bleaching during ENSO at the end of 2024.

Key lessons learned from the previous projects as fundamental ground for the next Ecosystem-based Adaptation steps.

37. One of the key lessons from the ICCTF project approach in the Savu Sea is the importance of integrating climate resilience strategies into coastal and marine resource management. The project demonstrated that restoring coastal ecosystems—such as seagrass beds, coral reefs, and mangroves—enhances both biodiversity and the adaptive capacity of local communities, showing an intertwined social-ecological system. As a consequence, these efforts must be complemented by sustainable livelihood programs, such as community-based ecotourism and low-impact, small-scale fisheries, to reduce singular dependency on extractive practices, which might fundamentally deteriorate the social-ecological dynamics. This was unfortunately proven true when TC Seroja hit in 2021, it changed dramatically the local ecosystem's characteristics and, in some cases, crippled the coastal livelihood - at least for a period of time. The project also outlined the significance of empowering multi-stakeholder platforms to ensure that conservation and climate adaptation policies are implemented effectively, with active involvement from different levels of local governments, marine protected area managers, and local communities. The experience from the EbA projects in Savu Sea Marine National Park, particularly in Rote Ndao and Sabu Raijua, emphasizes the importance of an integrated social-ecological approach that fits climate resilience with local characteristics, one of them are the sustainable livelihoods. The ICCTF initiative underlined how community-driven economic diversification must complement efforts at ecosystem restoration—in mangroves, coral reefs, or seagrass—to help against environmental shocks like TC Seroja. Moreover, managing complex seascapes depends on adaptive governance to ensure that environmental policies and regulations are sensitive to local climate hazards and deeply embedded within more general coastal/marine spatial planning. While multi-stakeholder cooperation remains essential for effective implementation, financial systems such as PES, EFT and blue carbon initiatives should be investigated to improve sustainability.
38. Lessons learned that effective climate adaptation in Indonesia requires localized, ecosystem-based approaches that align with community needs, instead of top-down, homogenous program approach. The initiative in Nusa Tenggara Timur (NTT) highlights that climate resilience is best achieved when adaptation strategies are rooted in local knowledge and traditions linked with social-ecological characteristics. Community involvement in decision-making, particularly in coastal and agroforestry-dependent villages, ensures that adaptation measures are practical and culturally relevant. Strengthening locally-led initiatives, multi-stakeholder collaboration, including local governments and NGOs, has been essential in integrating adaptation into regional planning. Another critical lesson is that capacity-building efforts must go beyond technical training; they need to foster long-term

knowledge, behavioral, and policy changes both at the personal level and at the collective level. While equipping local communities with climate adaptation skills is vital, enabling them to access financial resources and policy support is important. The project has shown that small-scale, ecosystem-based adaptation—such as improved watershed management, sustainable fisheries, and agroforestry—can have significant impacts when combined with strong, cross-scale and cross-sector governance frameworks. Adaptive governance, which allows flexibility in response to increasing climate risks, has proven to be a key success factor. The next EbA project should give locally-led adaptation solutions that combine modern conservation techniques with traditional ecological knowledge top priority. Therefore, EbA activities can be diverse although it is imperative to maintain coherence in term of developing resilience.

39. The ADAPTASI Consortium and Lifuleo coral restoration projects showed that capacity-building initiatives have to go beyond just technical ability to incorporate long-term policy involvement, financial access, and behavioral changes. Scaling up effective initiatives will depend critically on knowledge-sharing platforms, cross-sector cooperation, and adaptive governance structures, including use of local knowledge as well as locally-available resources. Furthermore, by means of inclusive discussions and stakeholder collaborations, integrating seamless climate adaptation into local and regional policies will help to ensure that efforts toward resilience-building are not only prolonged but also institutionalized for long-term impact. Establishing partnerships with local governments and agencies, including BKKPN Kupang as the Savu Sea NP Management Authority, was essential in embedding restoration efforts into broader marine conservation policies and ensuring long-term support. Lastly, this initiative underscored the value of knowledge exchange and capacity building as fundamental drivers of success. Training local stakeholders in coral propagation and monitoring not only built technical skills but also empowered them as active contributors to marine conservation. The experience from Lifuleo reinforces that community-based restoration projects should go beyond infrastructure deployment; they must foster continuous learning, collaboration, and policy integration to create lasting environmental and social impacts.

40. **Project/Programme Objectives** Objectives of this project are designed based on the General Climate Impact Chain Model for Savu Sea Seascape (Figure 05) and consist of three project components:

1. **Project Component 1: Strengthening ability of coastal communities to make informed decisions about actions to respond to climate change- driven hazards and impacts.** This objective is aligned with the Adaptation Fund (AF) Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at the local level.
2. **Improved adaptive capacity of coastal socio-ecological systems to withstand extreme weather and climate.** This objective is aligned with the AF Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress, and AF Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in the target area.
3. **Strengthened institutional capacity to reduce risks associated with climate-induced socio economic and environmental losses.** This objective is aligned with the AF Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.

41. Below is the Theory of Change for the Project and alignment of the project objectives with the Adaptation Fund Result Framework at the outcome level as indicated by brown boxes on the top of ToC:

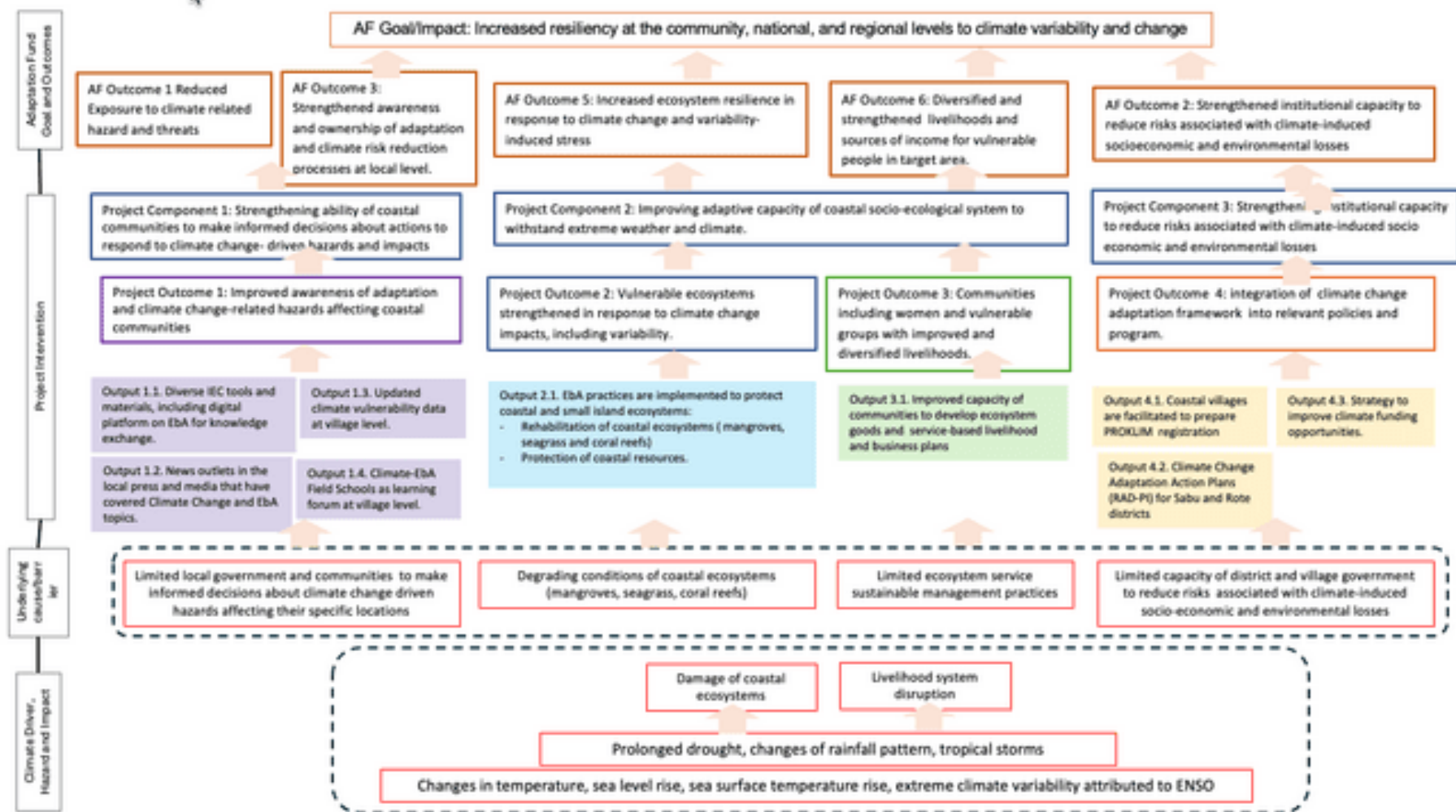


Figure 09. The Theory of Change (TOC)

Project/Programme Components and Financing:

Table 04. Project Components Outcomes, Outputs and Budget

Project/ Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Knowledge Management.	● Output 1.1. Diverse IEC tools and channels, including digital platform on EbA for knowledge exchange. ● Output 1.2. News outlets in the local press and media that have covered Climate Change and EbA topics. ● Output 1.3. Updated climate vulnerability data at village level. ● Output 1.4. Climate-EbA Field Schools as a learning forum at village level.	Project Outcome 1: Improved awareness of adaptation and climate change-related hazards affecting coastal communities	USD 135,229.
2. Ecosystem-based Adaptation and Livelihood.	● Output 2.1. EbA practices are implemented to protect coastal and small island ecosystems., including coastal, benthic and water ecosystems.	Project Outcome 2: Vulnerable ecosystems strengthened in response to climate change impacts, including variability.	USD 281,405.
	● Output 3.1. Improved capacity of communities to develop ecosystem goods and service based (EG&S) livelihood and business plans.	Project Outcome 3: Communities including women and vulnerable groups with improved and diversified livelihoods.	USD 109,574.
3. Institution and Governance	● Output 4.1. Coastal villages are registered to PROKLIM program. ● Output 4.2. Climate change Adaptation PLans (RAD API for Sabu Raijua and Rote Ndao districts.SOutput 4.3. Strategy to improve climate resilience funding opportunities for the local and village governments.	Project Outcome 4: integration of climate change adaptation framework into relevant policies.	USD 304.856

Project/ Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
4. Implementing Entity Activities	Kick off meeting, Quarterly Monitoring, Expertise, Audit, Seminars,etc.		USD 78.056
5. Project Execution cost			USD87.239
6. Total Project/Programme Cost			USD 831.064
7. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			-
Amount of Financing Requested			USD 996,358

Project/Programme Components and Financing:

Table 05. Projected Calendar:

Milestones	Expected Dates
Start of Project/Programme Implementation	October 2025
Mid-term Review (if planned)	September 2026
Project/Programme Closing	September 2027
Terminal Evaluation	September 2027

PART II: PROJECT/PROGRAMME JUSTIFICATION

II. A. Project Components

Project Component 1: Strengthening ability of coastal communities to make informed decisions about actions to respond to climate change- driven hazards and impacts.

42. This component is aligned with the Adaptation Fund Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at the local level.

43. The project outcome that is expected to be achieved under this component is:

Project Outcome 1: Improved awareness of adaptation and climate change-related hazards affecting coastal communities, that is aligned with the Adaptation Fund Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities.

44. Project outputs and activities under this component will also mainstream ecosystem-based climate change adaptation to local governance through improving knowledge, awareness and practices of local communities in adapting to impacts of climate change. Co-creation approach will be used to implement activities and achieve the outputs. Positioning community as key partner we will facilitate co-creation approach which will include co-design, co-production and co-dissemination of the knowledge being produced throughout the Outcomes 1 and may also benefits Outcomes 2 and 3.

45. The project outputs will include:

1) Output 1.1. Diverse Information Education and Communication (IEC) tools and materials including digital platform on EbA for knowledge exchange. The IEC materials will address climate change issues including community preparedness for climate-driven hazards such as tropical cyclones and how to initiate, implement participative EbA practices, as well as gender and social inclusion issues related to climate change adaptation. This output will be achieved by conducting the following activities:

- **Activity 1.1.1. Conduct Knowledge Attitude Practices (KAP) baseline survey, and endline surveys.** KAP survey is a quantitative method used to gauge what people know about a certain concept or problem, how they perceive it, and how they deal with it. It helps to measure the extent of a known situation, confirm, or disprove a hypothesis, provide new insights into a situation's reality, and establish a baseline for use in future assessments. KAP survey will be conducted in five target villages as well as two control villages in Sabu and Rote. KAP Survey baseline result will be particularly used as inputs in developing communication and awareness strategy as well as in developing capacity building strategy to implement EbA and climate change in general; while KAP endline survey will provide inputs for evaluation of the project. KAP survey will be conducted by a KAP Survey consultant in coordination with the M&E Manager.

- **Activity 1.1.2. Develop a communication and awareness strategy to implement EbA that considers gender and social inclusions.** The project will recruit an expert on Communication Strategy/Communication Specialist to prepare the strategy for communication through an inception workshop participated by relevant stakeholders, guided by co-creation approach. Role of the community as an equal partner in this process is essential, to provide with more in-depth, first hand understanding about gender and social inclusion in climate change context. This document also includes

protocol to measure knowledge exchange during communication and awareness events. For example: pre and post-test that fits into the Knowledge Management Specialist.

- **Activity 1.1.3. Design and production of IEC materials including but not limited to posters, digital content, calendar, and project merchandise.** The IEC materials will address climate change issues including community preparedness for tropical cyclones and EbA practices, as well as gender and social inclusion issues related to climate change. IEC materials will be disseminated during training and workshops, media trips, and other project activities. Target group of disseminating the IEC materials will include government officials, local community groups (such as POKDARWIS, women's groups) at target villages. A communication officer will be hired to be responsible in designing and producing the IEC materials with technical inputs from other experts by implementing co-creation approach.

- **Activity 1.1.4. Design and production of a Guide to EbA Practices for Coastal and Small Islands.** The Guidebook will be targeted for local communities in implementing EbA practices especially for coastal and small islands. The communication officer will work with EbA experts and local community representatives in developing the Guide to EbA Practices for Coastal and Small Islands.

2) Output 1.2. News outlets in the local press and media that have covered Climate Change and EbA topics. This output will be achieved by conducting the following activities:

- **Activity 1.2.1. Facilitate media trips to cover climate issues, inclusive EbA implementation, livelihood activities, local leadership, and the role of women and vulnerable groups in responding to climate change in Rote and Sabu Islands.** This activity will be coordinated by the Communication Specialist with supports from local champions and participated by journalists and influencers at national and local levels. The project will prepare a press release to focus the media coverage. Media coverage will be channeled through various social media channels including Instagram, Tik-Tok, and Facebook and other media mainstreams.

3) Output 1.3. Updated climate vulnerability data at village level, which include assessment of vulnerability and developing adaptation strategies that take into account the specific needs and circumstances of communities potentially affected by cyclones. The project will produce updated climate vulnerability data at the five villages by conducting the following activities:

- **Activity 1.3.1. Conduct Participatory Action Research (PAR) on coastal vulnerability associated with TC in Rote and Sabu.** The PAR will be conducted by experts/consultants at target villages involving women and other vulnerable groups, village and local government, academia including experts from the Center of Transdisciplinary and Sustainability Science-IPB University (CTSS-IPB), and other stakeholders. A climate vulnerability assessment at the village level can provide valuable insights for decision-makers, community members, and stakeholders to understand and address the specific climate risks and vulnerabilities faced by the village. This assessment can guide the development of effective adaptation strategies and actions to enhance resilience and build a sustainable future.

4) Output 1.4. Climate-EbA Field Schools as a learning forum at five target villages. The field schools will be a learning forum for other coastal PROKLIM villages on how to implement EbA practices as well as creating emergency plans during storm surges. To establish the field schools as the learning forum, the project will conduct the following activities:

- **Activity 1.4.1. Develop training modules on EbA practices for coastal communities.** The training modules will include but not limited to mangrove restoration, coral reef restoration, and water resource protection. Experts from local universities will be

involved in preparing the training modules coordinated by a training specialist hired for the project.

- **Activity 1.4.2. Conduct a series of training on climate-EbA for community groups at village level, including women and vulnerable groups to improve their knowledge and skills on climate and implementation of EbA approach and practices.** The field school materials cover the principles and practices of EbA, including the sustainable management, conservation, and restoration of biodiversity and ecosystems to enhance resilience to climate-related risks. The training series will be organized by the project Community Organizers (CO) and involve trainers from local universities as well as the local agency of disaster management. The COs will be working at village level in coordination with the village government.
- **Activity 1.4.3. Provide supporting equipment for learning purposes in the field schools, such as, in focus projector, whiteboard, binoculars, etc.** The Community Organizers will identify equipment required in the field schools for the learning purposes. These equipment will be handed over to the village government to be used for the field schools.

Project Component 2: Improving adaptive capacity of coastal socio-ecological systems to withstand extreme weather and climate.

46. This project component will be aligned with the **Adaptation Fund AF Outcome 5: Increased ecosystem resilience in response to climate change and variability- induced stress, and Adaptation Fund Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in target areas.**

47. Two project outcomes are expected to be achieved under this component:

- **Project Outcome 2: Vulnerable ecosystems strengthened in response to climate change impacts, including variability,** that is aligned with the **Adaptation Fund Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability.**
- **Project Outcome 3: Communities including women and vulnerable groups with improved and diversified livelihoods,** that is aligned with the **Adaptation Fund Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability.**

48. Project activities and outputs under this component are also expected to mainstream EbA and sustainable livelihood practices at village level that will support improvement of adaptive capacity of socio-ecological systems. The project activities will be targeted to protect and rehabilitate coastal ecosystems and to improve local community groups in developing alternative livelihood. Inclusive and meaningful participation of the local communities, including women and vulnerable groups will become important parts of the activities adhering to ESMP, SGIP (Annex 2, Annex 4) document prepared. Community facilitators will be mobilized to facilitate the process and ensure inclusive meaningful, just process is implemented.

49. To strengthen vulnerable coastal ecosystems in response to climate change impacts (Outcome 2), the project will produce outputs to reduce specific climate vulnerabilities at each targeted village ecologically and socially. Table 02, Table 03 provide detailed information of specific EbA approach implemented to respond specific vulnerability and target groups. EbA activities being proposed are selected activities that have been consulted to stakeholders during project preparation stage,

maximizing local components, local human resources and avoiding grey infrastructure (i.e concrete seawall), modular and small-scale to facilitate easier replication. Most of the components can be absorbed back to the ecosystem through decomposition and/or oxidation.

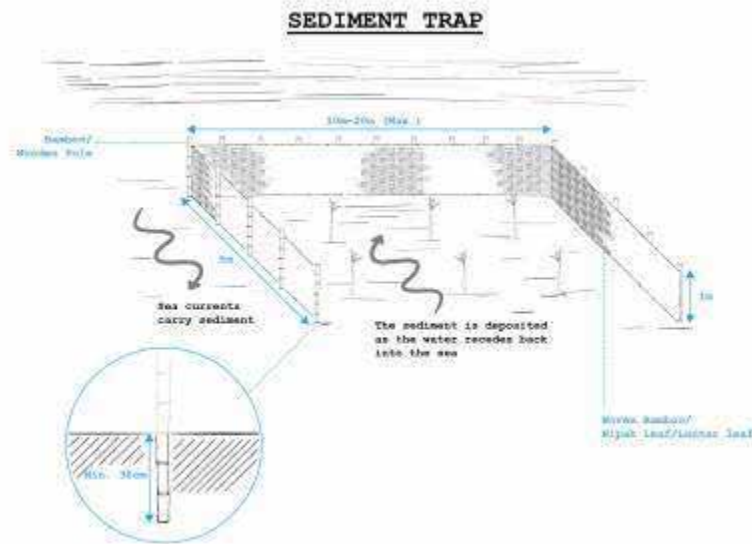


Figure 10. Design of sediment trap to stabilize seedlings avoiding destructive power of oceanic waves. All materials are abundant locally, mostly bamboos and nypa. Effective up to 3-4 years and easily decompose absorbed by ecosystem afterwards.



Figure 11. Simple and effective spider frame structure for coral rehabilitation. Man and woman can participate in the process using locally sourced materials.



Figure 12. Spider frame with thriving branching coral *Acropora* in just 12 months after installation. Photo from other YAPEKA's project north of Rote Island. Positioned in 10 m depth, it can tolerate the 2023-2024 ENSO. An instrumental EbA implementation strategy that can be replicated in this project. Note that the frame already covered with algae and sponges, eventually the frame will be “disappeared”, oxidized and become part of the ecosystem.

50. Output 2.1. EbA practices are implemented to protect and rehabilitate coastal and small island ecosystems: - **Rehabilitation of coastal ecosystems (mangroves, seagrass and coral reefs), - Protection of coastal resources.** This output will be achieved by conducting the following activities:
- **Activity 2.1.1. Conduct Project Inception Workshop and Mid-term Evaluation Workshop to collect inputs and reviews from project stakeholders (national, provincial and district government, local universities, local NGOs, and media) on project implementation plans.** The workshop will be conducted at Provincial level.
 - **Activity 2.1.2. Conduct Free, Prior, and Informed Consent (FPIC) and EbA implementation planning in target villages in Rote and Sabu in five target villages.** The community organizers (COs) will facilitate the FPIC process as well as the EbA implementation planning at target villages. EbA experts will be responsible for providing technical inputs in developing EbA implementation plan. The EbA implementation plan will identify EbA approach and methodology, feasibility, and stakeholders, and timeframe of EbA implementation. FPIC and EbA implementation planning activity will include coordination with village government as well as FGDs at village level participated by inclusive community members, including women, elder people, disabled and youth groups.
 - **Activity 2.1.3. Implement EbA practices (rehabilitation and conservation) in five villages: Mebba, Limaggu, Holulai, Oelua and Fuafuni villages (see Table 03).** This activity will be implemented based on EbA implementation plan at each target villages, including but not limited to: Mangrove, coral reef and seagrass rehabilitation, water resource protection and setting local conservation area through Locally Managed Marine Area (LMMA)²¹. LMMA activity will include FGDs at target villages and will revitalize existing customary laws for coastal ecosystem protection measures (such as revitalization of Deak Batu). Community

²¹ Govan, H. et al. (2008). Locally Managed Marine Areas: A guide for practitioners. *The Locally Managed Marine Area Network*. p. 2

organizers will be recruited to facilitate the implementation of EbA practices by community groups, in coordination with the village government and the EbA experts.

Table 06. EbA - Protection and Rehabilitation of Coastal Ecosystems.

Village	EbA Sub Activity	Note	Specific target beneficiaries.
Holulai, Rote Ndao	a. Construction of sediment trap/permeable dam units in front of mangrove and seagrass areas along the coast (300 m in total)	14 units of sediment traps for mangrove modular (Each unit of sediment trap has a dimension of 20m length x 5m width x 1 m height) 14 units of sediment traps for seagrass modular (each unit has dimension of 20m length x 5m width x 0,5m height). Environmental and Social Safeguards as well as DED of the construction sediment trap will be prepared by experts prior to the construction activity. Construction of sediment traps will involve local labors/community groups.	22 households in the coastal zones and are prone to extreme oceanic weather; at least 35 households dependent on gleaning in the intertidal areas; Village government.
	b. Mangrove planting in an indicative mangrove rehabilitation area (3 Ha).	Mangrove planting will use mangrove enrichment methods (3,000 trees/Ha) using <i>Rhizophora apiculata</i> , <i>R mucronata</i> , <i>R stylosa</i> and <i>Sonneratia alba</i> species. Mangrove seedlings will be supplied from Oelua mangrove nursery. Mangrove planting will involve local labors/communities.	
	c. Seagrass rehabilitation/replanting	Seagrass replanting will be implemented in 300-meter coastline adjacent to the mangrove restoration site. Species list: <i>Enhalus acoroides</i> , <i>Thalassia hemprichii</i> , <i>Cymodocea rotundata</i> . Seagrass replanting will involve local communities.	
	d. Enactment of village regulation on protection and rehabilitation of coastal ecosystems	The village regulation will protect 18 Ha of coastal ecosystems (mangrove and associated ecosystems) and as. This activity will include a series of village meetings/FGD and legal drafting of the regulation, and will be conducted in coordination with village and district governments.	

Village	EbA Sub Activity	Note	Specific target beneficiaries.
Oelua, Rote Ndao	a. Construction of one mangrove tree nursery. also supplying Holulai.	Mangrove nursery will consist of 5 seedbeds (1.5m x 10 m; 2,500 polybags/seedbeds) that will be maintained by a local community group. The tree nursery will supply mangrove seedlings for Holulai village as well.	33 households in the coastal zones prone to extreme oceanic weather and estuary surge; 45 households are specific small-scale fishermen and facultative gleaners; Village government.
	b. Mangrove planting	Planting mangrove seedlings (2 Ha) at mangrove ecosystem (<i>Rhizophora apiculata</i> , <i>R mucronata</i> , <i>R stylosa</i> and <i>Sonneratia alba</i>). and <i>Nypa fruticans</i> and <i>Borassus flabellifer</i> at the landward areas, density of 3000 seedlings per ha for species enrichment. Mangrove planting will involve local laborers/communities and village government.	
	c. Enactment of village regulation on protection and rehabilitation of coastal ecosystems.	The village regulation will protect 100 Ha of mangroves and associated ecosystems. This activity will include a series of village meetings/FGD and legal drafting of the regulation, and will be conducted in coordination with village and district governments.	
Fuafuni, Rote Ndao	a. Temporary closure for sustainable sea cucumber harvest	Development of two hectares temporary closure areas at Nusa Manuk encompasses mangrove, seagrass, and coral reef ecosystems to sustain a healthy, sustainable sea cucumber (<i>Holothuria scabra</i> and <i>Bohadschia marmorata</i>) harvest. This activity will include village meetings/FGDs and involve village government and local communities.	16 households live in an Nusa Manuk island, more susceptible to resource limitation and isolation, particularly during severe weather. 25 households are specific small-scale fishermen, gleaners and implementors of Deak Batu; Village government.
	b. Coral reef rehabilitation	50 units of spider frame to rehabilitate coral reefs in 8-10 m depths, adjacent to the Deak Batu locations.	

Village	EbA Sub Activity	Note	Specific target beneficiaries.
		Coral Reef rehabilitation activities will involve local communities and local diving clubs.	
	c. Traditional Ecological Knowledge (TEK) Conservation	Development of written and audiovisual recording of Deak Batu practice to preserve maritime knowledge and culture. This activity will be conducted by a consultant and involve local/traditional communities.	
	d. Enactment of village regulation on protection and rehabilitation of coastal ecosystems	Protection of 87 Ha of the mangrove and associated ecosystem. This activity will include a series of village meetings/FGD and legal drafting of the regulation, and will be conducted in coordination with village and district governments	
Mebba, Sabu Raijua.	a. Mangrove planting	1 hectare of mangrove rehabilitation and species enrichment, at least with 10,000 seedlings per hectare density. <i>Rhizophora apiculata</i> , <i>R mucronata</i> , <i>Sonneratia caseolaris</i> , <i>Ceriops tagal</i> , <i>Xylocarpus rumphii</i> , <i>Lumnitzera racemosa</i> . Mangrove planting will involve local labor/communities and village government.	30 households are dependent on 7 ha of mangrove and seagrass ecosystem for living space, protection, and gleaning.
	b. Construction of mangrove tree nursery.	Mangrove nursery will consist of 5 seedbeds (1.5m x 10 m; 2,500 polybags/seedbeds) that will be maintained by a local community group.	
	c. Enactment of village regulation on protection and rehabilitation of	Protection of 8Ha of the mangrove and associated ecosystem. This activity will include a series of village meetings/FGD and legal drafting of the regulation, and will be conducted in coordination with village and district governments	

Village	EbA Sub Activity	Note	Specific target beneficiaries.
	coastal ecosystems		
Limanggu, Sabu Raijua	a. Plant vegetation barrier along 500m coastline to prevent sand and saline water surge intrusion.	Tree species for planting will include Local species like <i>Arenga pinnata</i> , <i>Borassus flabellifer</i> , and <i>Pandanus fascicularis</i> are ideal for coastal barriers because these species are culturally significant and also sources for sugar, vinegar, food ingredients, and materials.	11 ha of productive farmlands, managed by 20 households, are located less than 350 m from the coastline, prone to saline water intrusion and extreme oceanic weather
	b. Planting Trees in riparian and water resource areas.	500 new tree saplings will be planted in riparian and water resource areas.	
	c. Constructing composting center	One composting center will be constructed to provide compost for organic farming.	
	d. Use of composting to improve productivity and improve water-resilient agriculture practices	One demonstration plot for the composting unit will be developed and maintained by local communities.	

- **Activity 2.1.4. Conduct Monitoring and evaluation of EbA activities.** This activity will monitor the progress of EbA activities implemented, and will be conducted in line with project monitoring missions which will be conducted on a quarterly basis. Monitoring missions will be coordinated by M&E manager and will involve representatives of project management, technical staff, and local government counterparts.
- **Activity 2.1.5 Provide technical assistance and facilitation of EbA implementation.** This activity will include recruitment of EbA experts and Community Organizers to provide technical

support missions for community groups implementing EbA practices, including preparation of manual of mangrove, seagrass and coral reef rehabilitation.

51. To achieve the **Project Outcome 3: Communities including women and vulnerable groups with improved and diversified livelihoods**, the project will produce the following outputs:

52. **Output 3.1. Improved capacity of communities to develop ecosystem goods and service-based (EG&S) livelihoods and business plans.** Activities to produce this project output are:

- **Activity 3.1.1. Conduct Livelihood Training Need Assessment (TNA) and provide technical support on Livelihood activities in Target Villages.** Livelihood Expert will be recruited to conduct the TNA and coordinate other livelihood activities including but not limited to livelihood training.
- **Activity 3.1.2. Facilitate Training for local communities on sustainable production of livelihood practices.** The training will be based on the training need assessment and will involve local trainers (such as from local universities). Training will be targeted to local community groups including women and vulnerable groups (small-scale fishers, farmers). Table 4 below shows livelihood training options as EbA that corresponds to specific vulnerabilities at each target village.

Table 07. EbA Livelihood options in Target Villages

Village	EbA- Livelihood sub activity options.	Note	Specific target beneficiaries
Holulai, Rote Ndao	a. Conduct training on production of processed products from mangrove, seaweed, and fishery.	Local experts will deliver the training.	Community groups including women and youth groups.
	b. Provide equipment (e.g. cold storage) to support the production processed products from mangrove, seaweed, and fishery	Required equipment will be identified in the TNA; Operation and Maintenance Plan of the equipment will be prepared.	Community groups including women and youth groups
	c. Conduct training on developing livelihood business plans.	Local experts will deliver the training.	Community groups including women and youth groups.
	d. Conduct certified training on ecotourism guide	The certified training will support existing mangrove ecotourism activities in Holulai. The training will involve certification institution.	Women and Youth groups, Local ecotourism guides in Holulai.
Oelula, Rote Ndao	a. Conduct training on production of processed products from mangrove,	Local experts will deliver the training.	Community groups including women and youth groups.

Village	EbA- Livelihood sub activity options.	Note	Specific target beneficiaries
	seaweed, and fishery.		
	b. Provide equipment (e.g. cold storage) to support the production processed products from mangrove, seaweed, and fishery	Required equipment will be identified in the TNA; Operation and Maintenance Plan of the equipment will be prepared.	Community groups including women and youth groups
	c. Conduct training on mangrove Crab cultivation.	Local experts will deliver the training.	Community groups including women and youth groups.
	d. Conduct training on developing livelihood business plans.	Local experts will deliver the training.	Community groups including women and youth groups.
Fuafuni, Rote Ndao	a. Conduct training on production of processed products from mangrove, seaweed, and fishery (including sea cucumber)	Local experts will deliver the training.	Community groups including women and youth groups.
	b. Provide equipment to support the production of processed products from mangrove, seaweed, and fishery and from coconut-based products.	Required equipment will be identified in the TNA; Operation and Maintenance Plan of the equipment will be prepared.	Community groups including women and youth groups
	c. Conduct training on production of palm and coconut-based products.	Both coconut and the palmyra palm are abundant and are considered as trees of livelihood with many beneficial uses including food, beverage, fibre, medicine and timber. Among various uses, the sweet sap of palmyra tapped is used in making palm sugar.	Community groups including women and youth groups
	d. Conduct training on developing livelihood business plans.	Local experts will deliver the training.	Community groups including women and youth groups.

Village	EbA- Livelihood sub activity options.	Note	Specific target beneficiaries
Mebba, Sabu Raijua	a. Conduct training on production of processed products from mangrove, seaweed, and fishery (including sea cucumber)	Local experts will deliver the training.	Community groups including women and youth groups.
	b. Provide equipment (e.g. cold storage, fish dryer) to support the production processed products from mangrove, seaweed, and fishery	Required equipment will be identified in the TNA; Operation and Maintenance Plan of the equipment will be prepared.	Community groups including women and youth groups
	c. Conduct training on mangrove Crab cultivation.	Local experts will deliver the training.	Community groups including women and youth groups.
	d. Provide equipment (e.g. cold storage, fish dryer) to support the production processed products from mangrove, seaweed, and fishery	Required equipment will be identified in the TNA; Operation and Maintenance Plan of the equipment will be prepared.	Community groups including women and youth groups
	e. Conduct training on developing livelihood business plans.	Local experts will deliver the training.	Community groups including women and youth groups.
Limanggu, Sabu Raijua	a. Conduct training on sustainable agriculture practices (e.g. composting)	Local experts will deliver the training	Community groups including women and youth groups.
	b. Conduct training on production of palm and coconut-based products.	Both coconut and the palmyra palm are abundant and are considered as trees of livelihood with many beneficial uses including food, beverage, fibre, medicine and timber. Among various uses, the sweet sap of palmyra tapped is used in making palm sugar.	Community groups including women and youth groups
	c. Provide equipment to support	Required equipment	Community groups

Village	EbA- Livelihood sub activity options.	Note	Specific target beneficiaries
	the palm and coconut-based products.	will be identified in the TNA; Operation and Maintenance Plan of the equipment will be prepared.	including women and youth groups
	d. Conduct training on developing livelihood business plans.	Local experts will deliver the training.	Community groups including women and youth groups.

Project Component 3: Strengthening institutional capacity to reduce risks associated with climate-induced socio economic and environmental losses.

53. This component includes **Project Outcome 4: integration of climate change adaptation framework into relevant policies and program**, which will align with the **Adaptation Fund Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.**
54. Project outputs and activities in this component will strengthen climate adaptation program at district and village levels, which will contribute to the national NDC targets on climate adaptation. This component will specifically improve inclusiveness aspect of climate policymaking process. The project will ensure just, meaningful participation of affected coastal people, including women, disabled people by amplifying their voices throughout PROKLIM, RAD-API planning, implementation and M&E. Under this component the project will produce project outputs as follows:
55. **Output 4.1. Coastal villages are facilitated to prepare PROKLIM registration.** PROKLIM is a national program that recognizes the active participation of communities who have implemented integrated climate change mitigation and adaptation efforts, so that they can support to achieve the National Determined Contribution (NDC) targets including GHG reduction targets and increase community resilience to the impacts of climate change. PROKLIM has been initiated by the Indonesian Ministry of Environment and Forestry since 2012. Through this project it is expected to have a model of PROKLIM implementation at coastal and small island villages. The project will facilitate coastal villages in Rote islands to be registered as PROKLIM villages. Currently, there are 66 coastal villages in Rote Island and 34 coastal villages in Sabu Island. These coastal villages are vulnerable to climate impacts and risks including damage of coral reefs and associated ecosystems, coastal abrasion, and depletion of fishery resources. The project will target up to 40 villages in Rote and 10 villages in Sabu which have not been registered as PROKLIM villages to be registered as PROKLIM villages. Five of the villages will be supported to implement EbA activities (see Output 2.1 and Output 3.1). The project will conduct the following activities:
- **Activity 4.1.1. Organize a workshop to increase participation of coastal villages in Sabu and Rote in PROKLIM.** The workshop will be conducted at provincial level, and participated by the Directorate General for Climate Change, local government at district level, to identify coastal villages that will be registered as PROKLIM villages supported by this project.
 - **Activity 4.1.2. Recruitment and Training of Village Government Facilitators/extension workers**

on PROKLIM Registration. The training will be organized at district level and delivered by the Directorate General for Climate Change Control (Ditjen PPI) and from local universities.

- **Activity 4.1.3. Socialization of PROKLIM for coastal villages in Rote and Sabu.** The project will organize workshops at district level to socialize the PROKLIM for coastal villages. The socialization of PROKLIM will be coordinated with the Directorate General for Climate Change Control (Ditjen PPI) and local government. The socialization will be participated by representatives of village government and community groups of coastal villages.
- **Activity 4.1.4. Organize village meetings to conduct FPIC and climate mitigation and adaptation data collection.** The village facilitators/extension workers will organize village meetings at target villages to conduct FPIC and collect information required for PROKLIM registration.
- **Activity 4.1.5. Register the villages participating in the PROKLIM in SRN.** The project will facilitate the registration process of coastal villages in SRN in coordination with the local government and Ditjen PPI.

56. Output 4.2. Climate Change Adaptation Action Plans (RAD-API) for Sabu and Rote districts. These Climate Change Adaptation Plans will be synchronized with Climate Adaptation Plan at provincial level through inclusive facilitation process. To achieve this output the project will conduct the following activities:

- **Activity 4.2.1. Facilitate workshops to prepare Adaptation Action Plans for Rote Ndao and Sabu Raijua Districts.** The workshops will discuss climate impact and vulnerability, climate adaptation action plan and identify stakeholders and resources to implement the adaptation action plans. The workshop will involve representatives of women and vulnerable groups from target villages. The organization of the workshop will be coordinated with the District Government (Bappeda) and facilitated by the provincial coordinator.
- **Activity 4.2.2. Prepare Draft of Adaptation Action Plan Document for Rote and Sabu.** The project will recruit consultants to prepare the draft of the Adaptation Action Plan Documents for Sabu and Rote. The consultant will work closely with the District Government (Bappeda).
- **Activity 4.2.3. Facilitate stakeholder consultation and socialization workshops on Adaptation Action for Rote Ndao and Sabu Raijua Districts.** Based on inputs from this workshop the consultant will finalize the Adaptation Action Plans.

57. Output 4.3. Develop strategies to improve climate resilience funding opportunities for the local and village governments by conducting the following activities:

- **Activity 4.3.1. Develop policy brief on climate funding options in Rote and Sabu.** The project will recruit an expert/consultant to conduct research on opportunities to improve climate funding options for coastal areas of Rote and Sabu, and develop a policy brief. To conduct this activity, the project will also develop coordination with the local government of Sabu and Rote to have access to information on the existing climate budget.
- **Activity 4.3.2. Facilitate Exit Strategy Workshop at provincial level.** The workshop will discuss the sustainability of projects investments and disseminate lessons learned and policy brief on sustainable funding schemes for climate adaptation in Sabu and Rote.

II. B. Economic, Social and Environment Benefits with reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations.

Impact Potentials

58. The project will indirect impact 7,254 beneficiaries (individuals) living in 3 villages of Rote Ndao and 2 villages in Sabu Raijua (see Table 09). The beneficiaries will include women, small-scale fishermen and poor communities, who depend on the coastal ecosystem's goods and services distributed in the 6.65km of coastline. This figure will include:

- Direct beneficiaries from EbA and livelihood implementation in 3 villages of Rote and 2 villages in Sabu are estimated at 66% of the total population: 479 individuals (316 male and 163 female). As most of the populations are small-scale fishermen, it is assumed that around 100% of 479 individuals are small-scale fishermen and they will become the beneficiaries of the project (see Table 08). Based on the assessment of gender and social inclusion conducted by YAPEKA, vulnerable groups to climate change are women and small-scale fishers. In addition, the most vulnerable group of fishermen Rote and Sabu are estimated at 206 fishermen who live in coastal zones and are prone to extreme oceanic weather and 20 households managed farmlands. Their vulnerability to climate changes is twofold: first: the nature of their livelihood is strictly dependent on provisions of goods and services from the coastal area on a daily basis. Second, small-scale fishermen usually live around the coast, making them even more vulnerable, exposed to any threats caused by climate change at coastal areas. As a result, any shock to the natural coastal system, i.e. caused by climate change, will have immediate impacts to small-scale fishermen.
- With the assumption that each capacity building activity (such as training EbA field schools, livelihood business development, and participatory climate adaptation planning) will be participated in average by 20 individuals, direct beneficiaries of the training activities of the project is estimated 300 individuals consisting of 210 male and 90 female (30% of participants are women). Inclusion of women is key and their insight may become a source of resilience in adaptation. Gender roles cause different vulnerability between men and women. However, women are not only victims of adverse climate impacts due to their limitations, but they are also key active actors in the adaptation process. This ability is due to their deep knowledge of their environment, experience in managing natural resources (forests, water, biodiversity, and land), and involvement in climate-sensitive occupations such as agriculture, forestry, and fisheries. Women's roles are not only as caregivers and nurturers, but they usually form strong social networks in their communities that fulfill the prerequisites as agents of climate change.

Table 08. Project Direct Beneficiaries

Regency	Villages	Specific/Direct Beneficiaries					
		Male	Female	Youth (15-24)		Household	Total
				Male	Female		
Rote Ndao	Oelua	60	25	18	13	45	116
	Holulai	56	24	13	14	35	107
	Fuafuni	35	15	8	8	25	66
Sabu	Mebba	66	29	11	10	30	116

Raijua	Limaggu	42	18	7	7	20	74
Total Direct Beneficeries		259	111	57	52	155	479

Table 09 Project Indirect Beneficiaries

Regency	Villages	Indirect Beneficiaries			
		Man	Woman	Household	Total
Rote Ndao	Oelua	482	480	525	962
	Holulai	495	454	304	949
	Fuafuni	539	584	595	1123
Sabu Raijua	Mebba	1634	1624	1030	3528
	Limaggu	480	482	320	962
Total Indirect Beneficeries		3630	3624	2774	7254

Broader benefit can be achieved through the knowledge sharing, awareness activities, and implementation of District Adaptation Action Plans.

59. The project will develop a model of how climate resilience is implemented in coastal and small islands in Indonesia. Economic, social, and environmental benefits of project are described in the following table:

Table 10. Economic, social, and environmental benefits of the project.

No	Project Output	Economic Benefit	Social Benefit	Environment Benefit
1.	Output 1.1. Diverse IEC tools and materials, including digital platform on EbA for knowledge exchange.	The IEC tools and materials that include sustainable use of natural resources and livelihood can increase participation and engagement of local communities in climate change adaptation This can lead to more effective and efficient use of resources, increased economic productivity, and improved livelihoods.	The development of diverse IEC tools and materials, along with a digital platform for knowledge exchange, can lead to increased awareness and knowledge sharing within communities. This can empower individuals with information on climate change adaptation, leading to informed decision-making and improved community	The development and dissemination of diverse IEC tools and materials can increase awareness and understanding of climate change impacts and adaptation measures among local communities. This can lead to more informed decision-making and behavior change, resulting in reduced vulnerability to climate change impacts and improved environmental sustainability.

No	Project Output	Economic Benefit	Social Benefit	Environment Benefit
			resilience.	
2	Output 1.2. News outlets in the local press and media that have covered Climate Change and EbA topics.	The coverage of climate change and EbA topics in local news outlets will include livelihood activities that can have economic benefits. This can lead to increased investment in climate change adaptation measures, resulting in improved economic productivity and reduced vulnerability to climate change impacts.	The coverage of climate change and EbA topics in local news outlets can have social benefits by increasing awareness and understanding of climate change impacts and adaptation measures among local communities. This can lead to more informed decision-making, behavior change, and improved community resilience.	The coverage of climate change and EbA topics in local news outlets can have environmental benefits by promoting sustainable practices and behaviors among local communities. This can lead to reduced environmental impact and increased environmental sustainability.
3	Output 1.3. Updated climate vulnerability data at village level.	Provide decision-makers with the necessary information to plan and sustainable livelihood. This can lead to reduced economic losses due to climate change impacts and increased economic productivity	Increase awareness and understanding of climate change impacts and adaptation measures among local communities. This can lead to more informed decision-making, behavior change, and improved community resilience	The availability of updated climate vulnerability data at the village level can have environmental benefits by promoting sustainable practices and behaviors among local communities. This can lead to reduced environmental impact and increased environmental sustainability.
2.	Output 1.4. Climate-EbA Field Schools as learning forum at village level.	The field school will improve fishery and agriculture practices which lead to improved productivity and economic for small-scale fishermen and farmers.	Improved knowledge and skills of women and vulnerable groups in understanding climate and implementing EbA; Increased climate literacy of local communities.	The field school will increase ecosystem restorations and protections, by implementing EbA and use of climate relevant information from reliable sources (i.e. BMKG).
3.	Output 2.1. EbA practices are implemented to protect coastal and small island ecosystems., including coastal, benthic and water ecosystem	The implementation of EbA practices can have economic benefits by protecting coastal and small island ecosystems, which are often important for economic activities such as tourism and fisheries. This can lead to increased economic productivity and reduced economic	The implementation of EbA practices can have social benefits by protecting coastal and small island ecosystems, which are often important for cultural and recreational activities. This can lead to improved community well-being and increased resilience to climate change impacts.	The implementation of EbA practices can have environmental benefits by protecting coastal and small island ecosystems, which are often important for biodiversity and ecosystem services. This can lead to improved environmental sustainability and increased resilience to climate change impacts.

No	Project Output	Economic Benefit	Social Benefit	Environment Benefit
		losses due to climate change impacts.		
4	Output 2.2. Small infrastructure and facilities to support EbA activities	The infrastructure can protect and restore ecosystems, which are often important for economic activities such as tourism and fisheries. This can lead to increased economic productivity and reduced economic losses due to climate change impacts	The implementation of small infrastructure and facilities to support EbA activities can have social benefits by improving the well-being of local communities. This can lead to improved community resilience and increased social cohesion.	The implementation of small infrastructure and facilities to support EbA activities can have environmental benefits by protecting and restoring ecosystems, which are often important for biodiversity and ecosystem services. This can lead to improved environmental sustainability and increased resilience to climate change impacts
5	Output 3.1. local communities with improved capacity and access to develop ecosystem goods and service-based livelihood opportunities.	Livelihood opportunities can have economic benefits by providing alternative income sources for local communities. This can lead to increased economic productivity and reduced economic losses due to climate change impact	Livelihood opportunities can have social benefits by improving the well-being of local communities. This can lead to improved community resilience and increased social cohesion	The implementation of ecosystem goods and service-based livelihood opportunities can have environmental benefits by promoting sustainable practices and behaviors among local communities. This can lead to reduced environmental impact and increased environmental sustainability.
13	Output 3.2. Local community groups with improved knowledge and skills to develop livelihood proposals and business plan.	Improved skills can support the development of small businesses and entrepreneurial initiatives, contributing to economic growth and job creations in local communities.	Empower communities to take ownership of their economic development, and create sustainable, locally driven solutions to address their needs and solutions.	Support business initiatives that have a positive impact on the environment.
14	Output 3.3. Local community groups with improved knowledge and skills to develop livelihood proposals and business plans	Support the development of small businesses and entrepreneurial initiatives, contributing to economic growth and job creations in local communities.	Help build capacity of local communities including women and vulnerable groups to develop and implement business initiatives.	Support business initiatives that have positive impact on environment
15	Output 4.1. Adaptation Action. Plans for Sabu and Rote districts	Support economic growth by reducing damage to infrastructure, agriculture, small-scale	Foster community engagement and collaboration, ensuring that plans are effective.	Help to identify and reduce vulnerable areas; enabling targeted interventions to reduce the risk of climate impact.

No	Project Output	Economic Benefit	Social Benefit	Environment Benefit
		fishery caused by climate change.		
16	Output 4.2. Strengthened DKPPNTT as a multi stakeholder forum to improve ICM approach in Savu seascape.	Improved resource allocation by multi stakeholder forum, to ensure efficiency and effectiveness of the resource to implement ICM.	Increased transparency in decision making processes and ensure interests of stakeholders are considered; provide a platform for collaboration; and enhanced learning and capacity building.	Help build climate resilience to climate change impact and other coastal management challenges.
17	Output 4.3. Strategy to improve climate funding opportunities.	Support innovative and creative climate resilience initiatives that may not be eligible for traditional funding resources, encouraging entrepreneurship and diversity of local economies.	Increased capacity of local government and community empowerment to implement climate mitigation and adaptation activities.	Support climate resilience initiatives that have a positive impact on the environment.
18	Output 4.4. Target villages are facilitated to prepare PROKLIM registration.	Improved resilience to climate change impacts can lead to reduced economic losses for local communities, particularly those dependent on climate-sensitive sectors such as agriculture and fisheries; contribute to the preservation of local livelihoods and economic activities, thereby supporting sustainable development	Enhanced community resilience and adaptive capacity can lead to improved well-being and reduced vulnerability to climate change impacts. The participatory nature of community-based adaptation can foster social cohesion, local leadership, and empowerment, contributing to the overall social development of the communities.	The implementation of adaptation actions can contribute to the protection and restoration of local ecosystems, thereby supporting biodiversity and ecosystem services. The Climate Village Program's focus on community-based adaptation aligns with the principles of sustainable environmental management and can contribute to the overall environmental sustainability of the areas involved.

60. The above project activities will mostly benefit coastal communities in the target villages and sub districts including women and mostly poor and disadvantaged dryland farmers and small-scale fishers. Small-scale fishers operate fisheries at the household level, fishing with or without a fishing boat of < 5 GT and using fishing gear that is operated by manpower alone; and most women in coastal communities are vulnerable to climate change.

Mitigation of Negative Impacts, in Compliance with Environmental and Social Policy (ESP) and Gender Policy for the Adaptation Fund.

61. The Implementing Agency has conducted a self-screening and self-assessment process in order to determine compliance with the Environment and Social Policy of the Adaptation Fund (See Section II.K). After the screening and assessment have been conducted, magnitude of risks, potential adverse impacts and mitigation measures are assessed (See Section III.C).
62. With regards to Gender Policy of the Adaptation Fund, the Implementing Agency has conducted Gender Assessment, integrating gender in project objectives, Gender Responsive Implementation Measures, and mapping potential implementation partners, gender responsive frameworks and indicators, and gender-responsive project budget. The project will monitor and evaluate project intervention on gender issues.

II.C. Analysis of Cost Effectiveness of the Proposed Project

63. Beneficiaries of the project are 7,254 (individuals living in 3 villages of Rote Ndao and 2 villages in Sabu Raijua) as users of coastal ecosystem's goods and services distributed in the 6.65 km of coastline. Direct beneficiaries are approximately 66% of the population i.e. 479 individuals (316 male and 163 female), who are directly benefiting from EbA and sustainable livelihood activities implementation. Five target villages are positioned in the east coast and west coast of both islands, where eastward and westward monsoon winds are blowing making these areas prone to extreme weather events. These areas were impacted by TC Seroja, where massive damages and losses to the ecosystem and infrastructures occurred.
64. Comparisons between hard infrastructure and EbA scenarios to protect 13.32 km coastline are here used to provide an illustration of the project cost effectiveness. The hard infrastructure technology called Geo-tube, which is a synthetic geo-textile tube filled with soil to protect shores is compared with EbA instruments using a series of poles/bamboo, sediment trap and embankment to protect coastline against sea waves and creating new soils to defend the land. The table below indicates head-to-head cost of EbA project compared with Geo-tube at the same coastal length. Despite the geo tube protection benefit being much faster than EbA, the cost is staggering and many of the infrastructure features will drastically disrupt the existing social-ecological system of small islands and trigger cascading impacts.

Table 11. Comparison between Geo Tube and EbA

	Breakwater using geo tube	EbA instruments
Total cost	\$4,183,629.44	\$996,358
Protection benefit	Relatively quick to achieve when the construction ends	Relatively slow, following natural growth patterns
Materials	Synthetic fabrics, brought from outside, require large number of materials to fill geo tube	Mostly local, slowly accumulate sediments and biomass
Carbon efficiency	High emission from transportation of materials	Relatively low emission, able to absorb carbon
Support provision of ecosystem services	Almost none, breakwater will drastically change ecosystem characteristics	Suitable with ecosystem characteristics
Effect for coastal ecosystems	Mangrove: can be beneficial Seagrass: detrimental Coral reefs: detrimental	Mangrove: beneficial Seagrass: can be beneficial Coral reefs: beneficial
Socio-cultural viability	Abrupt change to livelihood system, potential harm to local values and create cascading impacts	Based on local livelihood system shaped by ecosystem characteristics

	Breakwater using geo tube	EbA instruments
Economic retention	High leakage as the materials coming from outside	Low leakage, materials are locals

65. All and all, EbA is very favorable in terms of social-ecological resilience with reasonable costs per length of shorelines. The project will be able to distribute benefits of USD 429.4 per person of direct beneficiaries or USD 99,971 per village of the population, with direct beneficiaries 479 individuals (see Table 08), from the total budget of USD 996,358.. EBA will be helpful to protect the coastal ecosystem through young mangrove and seagrass from extreme weather, thus increase the possibility for the seedlings to grow and reproduce effectively. This approach appears to be cost effective and environmentally friendlier than construction of sea wall or dikes, especially that it provides economic benefit for the community in the long-term. A well maintained and conserved coastal ecosystem through EBA (seagrass and coral reefs) also secure source of nutrients and offer income opportunity for the affected community through traditional, small-scale fishery practices e.g. *Makan Meting* and *Deak Batu*. EbA can bring multiplier effects, for example income generation, strengthening food security and developing local people's capacity in adapting to climate hazards including storm surges and drought. Implementation of EbA practices also take into account sustainability in terms of technical issues (such as selection of locations with proper depth for coral transplantation to minimize risks from strong sea waves); the project also strengthens knowledge and skills of local communities to handle climate hazards through trainings and capacity building activities.

Table 12. Projected progress of EbA activities in each locations, up to 5 years

Village	EbA activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
Holulai, Rote Ndao	28 units of sediment traps (Each unit of sediment trap has a dimension of 20m length x 5m width x 1 m height).	The sediment trap protects the mangrove and seagrass seedling and collects additional sediment to stabilize growth.	Sediment trap structure decomposed, sediment stabilised and becomes support effective regrowth of seagrass and mangrove.
	Mangrove planting will use mangrove enrichment method (3,000 trees/Ha) planted in 3 Hausing <i>Rhizophora apiculata</i> , <i>R mucronata</i> , <i>R stylosa</i> and <i>Sonneratia alba</i> species. Mangrove seedlings will be supplied from Oelua mangrove nursery. Mangrove planting will involve local labors/communities.	70% of the mangrove seedlings survive and grow; replacement seedlings are continuously supplied by the mangrove nursery ground, continued by the community group.	Density of mangrove are stabilized at 80% of the total areas, fragmented spaces are covered with new mangrove saplings. Overall environmental services i.e. protection, gleaning (<i>makan meting</i>) are increasing considerably.
	Seagrass replanting will be implemented in 300-meters intertidal coastline in the	As larger seagrass species start to emerge, smaller species i.e. <i>Halophila</i> spp,	Newly seagrass will start to proliferate and attract more fishes and invertebrates as

Village	EbA activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
	front of the mangrove rehab site. Species list: <i>Enhalus acoroides</i> , <i>Thalassia hemprichii</i> , <i>Cymodocea rotundata</i> . Seagrass replanting will involve local communities.	<i>Halodule</i> spp will potentially emerge adding diversity and attract marine life to dwell during high tide.	the sediments are increasingly stable, supporting sustainable gleaning/ <i>makan meting</i> .
	The village regulation will protect 18 Ha of coastal ecosystems (mangrove and associated ecosystems) and as. This activity will include a series of village meetings/FGD and legal drafting of the regulation, and will be conducted in coordination with village and district governments.	The village regulation is implemented. At the early stage, community in the village will still need further awareness raising, led by village government	The village regulation provides effective protection and becomes EbA governance reference for the adjacent villages.
Oelua, Rote Ndao	Mangrove nursery will consist of 5 seedbeds (1.5m x 10 m; 2,500 polybags/seedbeds) that will be maintained by a local community group. The tree nursery will supply mangrove seedlings for Holulai village as well.	Mangrove nursery continues to function after the project ends, primarily supporting restoration in Oelua and Holulai. Community activists will continue to work independently operating the nursery with facilitation from the village government. Some extra income starts to flow from mangrove buyers for restoration projects and requests to provide mangrove training start to emerge.	Mangrove nursery continues to operate in the year 3. More buyers of mangrove seedlings will come to the nursery and provide continuous support for any mangrove restoration in Rote. More capacity building requests are coming and more visits to learn the mangrove restoration in-situ, effectively transforming the Oelua and Holulai becomes community education center.
	Planting mangrove seedlings (2 Ha) at mangrove ecosystem (<i>Rhizophora apiculata</i> , <i>R mucronata</i> , <i>R stylosa</i> and <i>Sonneratia alba</i>). and <i>Nypa fructicans</i> and <i>Borassus flabellifer</i> at the landward areas, density of	70% of the mangrove seedlings survive and grow; replacement seedlings are continuously supplied by the mangrove nursery ground, continued by the community group. The <i>Borassus</i> and <i>Nypa</i>	Mangrove seedling survival is stabilized at 80% of the total seedling originally planted, fragmented spaces are covered with new mangrove saplings. Overall environmental services i.e. protection, gleaning (<i>makan</i>

Village	EbA activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
	3000 seedlings per ha for species enrichment. Mangrove planting will involve local labors/communities and village government.	plants continue to grow and provide additional protections.	meting) are increasing considerably. Some of the Borassus and Nypa start to yield more options to support livelihood sources, i.e. fruit, sugar drinks and leaves.
	The village regulation will protect 100 Ha of mangroves and associated ecosystems. This activity will include a series of village meetings/FGD and legal drafting of the regulation. Holulai-Oelua coordination, and will be conducted in coordination with village and district governments.	The village regulation is implemented. At the early stage, the community in the village will still need further awareness raising, led by the village government. An inter-village agreement between Holulai and Oelua creates optimum protection.	The village regulation and inter village coordination between Holulai and Oelua provide effective protection and become EbA governance reference for the adjacent villages.
Fuafuni, Rote Ndao	Development of two hectares temporary closure areas at Nusa Manuk encompasses mangrove, seagrass, and coral reef ecosystems to sustain a healthy, sustainable sea cucumber (<i>Holothuria scabra</i> H arata and <i>Bohadschia marmorata</i>) harvest. This activity will include village meetings/FGDs and involve village government and local communities.	Temporary closure cycle starts to give results by providing results as the size of the sea cucumbers that are reaching 11-15 cm are getting more common to see within the temporary closure. Sea cucumbers with size more than 20 cm are collected, some will be kept in nature as broodstocks.	In general, the size of the catch will increase and the abundance will also increase. More sea cucumbers can be seen with size more than 15 cm and some already reach its peak size of 25-30 cm, supporting healthy reproduction and sustainable harvest.
	50 units of spider frame to rehabilitate coral reefs in 8-10 m depths, adjacent to the Deak Batu locations. Coral Reef rehabilitation activities will involve local communities and local diving clubs.	At least 70% of the hard coral fragments transplanted will survive at that depth, avoiding SST anomaly at shallow water. The fragments have grown into larger coral reefs indicating healthy growth and 30% fragment bleached or dead. These surviving coral structures as entirety including the frame would	Surviving coral fragments stabilized at 70%-80%. Coral growth will be able to replace those which died in the year 3. Originally dominated by branching coral, more life forms will start to appear, such as lifeform massive and foliage. Diversity of fish will also increase, inline with increasing fish biomass.

Village	EbA activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
		attract more fish species, mainly smaller species, and potentially add the fish catch at Deak Batu.	More fish from Labridae and Siganidae Families will increase providing more consistent fish supplies at Deak batu.
	Development of written and audiovisual recording of Deak Batu practice to preserve maritime knowledge and culture. This activity will be conducted by a consultant and involve local/traditional communities.	The documentations will become proud of the local people, proof of the maritime culture of the island. The documentations will also be used as awareness raising to the benefit of EbA for island people, from the perspective of maritime culture.	The use of documentation could open several different conservation pathways, strengthening the culture and the ecosystems. One of the pathways is the “Living Museum” pathway, supported through the Ministry of Education and Culture realizing the clear connection of climate change and maritime culture.
	Protection of 87 Ha of the mangrove, seagrass and coral reefs ecosystem. This activity will include a series of village meetings/FGD and legal drafting of the regulation, and will be conducted in coordination with village and district governments	The village regulation is implemented. At the early stage, the community in the village will still need further awareness raising, led by the village government. The village regulation is a model of village-level EbA governance framework showcasing village which has mainland and island territory	The village regulation shows a case of EbA coordination between mainland and island village territory of Fuafuni, providing effective protection and becoming an EBA governance reference for the adjacent villages.
Mebba, Sabu Raijua.	1 hectare of mangrove rehabilitation and species enrichment, at least with 10,000 seedlings per hectare density. Rizhopora apiculata, R mucronata, Sonneratia caseolaris, Ceriops tagal, Xylocarpus rumphii, Lumnitzera racemosa. Mangrove planting will involve local labor/communities and village government.	70% of the mangrove seedlings survive and grow; replacement seedlings are continuously supplied by the mangrove nursery ground, continued by the community group.	Mangrove seedling survival is stabilized at 80% of the total seedling originally planted, fragmented spaces are covered with new mangrove saplings. Overall environmental services i.e. protection, gleaning (makan meting) are increasing considerably.
	Mangrove nursery will	Mangrove nurseries	Mangrove nurseries continue

Village	EbA activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
	consist of 5 seedbeds (1.5m x 10 m; 2,500 polybags/seedbeds) that will be maintained by a local community group.	continue to function after the project ends, primarily supporting restoration in Mebba village. Community activists will continue to work independently operating the nursery with facilitation from the village government. Community will use the existing facilities, mangrove boardwalk and the information center as the education and tourism center showcasing the EbA mangrove restoration.	to operate in the year 3. More buyers of mangrove seedlings will come to the nursery and provide continuous support for any mangrove restoration in Sabu Raijua. Mebba, will become mangrove EbA capacity building center, producing more young cadres, fostering new climate-aware generation.
	Protection of 8 Ha of the mangrove and associated ecosystem. This activity will include a series of village meetings/FGD and legal drafting of the regulation, and will be conducted in coordination with village and district governments	The village regulation is implemented. At the early stage, the community in the village will still need further awareness raising, led by the village government. Their proximity to the existing educational infrastructure gives them an advantage to reach out to the public and decision makers in Sabu Raijua.	The village regulation shows a case of EbA coordination between mainland and island village territory of Mebba, providing effective protection and becoming EbA governance reference for the adjacent villages.
Limangu, Sabu Raijua	500 m of vegetation will be enriched by planting 3000 trees. The planted species will include local species like <i>Arenga pinnata</i> , <i>Borrassus flabellifer</i> , and <i>Pandanus fascicularis</i> are ideal for coastal barriers because these species are culturally significant and also sources for sugar, vinegar, food ingredients, and materials.	80% of the trees planted survive and the density of trees in the coastal barrier are improved, preventing saline water intrusion further and securing the farmland. Local species chosen for the planting started to yield, particularly the <i>Pandanus fascicularis</i> , people can start to use them for food ingredients and traditional materials.	Local species such as <i>Arenga pinnata</i> , <i>Borrassus flabellifer</i> are starting to produce fruits and supporting local brown sugar production and vinegar therefore supporting local food security as an additional benefit.
	500 new tree saplings planted in riparian and water resource areas.	Planted trees in the riparians will help to stabilize the soil slopes and	Soil in the riparian slopes are stabilized further. Additional benefits from the planted

Village	EbA activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
		reduce the sedimentation in the water bodies.	trees, mainly fruits, can be harvested and help to improve food security for the Limaggu people.
	One composting center and a demo site (1 ha) will be constructed to provide compost for organic farming.	Composting center is continuing to function and supply partial fertilizer needs of the local agricultural lands. User of the compost will increase to 2 hectares.	Composting for agriculture become more common and compost user increase to 3 hectares.

Table 13. Project progress livelihood activities in each location, up to 5 years

Village	Livelihood activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
Holulai, Rote Ndao	Direct beneficiaries of fishermen in the livelihood activities ca. 57 people Capacity building activities conducted at the community level involved 20 people in each training. Community was able to produce products from mangrove (mangrove chips, mangrove beverages); seaweed: (seaweed chips: seaweed pudding); and fisheries (shredded fish, fish meatballs); mangrove crab cultivation; and has at least 4 business plan models.	Direct beneficiaries of fishermen in the livelihood activities ca. 68 people (increased by 20% from 97) and income increased at least 20% from Year 2 The community in Holulai have been able to manage coastal resources sustainably and utilize coastal resources with production from mangrove, seaweed, fisheries, and mangrove crab cultivation increasing by 50% and has been marketed	Direct beneficiaries of fishermen in the livelihood activities ca. 82 people (increased by 20% from Year 3) and income increased at least 20% from Year 3 The community in Holulai have been able to manage coastal resources sustainably and utilize coastal resources with production from mangrove, seaweed, fisheries, and mangrove crab cultivation increasing by 70% and has been marketed
	1 equipment package in the village (e.g. cold storage for fisheries; production equipments for processes products from mangrove, seaweed and mangrove crabs cultivation) is provided	Addition of number of equipment (e.g. 1 cold storage for fisheries; 5 production equipments for processes products from mangrove, seaweed and mangrove crabs cultivation)	Addition of number of equipment (e.g. 1 cold storage for fisheries; 5 production equipments for processes products from mangrove, seaweed and mangrove crabs cultivation) is provided,

Village	Livelihood activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
		is provided, managed and operated	managed and operated
	16 people certified as ecotourism guides	70% increase in certified ecotourism guides on mangrove ecotourism	80% increase in certified ecotourism guides on mangrove ecotourism
Oelua, Rote Ndao	Direct beneficiaries of fishermen in the livelihood activities ca. 78 people Capacity building activities conducted at the community level involved 20 people in each training. Community was able to produce products from mangrove (mangrove brownies, mangrove beverages); seaweed: (seaweed chips: seaweed pudding); and fisheries (shredded fish, fish meatballs); mangrove crab cultivation; and has at least 4 business plan models.	Direct beneficiaries of fishermen in the livelihood activities ca. 93 people (increased by 20% from Year 2) and income increased at least 20% from Year 2 The community in Oelua have been able to manage coastal resources sustainably and utilize coastal resources with production from mangrove, seaweed, fisheries, and mangrove crab cultivation product increasing by 50% and has been marketed	Direct beneficiaries of fishermen in the livelihood activities ca. 112 people (increased by 20% from Year 3) and income increase at least 20% from Year 3 The community in Oelua have been able to manage coastal resources sustainably and utilize coastal resources with production from mangrove, seaweed, fisheries, and mangrove crab cultivation product increasing by 70% and has been marketed
	1 equipment package in the village (e.g. cold storage for fisheries; production equipments for processes products from mangrove, seaweed and mangrove crabs cultivation) is provided	Addition of number of equipment (e.g. 2 cold storage for fisheries; 5 production equipments for processes products from mangrove, seaweed and mangrove crabs cultivation) is provided, managed and operated	Addition of number of equipment (e.g. 5 cold storage for fisheries; 10 production equipments for processes products from mangrove, seaweed and mangrove crabs cultivation) is provided, managed and operated
Fuafuni, Rote Ndao	Direct beneficiaries of fishermen in the livelihood activities ca. 41 people Capacity building activities	Direct beneficiaries of fishermen in the livelihood activities ca. 49 people (increased by 20% from Year 2) and income increased at least 20% from Year 2	Direct beneficiaries of fishermen in the livelihood activities ca. 59 (increased by 20% from Year 3) and income increased at least 20% from Year 3

Village	Livelihood activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
	conducted at the community level involved 20 people in each training. Community was able to produce products from mangrove (mangrove chips, mangrove beverages); seaweed: (seaweed chips); and fisheries (fish meatballs); sea cucumber chips; palm (palm sugar) and coconut-based products and had at least 5 business plan models.	The community in Fuafuni have been able to manage coastal resources sustainably and utilize coastal resources with production from mangrove, seaweed, fisheries, sea cucumber cultivation, palm and coconut-based product increasing by 50% and has been marketed	The community in Fuafuni have been able to manage coastal resources sustainably and utilize coastal resources with production from mangrove, seaweed, fisheries, sea cucumber cultivation, palm and coconut-based product increasing by 70% and has been marketed
	1 package of equipment for production of mangrove products, seaweed product, sea cucumber product, palm and coconut-based product has been provided in Fuafuni	Addition of number of equipment (e.g. 5 production equipments for processes products from mangrove, seaweed, sea cucumber, palm and coconut-based product is provided, managed and operated	Addition of number of equipment (e.g. 5 cold storage for fisheries; 10 production equipments for processes products from mangrove, seaweed and mangrove sea cucumber cultivation, coconut-based product) is available, managed and operated
Mebba, Sabu Raijua	Direct beneficiaries of fishermen in the livelihood activities ca. 30 Capacity building activities conducted at the community level involved 20 people in each training. Community was able to produce products from mangrove (mangrove chips, mangrove beverages); seaweed: (seaweed chips); and fisheries (fish meatballs); sea cucumber cultivation (sea cucumber chips) and has at least 4 business plan models	Direct beneficiaries of fishermen in the livelihood activities ca.36 (increased by 20% from Year 2) and income increased at least 20% from Year 2 The community in Mebba have been able to manage coastal resources sustainably and utilize coastal resources with production from mangrove, seaweed, fisheries, and sea cucumber product increasing by 50% and has been marketed	Direct beneficiaries of fishermen in the livelihood activities ca. 43 (increased by 15% from Year 3) and income increased 20% from Year 3 The community in Mebba have been able to manage coastal resources sustainably and utilize coastal resources with production from mangrove, seaweed, fisheries, and sea cucumber product increasing by 70% and has been marketed
	1 equipment package in the village (e.g. cold storage and fish dryer for fisheries; production equipments for	Addition of equipment number (e.g. 2 cold storage and fish dryer for fisheries; 5 production	Addition of equipment number (e.g. 5 cold storage and dryer for fisheries; 10 production equipments for

Village	Livelihood activities by the project (ca. 2 years)	3 years after project begun	5 years after the project begun
	processes products from mangrove, seaweed and sea cucumber cultivation) is provided	equipments for processes products from mangrove, seaweed and sea cucumber cultivation) is provided, managed and operated	processes products from mangrove, seaweed and sea cucumber cultivation) is provided, managed and operated
Limaggu , Sabu Raijua	Direct beneficiaries of farmer in the livelihood activities ca.20 Capacity building activities conducted at the community level involved 20 people in each training. Community was able to produce products from sustainable agriculture practices (e.g. 500 kg composting); palm (palm sugar) and coconut-based product and had at least 3 business plan models	Direct beneficiaries of farmer in the livelihood activities ca.24 (increased by 20% from Year 2) and income increased at least 20% from Year 2 The community in Limaggu have been able to manage land resources sustainably and utilize land resources with production from sustainable agriculture practice (e.g. composting production); palm and coconut-based product increasing by 50% and has been marketed	Direct beneficiaries of farmer in the livelihood activities ca.29 (increased by 15% from Year 3) and income increased at least 20% from Year 3 The community in Limaggu have been able to manage land resources sustainably and utilize land resources with production from sustainable agriculture practice (e.g. composting production); palm and coconut-based product increasing by 70% and has been marketed
	1 equipment package in the village (e.g. composting production; palm sugar and coconut-based product production) is provided	Addition of equipment number (e.g. 5 composting production; palm sugar production, coconut-based product production) is provided, managed and operated	Addition of equipment number (e.g. 10 composting production; palm sugar production, coconut-based product production) is provided, managed and operated

II.D. Alignment with national/sub national sustainable development strategies.

66. Road Map Nationally Determined Contributions (NDC) of Indonesia (2020): This NDC Adaptation Roadmap document is published as a reference for the preparation of more technical planning and implementation of Climate Change Adaptation at the sectoral and regional levels. This Adaptation NDC Roadmap is a guideline for translating the commitments contained in the NDC document into various national action plans outlined in the National Adaptation Plan document in order to realize climate change adaptive national development. The document stated Indonesia's commitment on climate adaptation: Improvement of climate resilience including economic, social, livelihood, ecosystems, and landscape. This proposed project will contribute to this commitment by enhancing climate resilience of coastal areas and small islands in Savu Seascape, particularly in Rote and Sabu islands.

67. **Indonesia's National Climate Adaptation Plan (RAN API).** The project will support Indonesia's National Adaptation Plan (RAN-API) prepared by BAPPENAS in 2019, especially in **Marine and Coastal Priority Sector** in terms of: i) Infrastructure: by combining Ecosystem-based Adaptation (EbA) and Community-based Adaptation (CbA) approaches; and Capacity building: by providing alternative livelihood for small-scale fishermen during extreme weather. Currently, the provincial (NTT province) and districts of Sabu Raijua and Rote Ndao are preparing Climate Adaptation Plans based on The Ministry of Environment and Forestry Regulation No. P.33, 2016 about Guidelines on Climate Adaptation Action. This project will provide inputs for the Climate Adaptation Plan.
68. **Priority Locations for Climate Resilience prepared by Bappenas (2021).** Bappenas has listed priority locations for climate resilience in marine and coastal sectors, including Rote Ndao and Sabu Raijua districts in NTT. These two districts are target locations for this project. These locations are identified as areas with CVI value 4 (high) and 5 (very high) and potential ocean waves (increase >1m) which can interfere with the safety of shipping for ships <10 GT. In NTT province, both Rote and Sabu islands are listed as top priority locations.
69. **Vulnerability Index Data Information System (SIDIK; 2018) developed by Adaptation Directorate, Directorate General of Climate Change Control, Ministry of Environment and Forestry.** Based on the vulnerability index, NTT province has a relatively highly vulnerable status, including Rote Ndao and Sabu Raijua districts.
70. **Strategic Plan 2020-2024 Directorate General of Climate Change Control.** One of the targets in the strategic plan is improved regional resilience through climate adaptation, by ensuring availability of vulnerability and risk data and information at regional level and number of villages participating in the PROKLIM program. This project will generate coastal vulnerability assessments associated with tropical cyclones and will promote the implementation of PROKLIM.
71. **Policy on Marine Spatial Management, Directorate General of Marine Spatial Management, the Ministry of Marine and Fishery (issued in 2019).** The policy concerns marine conservation areas, rehabilitation of coastal and marine ecosystems, spatial marine zonation, coastal community development, marine tourism, protection of marine species, and marine and beach cleaning. The project will contribute to providing coastal vulnerability and risks data and information and climate adaptation measures that will be useful in coastal and marine spatial management of marine conservation areas (Savu Sea Marine Park).
72. **Savu Sea Marine National Park.** The Savu Sea has also been established as a marine conservation area known as "Taman Nasional Laut Sawu" by the Government of Indonesia based on The Ministry of Marine and Fishery Decree (Kepmen) No. KEP.38/MEN/2009 on 8 May 2009 with a total area of 3.5 million ha. Currently the management plan of the Savu Sea Marine National Park is under revision. The project will support the marine national park through restoration of coastal ecosystems and ecosystem-service based livelihood in coastal areas. The project will also strengthen the Integrated Coastal and Marine Management of the Savu Sea by revitalizing the multi stakeholder forum: DKPPNTT.
73. **NTT Province Mid-term Development Plan 2018-2023.** One of the objectives of the mid-term development plan is to ensure sustainable development and one of the targets is Improved disaster mitigation and climate adaptation. The project will improve disaster mitigation and climate adaptation by generating coastal vulnerability data in association with tropical cyclones and by implementing ecosystem-based adaptation.

74. **Mid-term Development Plan of Rote Ndao District 2019-2024.** One of the missions is to improve the quality and sustainability of infrastructure, spatial planning and environment. This project will support this mission by ensuring the quality and sustainability of the ecosystem through implementation of ecosystem-based adaptation.
75. **Mid-term Development Plan of Sabu Raijua District 2021-2026.** The project will contribute to the district's mid-term development plan target in improving sustainability and quality of environment that can support one of the Sabu Raijua' main agenda goals of develop the environment, improving disaster resilience and climate change

II. E. Compliance with National Technical Standards and Compliance with Environmental and Social Policy of the Adaptation Fund.

76. The project complies with national policies and regulations as follows:

77. Biodiversity Conservation and Sustainable Management of Living Natural Resources.

- **Law No. 5/1990 and amendment with Law No. 32/2024 on Conservation of Living Natural Resources and their Ecosystems.** This law is a reference on conservation of living natural resources and their ecosystems. The project will deal with marine conservation areas as well as marine and coastal ecosystems, small islands and preservation areas in the target villages of Sabu Raijua and Rote Ndao. The project also ensures compliance with the Law No. 32/2024 that includes collaboration with central government, local government and community as the responsibility and obligation and improvement of community welfare in coastal areas.
- **Law No. 1, 2014 on changes of Law No. 27, 2007 on Coastal and Small Island Management.** The law is a reference for national and local governments in managing coastal areas and small islands. The project focuses to improve climate resilience of coastal areas and small islands in Savu Seascape, particularly in Rote Ndao and Sabu Raijua districts.
- **Government Regulation No. 26 of 2020 on Forest Rehabilitation and Reclamation.** The regulation is a reference on general pattern, criteria and standard for forest rehabilitation and reclamation. Project activities will include rehabilitation of mangroves in coastal areas and will follow this regulation.
- **Minister of Marine Affairs and Fisheries Regulation No. 24/PERMEN-KP/2016 on Procedures for acquiring permits to manage Coastal Areas and Small Islands.** The regulation is a reference for national, local governments and the private sector in acquiring location permits and permits to manage coastal areas and small islands. The project activities in conducting ecosystem restorations and developing livelihood activities will follow this regulation.

78. Climate Change

- **Presidential Regulation No. 98, 2021 on implementation of carbon economic value; section 3 on Implementation of Climate Change Adaptation.** The regulation is a reference for the implementation of carbon economic value to reach the nationally determined contribution (NDC) by climate mitigation and adaptation. The project will follow the regulation particularly on implementation of climate adaptation strategies.
- **Ministry of Environment and Forestry Regulation No. 33/2016 on Guidance for Development of Climate Change Adaptation Action:** The regulation is a reference for national and local governments to develop their climate change adaptation action plan and subsequently mainstreaming the plan into corresponding development plan. The regulation stated area/sector identification that will be the subject should be followed by climate vulnerability and risk assessment before developing climate change adaptation actions and its

implementation priorities. The actions should be mainstreamed to the corresponding development plan, program and policy. The project will support the district governments of Rote Ndao and Sabu Raijua to develop the climate change adaptation action plans.

- **Ministry of Environment and Forestry Regulation No. P.84/MenLHK-Setjen/Kum.1/11/2016 about PROKLIM (*Program Kampung Iklim*); Directorate General of Climate Change Regulation No. P.1/PPI/SET/KUM.1/2/2017 about Guidelines to implement PROKLIM.** The regulations are a reference for the local governments to implement the climate village program (PROKLIM). The project will support the GOI in promoting the PROKLIM and will refer to these regulations.

79. Ecological Fiscal Transfer

- Government Regulation No. 12, 2019 on Regional Financial Management.
- Government Regulation No. 47, 2015 article 96 on changes of Government Regulation No. 43, 2014 about implementation of Law No. 6 2014 on Village.

80. Assessment and management of environmental and social risk impacts

- Law No 32/2009 on Environmental management and protection.
- Law No. 11, 2020 on Job Creation. Article 35 states that businesses and/or activities that are not required to be equipped with UKL-UPL as referred to in Article 34 paragraph (4) are required to make a statement of ability to manage and monitor the environment (SPPL).
- Government regulation No. 22/2021 on Implementation of environmental protection and management.
- Minister of Environment and Forestry Regulation No. 4/2021 on a list of businesses that require Environmental Permits (AMDAL, UKL-UPL and SPPL).

Most project activities are knowledge management and capacity building activities which do not require AMDAL/UKL-UPL. Project activity particularly construction of small hybrid infrastructure for ecosystem restoration will have the environmental permit (SPPL).

81. Indigenous People

- Minister of Home Affairs Regulation No. 52/2014 on Guidelines for the Recognition and Protection of Customary Law Communities.
- Minister of Environment and Forestry Regulation No. 17/2020 on *Adat*/Customary Forest and Private Forest. Guidelines for Recognition and Protection of *adat*/communal use of forest areas and resources within *adat* land and/or within the designated social forestry areas

82. Stakeholder Engagement and Information Disclosure

- Law No. 14/2018. Public Information Transparency, which guarantees the rights of citizens on public policy decisions and fosters public participation in such decision-making.
- Law No. 7/1984 Enactment of the Convention on the Elimination of All Forms of Discrimination Against Women.
- Law No. 8 of 2016 Inclusion of people with disabilities.
- Presidential Instruction No. 9/2000. Gender Mainstreaming in National Development emphasizes women's participation in development processes.

II.F. Duplication of Project with Other Funding Source

83. Currently, there is no duplication of this Project with other funding sources. No other regional government, corporations, and other development agencies/CSOs program/project is currently working on the same issue and at the same target location as proposed by the Project. However, the proposed project will fill the gap of the previous conservation and climate change projects in NTT

Province, especially in Savu Seascape. This AF proposed project will benefit from foundation laid down by previous project implemented by YAPEKA and other organizations in the region. Many of the potentials, skills, expertise and topics originating from previous projects can be facilitated and connected by this proposed project and can potentially upscale the overall benefits for the seascapes and communities.

84. The table below shows relevant conservation and climate change projects that were implemented in Sabu and Rote Island in NTT Province:

Table 14. Relevant conservation and climate change projects in Sabu and Rote Island in NTT Province.

Project Name	Location	Brief Description of the Project	Relevance to the Proposed Project
1. Strategic Action and Planning to Strengthen Action to Strengthen Climate Resilience of Rural Communities (SPARC) Project in NTT Province (2013-2018)	Sabu Raijua villages: Eimau, Tada, Ledekapaka, Molie, Lohohede, Gurimonearu and Eiada)	The SPARC project provided technical assistance to NTT province (including 7 villages in Sabu Raijua) by integrating climate resilience in rural development with a focus on livelihoods, food and water security.	The proposed project will focus on different target villages in Sabu island, while taking into account lessons learned from the SPARC project in climate resilience issues, particularly on livelihood and water security activities.
2. Arafuru and Timor Seas (ATSEA) (2010-2020)	Rote Ndao District: Nusa Manuk island.	The ATSEA project provided training and facilitated regional exchange on oil spill response and disaster management preparedness for selected local authorities and community representatives, in order to address pollution in the region.	The proposed project will use baseline data on climate resilience data and information produced from the ATSEA project to update climate vulnerability data and develop suitable EbA and livelihood activities.
3. Coral Reef Rehabilitation and Management (COREMAP) Project in Savu Sea (2020-2021)	Sabu Raijua and Rote Ndao districts	The COREMAP project focused on strengthening the effectiveness of conservation management and sustainable use of the Savu Sea National Park. YAPEKA was involved in implementing the project.	The proposed project will continually strengthen the capacity of village communities and district governments in implementing EbA, and expand the focus of project activities to ensure resilience of both coastal communities and ecosystems.
4. Voices for Just Climate Action (VCA) Project. (2021-2025)	Rote Ndao (Holulai, Sakubatun and Fuafuni)	The project objective was civil society groups including climate actors are recognized and supported as innovators, facilitators and advisors that are empowered and become strategic government partners; and project	This proposed project will continue and expand the scope of awareness and implementation of EbA, livelihood and integrating climate adaptation framework into climate policies.

Project Name	Location	Brief Description of the Project	Relevance to the Proposed Project
		activities were focused on advocacy and awareness.	

(see paragraph 32 to 39 for the strategic lesson learned from each projects, where YAPEKA is, or was participating)

II.G. Learning and Knowledge Management

85. Component 1 of the project: Knowledge Management focuses on knowledge generation, deposition and dissemination aspects. Main outputs from this component will be for generating information and knowledge and creating a repository of the knowledge and for using and sharing the knowledge for practices.
86. Project activities in this component will include Participatory Action Research (PAR) on socio-ecological system assessment and climate vulnerability in Rote and Sabu islands, which will update data and information to be used for developing climate adaptation action plans (RAD-API) at district level and for developing a policy brief on Integrated Coastal Management at provincial level in the Component 3. The PAR itself will include focus group discussions of multi stakeholder forums at district and provincial levels consisting of scientists and academia from various disciplines (from national and local universities), representatives of district and village government, women and vulnerable communities, and NGOs; and adopt a Transdisciplinary (TD) approach with the involvement of scientists from various disciplines, and government staff, conservation and community development practitioners and community.
87. In Component 1, the project will also establish climate field schools at village/sub district level to share knowledge and provide training on climate vulnerability and Ecosystem-based Adaptation practices - particularly in ecosystem restoration and on Locally Managed Marine Area (LMMA) for local communities. Establishment of field schools will involve expertise from the local university and the local government agencies at district level. Local communities participating in the training program will be involved in ecosystem rehabilitation activities and will become conservation cadres in facilitating the LMMA. Community groups from a village can share their lessons learned in implementing ecosystem restoration and LMMA to other community groups in other villages.
88. The project will also produce various communication materials on EbA and sustainable livelihood, and channel the communication materials through various media both digital (such as social media) and printed media mainstreams, as well as through information centers managed by BKKPN Kupang and local government. In addition, the project will facilitate media visits for journalists and influencers to project's sites to capture lessons learned from ecosystem restoration, LMMA and livelihood activities facilitated by the project. BKKPN will become the knowledge exchange hub connecting the stakeholders. Knowledge products generated by the project can be disseminated beyond the project boundaries and inspire others start EbA by themselves. Intersection with other sectors, such as disaster preparedness, village governance, food security, social development can surely benefit from the knowledge exchange process.
89. The project will develop a digital information platform (website base) as a knowledge repository platform and to share knowledge, lessons learned and tools particularly on EbA practices in small islands. This platform will be made accessible for public, coupled with offline awareness activities (i.e. Field School, campus event, community event) to optimize the knowledge transmission and its benefits. The digital information platform will be maintained by BKKPN Kupang as the authority for the Savu Sea Marine National Park in collaboration with YAPEKA.

II.H. Consultation Process

90. Consultative process has been conducted with stakeholders including government agencies at national and sub national levels, as well as women's groups and vulnerable communities as described below:

Table 15. Summary from consultation process during preparation phase

Consulted Stakeholder: Sub-Director of Climate Vulnerability Identification and Analysis, The Directorate General of Climate Change Control, the Ministry of Environment and Forestry (July 1, 2022). Consultation Technique: Discussion Gender disaggregation: 3 male; 2 female)		
Concern, needs	Inputs and opinion	Incorporation of findings into project design
Need to ensure that the project proposal should take into account government's policies and strategic planning on climate change.	The project is expected to have contributions/recommendations at national level particularly on climate adaptation strategy for the coastal area, small islands and marine sector.	The project is in line with the GOI policy on climate resilience and at national level will contribute to replicating the Village Climate Program (PROKLIM) and registering the project's site in the SRN.
Consulted Stakeholder : Agency for Marine National Conservation Area (BKKPN) Kupang Consultation Technique: Discussion Gender disaggregation: 8.male; 2 female		
Concern, needs	Inputs and opinion	Incorporation of findings into project design
The agency is concerned about the condition of degrading ecosystems in Rote and Sabu islands particularly due to the Seroja tropical cyclone that hit the area in 2021.	The project can improve the adaptive capacity of the ecosystems as well as coastal communities. BKKPN Kupang also encourages sustainable utilisation of coastal and marine resources by local communities.	The project activities will include coastal ecosystem restorations and encourage sustainable livelihood of coastal communities based on marine resources.
Consulted Stakeholder: Climate Adaptation Forum at NTT Province (June 29, 2022) Consultation Technique: FGD Gender disaggregation: 18 male; 6 female		
Concern, needs	Inputs and opinion	Incorporation of findings into project design
The forum is concerned about the implementation of the PROKLIM (climate village) program	The province of NTT is willing to contribute to the achievement of the national target: 20,000 PROKLIM villages. The proposed project will strengthen the capacity of district and village governments in implementing the PROKLIM program.	The project activities at village level will be in line with the PROKLIM program, especially in integrating coastal ecosystem rehabilitation, LMMA and livelihood activities into village development planning.
Consulted stakeholder: Climate Adaptation Multi Stakeholder Forum at Rote District. (May 31, 2022) Consultation technique: FGD Gender disaggregation: 13 male; 7 female		
Concern, needs	Inputs and opinion	Incorporation of findings into project design
The forum concluded that Rote Ndao district is	The forum also identified sites/villages that required climate	The project will also facilitate the development of an EFT scheme to

vulnerable to climate hazards, especially the vulnerable groups in coastal areas including women; and climate adaptation measures are needed.	adaptation activities. In addition the forum also identified the need to have financial support from the government through ecological fiscal transfer mechanism.	ensure financial support for climate adaptation activities.
Consulted Stakeholder: District Agency for Environment, Rote Ndao (May 31, 2022) Consultation technique: Discussion Gender disaggregation: 16.male; 4 female		
Concern, needs	Inputs and opinion	Incorporation of findings into project design
The agency has a mandate to decrease greenhouse gas emission in addition to climate adaptation.	Restoration of the mangrove ecosystem as an ecosystem-based adaptation practice will also have potential for carbon sequestration and to offset greenhouse gas emission.	Project activities will include EbA practices including mangrove restorations and management. This will have environmental co-benefits in offsetting GHG emission.
Consulted Stakeholder: District Government BAPPELITBANGDA, DLHK Sabu Raijua (May 24, 2022) Consultation Technique: FGD Gender disaggregation: 3.male; 2 female		
Concern, needs	Inputs and opinion	Incorporation of findings into project design
Some concerns identified are the need to develop ecotourism to support the current district's mid-term development plan especially in improving sustainability and quality of environment. In addition, coastal abrasion has also been also the major concern in Sabu island that might be caused by sea level rise and other anthropogenic threats.	It is expected that the project will focus on sustainable use of coastal ecosystems.	The project will focus on rehabilitating and managing coastal ecosystems including in Sabu; The project also takes into account ecotourism activity as part of Eba and to improve community livelihood.
Consulted Stakeholder: Women's group in Rote Multi Stakeholder Forum (May 21, 2022) Consultation Technique: FGD Gender disaggregation: 14 male; 6 female		
Concern, needs	Inputs and opinion	Incorporation of findings into project design
Women's roles are limited and constrained by unjust gender proportion; male is dominating the group activities (i.e., Mebba, Lobo Rai village)	The project should be able to promote more women participation and access to decision making; The project should discuss with community leaders (i.e., manoholo – case in Rote Ndao) about gender role discrepancy and seek for culturally appropriate solutions	The project will consider gender balance and address gender issues in conducting socio-ecological assessment, ecosystem restoration and management and livelihood activities. The project will also take into account gender issues in preparing climate adaptation action plans.
Women are sometime occupied with work (assist husband as breadwinner) in	More livelihood options/diversification to reduce women burden; Future project	Livelihood activities in the project will take into account more livelihood options to reduce

the field and lack of time to manage household i.e., children higher risk to stunting	should contribute to improve protein intake/food diversification especially for infant/children	women's burden.
Areas for gleaning (foraging in the intertidal flats) become less available. TC Seroja changes the condition (Holulai, Oelua and Lobo Rai)	Future project should contribute to revive the situation and help to seek for solution	Coastal ecosystem restoration will ensure sustainability of ecosystem services including for areas for gleaning.
Getting water sometime are cumbersome for women, especially dry season	Future project should contribute to reduce the burden	The project will provide community grants for climate resilience and sustainable livelihood initiatives from the community. The grants can be used to address climate resilience on water resources.
Consulted Stakeholder: Underprivileged group in Holulai Village, Rote Ndao (May 27, 2022) Consultation Technique: FGD Gender disaggregation: 8 male; 5 female		
Concern, needs	Inputs and opinion	Incorporation of findings into project design
Disadvantaged people are often excluded in the decision-making process, particularly during village planning.	Create more consultation process, involving underprivileged groups; Project should prioritise underprivileged group	Project activities will include facilitation of village/community meetings and ensure inclusive participation of communities.
Food supplies are just enough, no opportunity to improve the dietary composition. There are provisions of subsidies from the government but not enough.	The future project should contribute to establish food security	Livelihood activities in this project will strengthen food security.
There are concern about insufficient fishing gears and their boat cannot cope longer distance/time to fish	The program should contribute to improve fishing activities	Ecosystem restoration and management will ensure sustainability of ecosystem services including for fishery.
Consulted Stakeholder: Traditional groups in Sabu Raijua (May 24, 2022) Consultation Technique: FGD. Gender disaggregation: 9.male; 5 female		
During some projects in the past, traditional practices/rituals are misplaced/much simplified; consultation processes are limited.	Future project should better involve traditional groups; more consultation needs to be made	The project will take into account traditional practices in conserving ecosystem resources.

91. A detailed stakeholder engagement plan that outlines the specific roles of each partner, the communication strategies to be conducted, and how stakeholder feedback will be incorporated throughout project implementation is provided in Annex 13.
92. Consultation process addressed safeguard measures and potential impacts, especially for vulnerable groups, including women's groups, traditional groups in Sabu Raijua and underprivileged group in Rote Ndao. Summary of results during consultative process can be seen in Table 10. The consultation issues

addressed included promoting women and vulnerable/traditional groups in decision making processes, improving livelihood and revitalizing traditional practices in conserving ecosystem resources.

II.I. Justification for Funding Request

93. The table below describes the adaptation reasoning by highlighting the differences between the 'without project' scenario and the 'with project' scenario with regards to the achievement to project outcomes.

Table 16. Justification of project intervention

Project Outcome	Without Project	With Project
Outcome 1: Improved awareness of adaptation and climate change-related hazards affecting coastal communities	Coastal communities have limited information on climate adaptation and climate change related hazards affecting their livelihood and environment.	Diverse IEC tools and materials, including digital platform on EbA for knowledge exchange produced by the project, News outlets in the local press and media that have covered Climate Change and EbA topics, Updated climate vulnerability data at village level will improve information access to coastal communities. Climate-EbA Field Schools as a learning forum at village level will be a tool to disseminate information and awareness to climate change issues.
Outcome 2: Vulnerable ecosystems strengthened in response to climate change impacts, including variability.	Seaward mangrove formations are degraded and fragmented caused by extreme weather; landward mangrove formations under pressure from land conversion and unsustainable use; Coral reef ecosystems are damaged by extreme weather and coral bleaching events; Rehabilitation process is absent, relying only on natural fecundity capacity; declining fishes for small scale fishermen; Traditional communities and traditional practices are rarely connected with EbA activities	EbA practices are implemented to protect coastal and small island ecosystems., including coastal, benthic and water source ecosystems (rehabilitation & protection of mangrove, coral reefs, seagrass), which will strengthen the coastal ecosystems resilience. 30,3 km of coastal zones are better managed. 10 villages participate in better coastal management through EbA activities, locally managed marine areas (LMMA), improving ecosystem resilience. Coastal management will also involve village and district governments. More traditional practices are integrated into EbA schemes (e.g., dea batu, papadak, hoholok); traditional communities are more involved in the EbA activities.
Outcome 3:	Gleaning areas in intertidal seagrass zones	Seagrass rehabilitation activities assist

Project Outcome	Without Project	With Project
Communities including women and vulnerable groups with improved and diversified livelihoods	which are an important source of food and income by local communities are damaged by extreme weather; Coastal communities, mainly small-scale fishers (most of them underprivileged) are relying on fishing activities as livelihood; fish resources declining due to habitat degradation and overfishing; Women participation in EbA activities are limited	seagrass ecosystem recovery and gradually improve food systems for gleaning; more protein source choices from animals associated with seagrass; More options of EbA-based sustainable livelihood activities, including integration with village enterprise (BUMDES); coastal social-ecological systems are more resilient.
Outcome 4: integration of climate change adaptation framework into relevant policies and program	Savu Seascape management is limited, mainly relying on BKKPN Kupang role only, in which resources are dispersed thinly in the vast Savu Sea and cannot reach the desired effectiveness; PROKLIM (climate resilient village, government program) is not gaining traction progressively due to massive relocation of funds to pandemic control efforts.	30,3 km of coastal zones are better managed; 10 villages participate in better coastal management through EbA activities, locally managed marine areas (LMMA), improving ecosystem resilience; Coastal management will also involve village and district governments; Coastal villages are facilitated to prepare PROKLIM registration; Climate Change Adaptation Action Plans (RAD-PI) for Sabu and Rote districts; RPPM for continuation of mangrove EbA actions; Inclusion of seagrass and coral reef EbA actions into Savu Sea Management Plan; Strategy to improve climate funding opportunities.

94. Project outcomes will be achieved by conducting project activities that require funding from the Adaptation Fund, as currently the government at district level has limited climate adaptation budget allocations. The Climate Adaptation Action Plan to be developed at district level in this project is expected to be a baseline to allocate climate adaptation budget for the future medium term.

II.J. Sustainability of Project Outcomes

95. The project strategy to ensure sustainability of the project outcome 1 (improved awareness of adaptation and climate change related hazards affecting coastal communities) includes building social capital by strengthening social networks and relationships within the community which can enhance the ability to share knowledge, resources, and responsibilities. The project will work with existing community groups including traditional community groups in conducting climate vulnerability assessment and in implementing EbA activities. Existing multi stakeholder fora at district and provincial level such as DKPPNTT and KKMD will continue the facilitation process after the project ends. IEC tools including digital platforms for knowledge exchange on climate change and EbA topics will be maintained by YAPEKA and will be carried on by BKKPN Kupang to ensure the sustainability of

their uses. The local government of Rote and Sabu will also be encouraged to maintain the digital platform.

96. The project will also encourage active participation and engagement of community members in climate change adaptation efforts which can increase awareness, knowledge, and adoption of climate-resilient practices. Engaging local communities and stakeholders in the participatory action research to update climate vulnerability data at village level can help ensure that this tool is well-suited to local needs and priorities and can help build local ownership. Results of the climate vulnerability studies are integrated into the district's climate adaptation action planning process, which helps these tools be used consistently and effectively over time. The establishment of Climate-EbA Field School to improve knowledge and skills in accessing and interpreting climate-extreme weather information also ensures the communities will have better knowledge on climate change and can use the knowledge to increase their resilience against climate change. BPBD NTT and BMKG will continue the Field School after the project ends, as part of their outreach program, working together with the village government.
97. The sustainability of EbA practices at village level will be established by engaging local community groups in implementing protection and restoration of coastal ecosystems, climate smart agriculture and protection of water resources. Because the projects use local materials, and the projects also ensure the skills of local people are developed, these EbA practices can be adopted and replicated easily. The project will also ensure to integrate the protection and restoration activities into village and local government climate action plans, such as Mangrove Protection and Management Plan (RPPM) at district level as well as supported by local/village regulations and customary law. The RPPM is integrated with coastal ecosystems, climate smart agriculture and protection of water resources which will continually being implemented in the future. The project will also coordinate with the Provincial Mangrove Working Group (KKMD) especially on mangrove rehabilitation and conservation to ensure provincial support on mangrove protection and management at target villages. The coral reef rehabilitation and seagrass transplantation will be continued by BKKPN as part of their duty to manage Savu Sea.
98. With regard to livelihood outputs and outcome, the project will ensure their sustainability by conducting rapid local market assessments on products from potential livelihood opportunities at target villages. The project will also strengthen the capacity and skills of communities in implementing diversified livelihoods by providing training and supporting regulations and permits. Diverse community livelihood business models developed by this project which will contribute to the improved economy of the local community, take into account local market and value chain viability that will be assessed prior to livelihood business incubation to ensure economic sustainability of livelihood and economic activities. The project will also strengthen the link of livelihood activities generated by the project with existing village business units (BUMDES) or cooperation as well as relevant local government agencies to continuously support the livelihood generated by the project.
99. The other project will integrate climate change adaptation framework into relevant policies. This exit strategy will include development of Climate Change Adaptation Plan at district level, an integration of EbA practices, particularly on mangrove rehabilitation and protection with the District Mangrove Protection and Management Plan (RPPM), and adaptation action plan at village level through PROKLIM. The project will produce policy briefs to strengthen climate resilience in both Sabu and Rote islands.

II.K. Overview of Environmental and Social Impacts and Risks as Being Relevant to the Project

100. YAPEKA has conducted self-assessment of compliance with the Adaptation Fund Environmental and Social Policy which include the management of potential impacts and risks that are described in Section III.C: Measures for Environmental and Social Risk Management. Further assessment and management required for compliance on Gender equality and women's empowerment has been conducted and reported in Annex 8.

101. Below are the screening results of project activities on potential environmental and social impact and risks, based on the checklist of environmental and social principles.

Table 17. Environmental & Social Screening result

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>		
<i>Access and Equity</i>		
<i>Marginalized and Vulnerable Groups</i>		
<i>Human Rights</i>		
<i>Gender Equality and Women's Empowerment</i>		
<i>Core Labour Rights</i>		
<i>Indigenous Peoples</i>		
<i>Involuntary Resettlement</i>		
<i>Protection of Natural Habitats</i>		
<i>Conservation of Biological Diversity</i>		
<i>Climate Change</i>		
<i>Pollution Prevention and Resource Efficiency</i>		
<i>Public Health</i>		
<i>Physical and Cultural Heritage</i>		
<i>Lands and Soil Conservation</i>		

102. Most of the project activities are about knowledge management, implementation of ecosystem-based adaptation and ecosystem service-based livelihood, and capacity building that are unlikely to have adverse environmental and social impacts. The Project risks are fewer in number, smaller in scale and less widespread; and easily mitigated. Therefore, the project should be categorized as Category B (see Environmental & Social Management Plan/ESMP of this project in separate file in Annex 2).

Gender and Vulnerability Context

103. With regards to the gender policy of the Adaptation Fund, a preliminary assessment of gender and vulnerable group context in the project sites has been conducted, and the findings are as follows:

104. In Sabu and Rote, the population ratio between men and women is 51% Male and 49% Female, thus there are about 4,021 male and 3,848 female in villages in Rote and 4,863 male and 4,651 female in villages in Sabu.

105. Gender vulnerability to climate change in both Sabu and Rote islands is a significant issue that affects women and men differently. Gender and Social Inclusion Assessment Report at 5 proposed project sites shows that women and men have different capacities in adapting to the adverse effects of Climate Change. The difference in needs, capacities, and societal roles lead to differing impacts of Climate Change on both sexes and exacerbate ongoing gender inequality. There is gender segregation in productive, reproductive, and public roles, resulting in inequality in power relations between women and men, especially in terms of access to marine and fishery resources in both Rote and Sabu islands; Women have limited access to resources such as land, water and credit which can affect their ability to adapt to climate change and cope with its impacts.
106. The pattern of traditional structure in the two districts is patrilineal-patrilocal, familial relations are calculated according to the male lineage, considering men to have a higher degree than women. With this structure of society, women lack a place in the public space to voice their rights. In addition, women and men tend to engage in different jobs in the fishery sector, with different results. In the seaweed farming community, men and women share the same jobs but do not have the same financial independence. Women have a more diverse alternative livelihood than men that correspond to their greater varieties of productive activities. Women tend to be less involved among the authorities and generally underrepresented in local decision-making structures in village and district levels. Compared to their male counterparts, women also struggle to gain access to natural resources, contributing to power imbalances that make them more vulnerable to the impacts of climate change and environmental degradation.
107. In this project women's participation in climate adaptation will be strengthened. Women will have better access in decision making of planning and managing coastal resources. Women will have improved access to resources in developing livelihood for climate resilience. EbA and livelihood activities will focus to improve knowledge, skills, and access of women to develop livelihood and income generating activities. The project will also encourage women to participate in training and focus group discussions/workshops to express and contribute their ideas. The project will also amplify voices and participation of women by documenting and sharing meaningful participation of women in project activities.
108. Traditional communities living in the target coastal villages are mostly poor families and vulnerable to climate change. They are mostly dryland farmers who depend their agriculture land to limited water resources; and small-scale fishers who operate and manage fishery activities on a household basis, fishing with or without a fishing boat of <5 GT (Gross Tonne) and using fishing gear that is operated by manpower alone. Both dryland farmers and small-scale fishers have limited access in managing natural resources. However traditional practices in managing coastal resources still exist such as Hoholok and Papadak and Dea Batu. These traditional practices and customary law are opportunities in strengthening conservation and sustainable use of coastal ecosystems such as mangrove, coral reef and seagrass bed.
109. The project will strengthen the resilience of coastal ecosystems by strengthening customary law and institutions for climate adaptation and sustainable practices. The project will train traditional communities in revitalizing customary law and traditional knowledge for climate adaptation. Project activities will include restoring degraded ecosystems and establishing LMMA, where small-scale fishers and their traditional practices can be involved and strengthened. In addition, livelihood activities will provide opportunities for the vulnerable and marginalized communities in generating more sustainable income.

PART III: IMPLEMENTATION ARRANGEMENTS

III.A. Arrangements for Project Implementation

110. The Implementing Entity of the project will be the Partnership for Governance Reform in Indonesia (Kemitraan) and the Executing Entity will be YAPEKA consortium; lead by YAPEKA, while Yayasan Penabulu and CTSS-IPB as consortium members. YAPEKA and the consortium members will establish a Steering Committee (SC) and a Project Execution Unit (PEU).
111. The Executing Entity will be responsible for managing the execution of project activities, responsible for achieving target indicators and financial disbursement. The main role of the executing entity includes preparing the work plan and annual budget, M&E tools and guidelines, ESMP, SGIP and other Stakeholder Engagement Plan; development of communication protocol, recruitment of Project Execution Unit (PEU) staff and coordination arrangement with the Steering Committee. The Executing Entity will establish and oversee the PEU in executing project activities, managing sub-projects, monitoring and evaluation and financial disbursement monitoring.
112. The Steering Committee (SC) consists of representatives of consortium members and representatives of the national and local government and will oversee the entire Project implementation to ensure that project results are achieved and contribute to the Adaptation Fund Strategic Result Framework. The SC will provide technical guidance for the PEU for the Project implementation. The SC will hold regular meetings to evaluate the performance of the PMU.
113. The Project Execution Unit (PEU) will be led by a Project Manager/Project Team Leader and supported by Finance and Operation Manager and M&E Manager. Experts/Consultants, Community Organizers will be recruited based on project activity needs.

Table 18. Project Execution Unit

Position	Roles and Responsibilities
Project Manager/ Team Leader	● Prepare an annual work plan and provide guidelines for consultants/experts and project staff to execute the work plan. ● Prepare TORs for project consultants/experts. ● Provide inputs on project budgeting. ● Ensure achievement and quality of project results. ● Oversee the implementation of project activities and ensure compliance with project guidelines. ● Responsible for preparing project progress and final report; and ensuring good quality of project activity reports. ● Ensure and maintain project teamwork. ● Develop coordination with the local government and other stakeholders. ● Provide regular updates to the steering committee and donors when required.
Finance & Operation Manager	● Responsible for the overall operations of the project, including developing guidelines and SOPs for project staff. ● Work with the Project Manager to prepare the annual budget. ● Monitor budget disbursement and prepare financial reports. ● Ensure operational and administration support to consultants/experts. ● Supervise procurement of goods and services.

	● Manage project administration documents.
M&E Manager	● Develop M&E strategy and plan. ● Lead M&E supervision missions. ● Document project progress vs target indicators ● Ensure compliance of ESMP and SGIP. ● Monitor and measure KM effectiveness ● Assist the Project Manager in preparing progress reports. ● Provide guidelines for project evaluation. ● Ensure alignment with government regulations
Consultants/ Specialists	● Responsible for carrying out specific tasks (e.g. implementation of EbA, Livelihood, capacity building, etc.) that will be written in the TORs. ● Prepare activity and progress reports. ● Provide technical assistance in implementing project activities.
Provincial Coordinator	● Responsible for providing direct supervision to the village facilitators. ● Coordinate project activities to be implemented at provincial, district, and village level. ● Develop coordination and communication with local government and other local stakeholders. ● Compile progress report from village facilitators.
Village Facilitators/ Community organizers	● Organize the implementation of project activities at local and village levels. ● Develop coordination and communication with the local and village government and other stakeholders for smooth implementation of project activities. ● Facilitate workshops, training, FGDs with local stakeholders and communities/villages. ● Provide technical facilitation for EbA and livelihood activities.

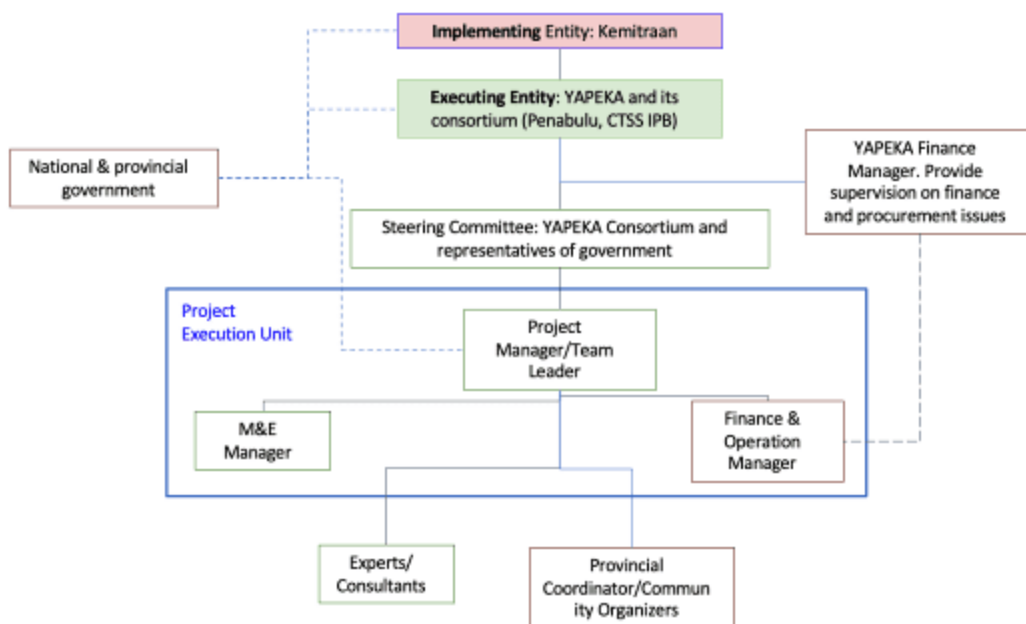


Figure 13 : Project Organization Structure

114. At national level, the project will develop coordination with the Directorate General for Climate Change Control (Ditjen PPI) of the Ministry of Environment and Forestry, and BKKPN Kupang, the Ministry of Marine and Fishery; Especially for mangrove rehabilitation, the project will seek guidance and coordination from the Directorate General for Water Catchment and Land Rehabilitation (Ditjen PDASRH). At provincial and district level the project will coordinate with BAPPEDA (the local agency of planning and development) and other relevant agencies such as the local agency of forestry (Dinas Kehutanan), the local agency of fishery (Dinas Perikanan), and the local agency for Disaster Mitigation (BPBD).
115. YAPEKA and its consortium will optimize the project operations at field level in Rote and Sabu islands by maintaining and developing existing networks with local NGOs/CBOs and conservation cadres in the islands to be part of the implementation of the project at field level.

III.B. Measures for Financial and Project Risk Management

116. Key Financial and project operational risks and mitigation measures identified at this stage are as follows:

Table 19. Risk, Mitigation and Person Incharge during project implementation

Risks	Mitigation measures	PIC
Financial Risks		
1. Miss-use of funds/fraud	- Implement YAPEKA's Guidelines for anti-corruptions and grievance mechanisms. - Implement SOP on financial management and accounting systems. - Minimize cash transfers and cash advances. - Internal and external audit.	YAPEKA Chairman
2. Lack of financial management capacity of NGOs partners/ sub-grantee.	- Training on financial management for NGO partners/community groups. - Conduct financial and administration monitoring/audit.	Project Manager
Project Operational Risks		
1. Disagreement among consortium members	- MoU and implementing arrangement agreed and signed by consortium members in advance. - Facilitate frequent coordination meetings among consortium members.	YAPEKA Chairman
2. Unreliable means of transportation to access project locations (Rote and	- Regularly update local weather reports prior to travelling to Rote and Sabu islands. - Optimize coordination via telephone/internet. - Optimize and delegate the local Rote and Sabu team	Project Provincial Coordinator

Risks	Mitigation measures	PIC
Sabu islands) due to bad weather in Savu Sea.		
3. Varied and inconsistent level of participation of stakeholders.	- Prepare a stakeholder engagement plan. - Layering approaches and tailored approaches to specific needs of stakeholders when necessary	Project Manager
4. Complaints/feedback from beneficiaries, stakeholders, public	- Grievance and accountability mechanisms in place and shared with stakeholders include handling complaint units.	Project manager

III.C. Measures for Environmental and Social Risk Management, In Line with The Environmental and Social Policy and Gender Policy of the Adaptation Fund.

117. Below (Table 20) is the project self-assessment of compliance with the Adaptation Fund Environmental and Social Policy and measures for environmental and social risk management. In accordance with project preparation phase, we have consulted with wide range of project stakeholders from national level, provincial-district levels and the village level. Stakeholder consultation was conducted during gender and social inclusion assessment during 12-22 August 2023 in five target villages, which include district government, local government officials, community groups, and local NGO. Detailed action plan Social Inclusion and Gender Action Plan available in Annex 2, 3, and 4.

Table 20. Self-Assessment - Risk Rating and Compliance to Adaptation Fund Environmental and Social Policy

Risk and risk rating	Mitigation Measures	PIC
Compliance with the Law		
According to Ministerial decree 5/KEPMEN-KP/2014 all project sites in marine areas are located within the Traditional Sustainable Fishery Zone. Therefore, project activities are in line with zone regulation. (Risk: Negligible) According to NTT Governor Decree No 1/2011 regarding Spatial Planning 2010-2030, The project target village locations are not overlapped with conservation areas like national park, nature reserve or wildlife sanctuary. Development in those areas require a specific license from	The Project will continue to remind community groups to avoid use of illegal fishing gear and illegal activities. The project will maintain close communication with BKKPN Kupang as Savu Sea Marine NP management. Produce project map showing that project locations are within the Traditional Sustainable Fishery Zone. The project will maintain close communication with BKSDA about the project EbA activities to ensure legal compliance. Produce project maps outlining specific land use plan according to Governor Decree No 1/2011, showing no	Project manager

Risk and risk rating	Mitigation Measures	PIC
BKSADA – MOEF. (Risk: Negligible) According to NTT Governor Decree No 1/2011 regarding Spatial Planning 2010-2030, some project activities will be done in protection of coastal zone or “sempadan pantai – kawasan lindung” thus hard infrastructure will require specific permit to build (Risk: Low)	overlap between project sites and conservation area in terrestrial zone. Although projects include provision of EbA instruments such as construction of sediment trap for living coastline, this infrastructure is not a hard infrastructure and is considered as green infrastructure. The project will consult further with the Office of Forestry and Environment (DLHK) or Office of Marine and Fishery Affairs (DKP). Based on the instrument's small scale and when necessary, the project can obtain environmental management documents for small infrastructure (UKL-UPL or SPPL).	
<i>Access and Equity</i>		
Beneficiaries of the Implementation of EbA and livelihood activities at village level might be influenced by local elite capture and cause unfair and inequitable access for the community to receive project benefits. Some project stakeholders might be reluctant to voice their concerns if a local leader(s) or respected person(s) present in the discussion. (Risk: Low)	The project will implement a consistent participatory and social equity framework; create specific consultation to the women and underprivileged groups; involve village representative boards in planning and implementation.	Project Manager
Process to allocate access to the project might not be transparent and not well coordinated with stakeholders; Selection of locations/villages for the implementation of EbA and livelihood activities might trigger jealousy among other villages (Risk: Low).	The project will prepare and disclose a Stakeholder Engagement Plan; and coordinate selection of locations/villages for the implementation of EbA and livelihood activities with the local government and other relevant stakeholders	Project Manager Provincial Coordinator
<i>Marginalized and Vulnerable Groups.</i>		
Marginalized and vulnerable groups might have limited access to participate in the project implementation. Most coastal communities are poor and marginalized small-scale fishers who are operating and managing fishery on a household basis and with limited fishing gear. Small scale fishery depends on ecosystem services provided by mangroves, coral reefs and seagrass. Degradation of these ecosystems will lead to decrease of fishery productions	The project is focused on the participation of marginalized and vulnerable groups in strengthening climate resilience including sustainable livelihood activities as well as in EbA activities. The project will identify marginalized and vulnerable groups in project locations, prepare and implement a social-gender inclusion plan (SGIP) and will provide training for the marginalized and vulnerable groups on alternative livelihood activities and participate in planning and managing coastal resources. The project	Project Manager Provincial Coordinator M&E Specialist

Risk and risk rating	Mitigation Measures	PIC
Limited understanding the rights of elderly, people with disabilities, are generally found in the project areas and mentioned during consultation process- especially in the climate change context (Risk: Low-medium).	will encourage marginalized/vulnerable groups to participate in project activities, document meaningful participation of marginalized/vulnerable groups in project activities. Strengthen the capacities of government, CSOs and NGOs to involve and address the rights and needs of people with disabilities in programs, policies, and plans. The project will outline this aspect during government discussion events, i.e. RAD-API workshops to connect them with available support group	
<i>Human Rights</i>		
The project does not trigger human rights issues. (Risk: Negligible).	-	
<i>Gender Equality & Women's Empowerment</i>		
Assessment of Gender and Social Inclusion found that Women and men had different capacities in adapting to the adverse effects of Climate Change. The difference in needs, capacities, and societal roles lead to differing impacts of Climate Change on both sexes and exacerbate ongoing gender inequality; Women tended to be less involved among the authorities and generally underrepresented in local decision-making structures in village and district levels. Compared to their male counterparts, women also struggled to gain access to natural resources, contributing to power imbalances that make them more vulnerable to the impacts of climate change and environmental degradation. Women might have limited access or neglected to participate in the project implementation (Risk: Medium).	The project has conducted Assessment of Gender and Social Inclusion during the preparation of project proposal. Based on the assessment, in this project women need to have better access in decision making of planning and managing coastal resources. EbA and livelihood activities will focus to improve knowledge, skills and access of women to develop livelihood and income generating activities. The project will also encourage women to participate in training and focus group discussions/workshops to express and contribute their ideas. The project will also amplify voices and participation of women by documenting and sharing meaningful participation of women in project activities. The project will prepare and implement a social-gender inclusion plan (SGIP), encourage women to participate in project activities and document meaningful participation of women in project activities.	Project Manager Provincial Coordinator M&E Specialist
<i>Core Labor Right</i>		
The project does not trigger core labor rights issues. (Risk: Negligible)	-	
<i>Indigenous People</i>		

Risk and risk rating	Mitigation Measures	PIC
There are no indigenous people in Sabu and Rote Islands. Communities originate from other islands. (Risk: Negligible)	-	
<i>Involuntary Settlement</i>		
The project does not trigger any involuntary settlement. (Risk: Negligible)	-	
<i>Protection of Natural Habitats</i>		
Project activities will focus on implementation of Ecosystem-based Adaptation (EbA) which will protect and enhance critical and natural habitats such as coastal ecosystem restoration and Conservation, and Climate Smart Agriculture through water resource protection. The project will also promote sustainable use of natural ecosystem's goods and services including by developing ecotourism. However, some livelihood activities might deprive natural habitats (Risk: Low)	The project will continuously promote sustainable use of natural resources, including ecosystem's goods and services such as by developing ecotourism and sustainable aquaculture outside the critical and natural habitats. The project will also conduct environmental and social assessment and use legal materials in constructing hybrid infrastructure.	Project Manager Provincial Coordinator M&E Specialist
<i>Conservation of Biological Diversity</i>		
In general, the project will not have a negative impact on endangered, vulnerable and protected species as defined in the IUCN Red List and Indonesia's wildlife protection status, but the project focuses to protect the occurrence of those species through establishing LMMA or OECM. Some ecosystem-based livelihoods might disturb the biological diversity of coastal ecosystems if only focused on a single source of livelihood. E.g. only target grouper fish to develop small-scale fisheries might deplete grouper stocks in the wild (Risk: Low)	The project will conduct viability assessment of ecosystem resources; establish no-take zone and/or local regulation in utilizing the resources; Diversify the livelihoods to utilise multiple species rather than limited species; and avoid promoting species that fall under ETP (endangered, threatened, protected) category; and use native species for ecosystem rehabilitation and livelihood activities and avoid introduction and spread of invasive species.	Project Manager Provincial Coordinator M&E Specialist
<i>Climate Change</i>		
Project activities do not contribute to climate change as project activities do not have land clearing activities and use a considerable amount of energy from fossil fuels. The project also encourages the use of renewable energy such as solar panels to be used for production of fishery products for livelihood and ecotourism	-	Project Manager Provincial Coordinator M&E Specialist

Risk and risk rating	Mitigation Measures	PIC
activity. (Risk: Negligible-).		
Pollution Prevention and Resource Efficiency		
Project activities in the field might impact soil pollution due to improper disposal of waste, such as unused polybags for mangrove rehabilitation, disposal of waste to the sea, improper waste disposal in ecotourism activity. (Risk: Low)	The project will promote the use recyclable mangrove poly-bags (e.g made of palm leaves), and proper unused plastic waste disposal; For coral rehabilitation the project will use locally sourced materials; avoid/minimize plastic structure for growth substrate and fixing the artificial substrate into the sea floor to avoid loose materials. The project will prepare guidelines for waste management in ecotourism areas and livelihood activities, and brief community groups implementing ecotourism and other livelihood activities on guidelines to manage the waste, proper waste disposal.	Project Manager Provincial Coordinator M&E Specialist
Public Health		
Project activities do not trigger public health issue (Risk: Negligible)	-	N/A
Physical and Cultural Heritage		
Project activities do not remove or trigger negative impact on cultural heritage. The project will strengthen customary law to protect natural resources. (Risk: Negligible).	-	N/A
Lands and Soil Conservation		
Project activities do not have a negative impact on land and soil conservation as project activities will not cause land/soil erosion. (Risk: Negligible).	-	N/A

III.D. Monitoring and evaluation arrangements including budgeted M&E plan.

118. The project Monitoring and Evaluation will focus on ensuring project progress and achievement of project results, compliance with all national laws and project partner policies, compliance to the Adaptation Fund Environmental and Social Policy and the Gender Policy of the Adaptation Fund. Below is the description of M&E arrangement and a table showing the M&E component budget of the project.

119. Under this component, the project will conduct several M&E activities as follows:

- **Prepare M&E Tools for the project: a detailed M&E plan, Environmental and Social Management Plan (ESMP), Social Gender Inclusion Plan (SGIP), Grievance Mechanism, and**

Stakeholder Engagement Plan (SEP). The project will recruit M&E Consultant to prepare, ensure implementation and evaluate M&E plan, ESMP and SGIP, Grievance Mechanism, and SEP.

- **Conduct KAP surveys and Mid-Term Evaluation.** Knowledge, Attitude and Practices Surveys will be conducted to measure immediate impacts of the project, while Mid-term Evaluation will evaluate project progress and adjust/refocus project activities when required.
- **Conduct joint monitoring and evaluation missions.** The project will conduct regular joint monitoring and evaluation missions, participated by project's stakeholders. The M&E mission will be conducted every six months of project implementation, to review project progress, compliance, quality, and identify any systemic issues as well as to document recommendations for corrective actions.
- **Prepare progress reports (quarterly and annually).** The project will prepare progress reports on a quarterly and annual basis. The progress report will include progress of project implementation based on agreed key performance/target indicators, SGIP, and ESMP, and budget disbursement.
- **Final report.** The project will prepare a final implementation report that provides a comprehensive summary of the objective, outcome, output, activities achievement and challenges during the project. Final reports also provide lessons learned and concrete evidence of the impact on the targeted beneficiaries (community), environment and can be used for advocacy or evidence-based policy recommendations for the sustainability after project completion.

120. M&E Plan is shown the table below:

Table 21. M&E Plan

M&E Activities	Methods & Tools	Responsible	Target/Deliverables	Cost (USD)	Source	Time
KAP Baseline and Endline Survey	- Field survey - FGD, interviews with targeted beneficiaries - Participatory observation	Project Manager	Baseline Data Report	26,944	Project Execution Cost	Within first three months upon sign of agreement
Monthly Review	- FGDs/meetings - Interviews with technical support	Project Manager	PMU's monthly reports	-	-	Monthly (Every month)
Quarterly Report: Supervisions/ Monitoring EbA implementation	- FGDs/meetings - Interviews with PMU - Field Visit (interview with beneficiaries, observation) - Supporting document review - Financial analysis	- IE - Project Director	- Quarterly Reports (6x) - Quarterly Financial Reports (6x)	31,863	Project Execution Cost	Quarterly (every 3 months)
Annual Report: Mid-term review	- FGD/meeting - Interviews with PMU - Field Visit (interview with beneficiaries, observation) - Supporting document review - Financial analysis	- IE - Project Director	- Annual Project Report - Annual PPR - Annual Financial Report	8,892	Project Execution Cost	By the end of the first-year project dates (12 th month)
Final Project Review: Exit Strategy	- FGD/meeting/workshop - Interviews with PMU - Field Visit (interview with beneficiaries, observation) - Supporting document review	- IE - Project Director	- Final Project Report - PPR - Final Project Financial Report	10,853	Project Execution Cost	By the end of project dates (24 th month) Due date: 6 months

	• Financial analysis					after closing
Audits	• External audit • Financial report analysis	• IE	Audit report	14,905	Project Execution Cost & Implementing Entity Fee	At least 9 months after closing
Total M&E Cost				93,457		

III.E. Result Framework

Table 22. Project Result Framework

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
Project Outcome 1: Improved awareness of adaptation and climate change-related hazards affecting coastal communities	● Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	0	60 % 288 persons M: 190 F: 98	● KAP Survey report	Risk ● The outcome may not necessarily translate into action or behavior change. It is not sufficient to ensure that communities take action to adapt to climate change and reduce their vulnerability to climate-related hazards. Assumption: Conducive social conditions in targeted villages.
Output 1.1. Diverse IEC tools and materials, including digital platform on EbA for knowledge exchange.	● Number of IEC tools including digital platform on EbA produced, addressing gender and social inclusion issues.	0	5 sets IEC tools 3627 persons M: 1815 F: 1812	● IEC materials (e.g. posters, calendars, etc.) ● Digital platform	Risk ● The tools and materials may not be effective or relevant to the target audience. ● the tools and materials are not well-designed or do not address the

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
					specific needs and concerns of the target audience. Assumption ● Network coverage is sufficient. ● Conducive weather condition for distribution of IEC materials.
Output 1.2. Media coverage in the local press and media covering Climate Change and EbA topics.	● Number of news stories covered annually in the local press and media cover the topic on climate adaptation, and roles of women and vulnerable groups	0	10 news stories annually.	● Copy of local media and press (digital/printed) that cover the topic on adaptation, and roles of women and vulnerable groups.	Risk ● Limited knowledge of local journalists/ influencers on climate adaptation and roles of women and vulnerable groups from project activities. Assumption: Willingness of journalists to participate in media visits ● Willingness to publish
Output 1.3. Generated climate vulnerability data at village level.	● Number of Climate vulnerability data set	0	● 5 set data	● Report on assessment of climate vulnerability at five target villages.	Risk: ● There is a risk that the updated climate vulnerability data may not be of sufficient quality or accuracy, which could undermine its usefulness for informing adaptation and risk reduction efforts. Assumption:

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
					● Availability of previous climate data ● Willingness to participate in PAR.
Output 1.4. Established learning forum on Climate and EbA at village level.	● Number of learning forums at village level.	0	5 learning forums in 5 villages	● Minutes of Meeting ● Field school activities ● Modules ● Documentation	Risk: ● Community members particularly women and vulnerable groups may not fully engage in the field schools, which could hinder the effectiveness of the learning forum. ● Sustainability Challenges: there is a risk that the knowledge and practices shared may not be sustained over time, limiting the long-term impact of the learning forum. Assumption: ● Willingness to participate in field school.
Outcome 2: Vulnerable ecosystems strengthened in response to climate change impacts, including variability.	● Area covered by EbA practices) ● Shannon Diversity Index	0	● 50 Ha. ● Shannon diversity index (H) between 1.5 – 3.5.	● Map Indicating EbA practices area. ● Biodiversity Survey Result	Risk ● Uncertainty and Severe Climate Change: The progression of global climate change poses the greatest threat to biodiversity and ecosystems, leading to exposure to rapid changes, species loss,

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
					community shifts, and collapse, which can challenge the effectiveness of efforts to strengthen vulnerable ecosystems. Assumption: There are no severe conditions that disturb the ecosystem.
Output 2.1. EbA practices are implemented to protect coastal and small island ecosystems., including coastal, benthic and water source ecosystem.	● Area covered by EbA Practices.	0	● 50 Ha.	● Map indicating EbA Area ● Visual Documentation	Risk ● There is a risk that EbA practices may not be effectively implemented, leading to insufficient protection for coastal and small island ecosystems. This could result from limited resources, capacity, or stakeholder engagement. Assumption ● Available access to the targeted site
Project Outcome 3: Communities, including women and vulnerable groups with improved and diversified livelihood.	● Number of new livelihood opportunities developed and accessed, taking into account women and vulnerable groups. ● Percentage of increased household income within the target communities (selected from samples)	0	● 5 ● 20%	● 2nd – 3rd Quarterly Report ● KAP survey	● Livelihood diversification alone may not be sufficient to buffer individuals and households from shocks and stresses and may even increase their vulnerability. This is because doing something

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
					new that may also be unfamiliar can increase risk, particularly for poor, marginalized, and subsistence livelihoods with few assets and resources
Output 3.1. improved capacity of local communities to develop ecosystem goods and service-based livelihood (EG&S).	● Number of EG&S product develop	0	● 5 EG&S	● EG&S Product	● Livelihood diversification is a complex process, and its association with positive or negative changes is not always clear. Assumption willingness community to join in the process
Project Outcome 4: Integration of climate change adaptation framework into relevant policy	● Number of local government policies incorporating climate change adaptation measures	0	2	● Policy document	Risk ● Lack of supportive political and institutional environment. ● Changing Political constellation Assumption Climate change issues are priority agenda of local government
Output 4.1. Coastal villages are facilitated to prepare PROKLIM registration	● Number of villages are facilitated	0	50	● Q3 report	Risk ● Lack of supportive political and institutional environment at village level ● Availability of required

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
					data Assumption ● All required data collected
Output 4.2. Adaptation Action Plans (RAD-PI document) for Sabu Raijua and Rote Ndao Districts.	● Number of Adaptation Action Plans for Sabu and Rote Islands	0	2	● Adaptation Action Plan documents	● Preparation of Adaptation Action Plan Documents are not inclusive. ● Changing Political constellation Assumption Willingness of PEMDA
Output 4.3. Strategy to improve climate resilience funding opportunities for the local and village governments.	● Number of Policy briefs submitted	● 0	2	● 2 Policy Briefs ● CBT analysis Document	● Availability of data Assumption ● Availability of data

Table 23. Adaptation Fund Core Impact Indicator: Natural Assets protected or rehabilitated

Regency	Villages	Natural protected or rehabilitated and Livelihood Activities	Length (m)	Area (Ha)	Amount
Rote Ndao	Holulai	a. Protected Coastline	300		
		b. Existing Mangrove Area		12	

		c. Sediment Traps placement			
		<i>Mangrove Moduler</i> <i>{moduler unit dimension</i> <i>20m (l) x 5m (w) x 1m (h)}</i>			14 units
		<i>Seagrass Moduler</i> <i>{Moduler unit dimension</i> <i>20m (l) x 5m (w) x 0,5m (h)}</i>			14 units
		d. Rehabilitation Area			
		<i>Indicative Mangrove & Seagrass Rehabilitation Area</i>		6	
		<i>Mangrove and Seagrass Planting area</i>		3	
		e. Replanting			
		<i>Mangrove</i>			9000 trees
		<i>Seagrass</i>			100.000 shoots
		f. Enactment of village regulation on protection and rehabilitation of coastal ecosystems.		18	
		g. Ecotourism guide			16 Person
		a. Existing Mangrove Area		96	
		b. Rehabilitation Area			

		<i>Indicative Mangrove Rehabilitation Area</i>		4	
		<i>Mangrove Planting area</i>		2	
		c. Mangrove replanting			6000 trees
		d. Mangrove Nursery		0,015	12500 polybag
		e. Crab Aquaculture			1 location
		f. Enactment of village regulation on protection and rehabilitation of coastal ecosystems.		100	
	Fuafuni	a. Existing Mangrove Area		85	
		b. Coral reef replanting (spider frame			50 units
		c. Temporary closure (Sea cucumber)		2	
		d. Enactment of village regulation on protection and rehabilitation of coastal ecosystems.		87	
Sabu Raijua		a. Protected Coastline	500		
		b. Existing Mangrove Area		2	
		c. Rehabilitation Area			
		<i>Indicative Mangrove Rehabilitation Area</i>		6	

		<i>Mangrove Planting area</i>		1	
		d. Mangrove replanting			10000 seedlings
		e. Mangrove Nursery		0,015	12500 polybag
		e. Crab Aquaculture			1 location
		g. Enactment of village regulation on protection and rehabilitation of coastal ecosystems.		8	
	Limaggu	a. Protected Coastline	500		
		b. Vegetation replanting		3500 trees	
		c. Composting			
		<i>Composting center</i>			1 unit
		<i>Organic Farming Demplot</i>		1	

Table 24. Adaptation Fund Core Impact Indicator

Adaptation Fund Core Impact Indicator “Number of Beneficiaries”	
Date of Report	-
Project Title	Ecosystem-based Adaptation to Support Climate Resilience of Coastal and Small Islands of Rote and Sabu in Savu Sea
Country	INDONESIA

Implementing Agency	KEMITRAAN – YAPEKA			
Project Duration	2 year			
	Baseline (<i>absolute number</i>)	Target at project approval (<i>absolute number</i>)	Adjusted target first year of implementation (<i>absolute number</i>)	Actual at completion ⁷ (<i>absolute number</i>)
Supported by the project				
<i>Female direct beneficiaries</i>	0	163		
<i>Youth direct beneficiaries</i>	0	109		
Indirect beneficiaries supported by the project				
<i>Female indirect beneficiaries</i>	0	3624		
<i>Youth indirect beneficiaries</i>	0	200		
Adaptation Fund Core Impact Indicator “Early Warning Systems”				
Adopted Early Warning Systems (Category targeted – 1, 2, 3, 4; and absolute number) (1) risk knowledge, (2) monitoring and warning service, (3) dissemination and communication, (4) response capability. (report for each project component)	(1) 0 (2) 0 (3) 0 (4) 0	(1) 2 (2) 2 (3) 2 (4) 2		
Hazard (select from the list on page 2) (report for each project component)	Tropical Cyclone (0) Drought (0)	Tropical Cyclone (2) Drought (2)		
Geographical coverage (km2) (report for each project component)	0	0,5 km2 (50 Ha) 1,3 km coastline		
Number of municipalities (number) (report for each component)	0	2 Regency (5 Villages)		
Adaptation Fund Core Impact Indicator “Assets Produced, Developed, Improved, or Strengthened”				

Sector (identify)		Three Sector - Policy - Livelihood - Ecosystem Base Adaptation		
Targeted Asset 1) Health and Social Infrastructure (developed/improved) 2) Physical asset (produced/improved/strengthened)	1) 0 2) 0	2) Physical assest consist of: - Produce Sediment trap - Produce Seagrass nursery - Produce Mangrove nursery - Produce Unit Crab Aquaculture - Produce unit of Spider frame - Produce unit of Composting center - Produce Organic Farming Demplot - Develop Policy		

Changes in Asset (Quantitative or qualitative depending on the asset)	2) 0	2) Physical assest consist of: - 28 Sediment trap (14 mangrove modular & 14 seagrass modular) - 1 Seagrass nursery - 1 Mangrove nursery - 2 Unit Crab Aquaculture - 50 unit of Spider frame - 1 unit of Composting center - 1 Organic Farming Demplot - 2 Adaptation Action Plan Policy Develop		
Adaptation Fund Impact Indicator "Increased income, or avoided decrease in income"				
Income Source (name)	0	at least 2 income source: - Small Scale Fisheries - Agriculture		
Income Source	0	at least 2 income source: - Small Scale Fisheries - Agriculture		
Income level (USD)	- Existing income source 77,2 USD - New income source (Crab Aquaculture) 0 USD	- Existing income source 92,7 USD - New income source (Crab Aquaculture) 20%		

Number of households (total number in the project area) (report for each project)	0	155 Household		
Adaptation Fund Core Impact Indicator “Natural Assets Protected or Rehabilitated”				
Natural Asset or Ecosystem (type)	0	3 Type Ecosystem - Seagrass ecosystem - Mangrove Ecosystem - Riparian/terrestrial vegetation ecosystem		
Change in state Ha or km Protected/rehabilitated, or Effectiveness of protection/rehabilitation - Scale (1-5)	0	- 50 Ha Area Protected/Rehabilitated - 1,3 km Coastline protected		
Total number of natural assets or ecosystems protected/rehabilitated	0	3 Type Ecosystem Protected		

III.F. Alignment with Adaptation Fund Result Framework

Table 25. Alignment with Adaptation Fund Result Framework

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Objective 1: Strengthened ability of coastal communities to make informed decisions about climate change-driven hazards affecting their specific locations.	Percentage of target coastal communities that are aware of the impacts of extreme weather and climate; and of adaptation measures (15%).	AF Outcome 1; Reduce exposure to climate related hazard and threats AF Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local	Risk and vulnerability assessments conducted or updated Percentage of targeted population aware of predicted adverse impacts of climate change, and of	135,229

		level.	appropriate responses.	
Objective 2: Improved adaptive capacity of the coastal socio-ecological system to withstand extreme weather and climate.	Area of restored/conserved ecosystems or with improved management (50 Ha)	AF Outcome 5: Increased ecosystem resilience in response to climate change and variability- induced stress.	Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	281,405
	Number of communities with improved/diverse livelihood (20%).	AF Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in target areas.	Percentage of households and communities having more secure access to livelihood assets.	109,574
Objective 3: Strengthened institutional capacity to reduce risks associated with climate-induced socio economic and environmental losses	Number of local and village government staff with improved capacity to respond to and mitigate climate impacts (15%).	AF Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.	Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased.	304,856

III.G. Project Budget

BUDGET for Ecosystem-based Adaptation to Support Climate Resilience of Coastal and Small Islands of Rote and Sabu in Savu Sea Project

Project/ Programme Components	Code	Expected Concrete Outputs	TOTAL USD
COMPONENT 1. Strengthening ability of coastal communities to make informed decisions about actions to respond to climate change- driven hazards and impacts.	1	Outcome 1. Improved awareness of adaptation and climate change-related hazards affecting coastal communities	\$ 135.229
	1.1	Output 1.1. Diverse IEC tools and channels, including digital platform on EbA for knowledge exchange.	\$ 70.624
	1.2	Output 1.2. News outlets in the local press and media that have covered Climate Change and EbA topics.	\$ 11.955
	1.3	Output 1.3. Updated climate vulnerability data at village level, which include assessment of vulnerability and developing adaptation strategies that take into account the specific needs and circumstances of communities potentially affected by cyclones.	\$ 19.708
	1.4	Output 1.4. Climate-EbA Field Schools as a learning forum at five target villages.	\$ 32.942
COMPONENT 2 Improving adaptive capacity of coastal socio-ecological system to withstand extreme weather and climate	2	Outcome 2. Vulnerable ecosystems strengthened in response to climate change impacts, including variability	\$ 281.405
		Output 2.1. EbA practices are implemented to protect and rehabilitate coastal and small island ecosystems, including coastal, benthic and water source ecosystems, in the five target villages.	\$ 281.405
	3	Outcome 3. Communities including women and vulnerable groups with improved and diversified livelihoods	\$ 112.241
		Output 3.1. Improved capacity of communities to develop ecosystem goods and service-based (EG&S) livelihoods and business plans.	\$ 112.241
COMPONENT 3. Strengthening institutional capacity to reduce	4	Outcome 4. Local and village government with improved capacity and finance to implement adaptation measures	\$ 302.212

risks associated with climate-induced socio economic and environmental losses		Output 4.1. Coastal villages are facilitated to prepare PROKLIM registration.	\$	236.170
		Output 4.2. Climate Change Adaptation Action Plans (RAD-PI) for Sabu and Rote districts.	\$	51.625
		Output 4.3. Develop strategies to improve climate resilience funding opportunities for the local and village governments	\$	14.417
A. PROGRAM COST			\$	831.088
B. PROJECT EXECUTION COST			\$	87.216
C. IMPLEMENTING ENTITIY FEE			\$	78.056
TOTAL			\$	996.358

III.G1. Budget Notes

Table 26. Budget Notes

DESCRIPTION	Description of budget item	Notes/Justification
COMPONENT 1. Strengthening ability of coastal communities to make informed decisions about actions to respond to climate change- driven hazards and impacts.		
Outcome 1. Improved awareness of adaptation and climate change-related hazards affecting coastal communities		
Output 1.1. Diverse IEC tools and channels, including digital platform on EbA for knowledge exchange.		
Activity 1.1.1. Conduct Knowledge Attitude Practices (KAP) baseline survey, and endline surveys.	- Expert on KAP Survey, fee for enumerators, questionnaire, local transport, merchandise.	The KAP (Knowledge, Attitudes, and Practices) survey is essential for assessing the knowledge, attitude and practice towards climate change risks and adaptation among coastal communities at the beginning and at the end of the project period. Budget will include Experts and enumerators which are needed to collect and analyze data, print questionnaire, merchandise (e.g. reusable bags, notebook, etc.) for communities who will be participating in the survey, and local transport for expert and enumerator to conduct the survey.
Activity 1.1.2. Develop a communication and awareness strategy to implement EbA that considers gender and social inclusions.	- Expert on Communication Strategy, local transport, meals and venue for workshop to develop communication awareness strategy	The expert on Communication strategy will prepare the awareness strategy to implement EbA through consultation of stakeholders in a workshop. Budget for the workshop will include Local transport, meals are for workshop participants, and workshop venue.
Activity 1.1.3. Design and production of IEC materials including but not limited to such as posters, digital content, calendar, and project merchandise.	- Communication officer, production of IEC printed materials (posters, calendars, t-shirt)	The communication officer will be responsible in designing IEC materials, including updates of social media throughout the project implementation; the budget will also include production of IEC printed materials.

Activity 1.1.4. Design and production of a Guide to EbA Practices for Coastal and Small Islands.	- Fee for resource persons for developing the Guide of EbA practices, Fee for designer of the Guide to EbA practices, Production of the Guide to EbA practices.	The Guide to EbA practices will be developed by experts/resource person on EbA practices in coordination with the communication officer. The budget will include fee to design the Guide and production of EbA practices.
Output 1.2. News outlets in the local press and media that have covered Climate Change and EbA topics.		
Activity 1.2.1. Facilitate media trips to cover climate issues, EbA implementation, livelihood activities, and the role of women and vulnerable groups in responding to climate change in Rote and Sabu Islands.	- Airfare Jakarta - Kupang - Jakarta, Airport Transport CGK, KOE, Accommodation, In - Out Transport, Boat Ticket Kupang - Rote - Kupang	The budget is for journalists/participants who will participate in the media trip to key locations. The journalists will cover information on how climate adaptation is implemented to the specific locations. - Airfare and inter-island transport: Facilitates journalist travel to remote areas by air where climate adaptation initiatives are being implemented. - Accommodation & local transport: Necessary for logistical support, ensuring media coverage in different regions, including Rote and Sabu Islands. - Boat tickets & in-out transport: Essential for reaching coastal communities and documenting field activities.
	- Rent Car, Rote and Sabu, Accommodation in Rote, Boat Ticket Kupang - Sabu - Kupang, Accommodation in Sabu, Perdiem, Local Transport Facilitator	The budget is for journalists/participants of media trip. the budget will include- - Car rental & local transport: Enables media teams to reach rural and coastal communities where climate adaptation projects are implemented. - Accommodation & perdiem: Ensures media personnel can stay and work efficiently during coverage. - Local transport facilitator: Provides logistical support and ensures smooth coordination between media teams and local stakeholders.
	- Rent Camera, Drone	- Camera & drone rental: High-quality visual documentation is critical for impactful storytelling from media trip - Drone footage: Helps capture climate change impacts on coastal and island communities from an aerial perspective during media trip.
Output 1.3. Updated climate vulnerability data at village level, which include assessment of vulnerability		

and developing adaptation strategies that take into account the specific needs and circumstances of communities potentially affected by cyclones.		
Activity 1.3.1. Conduct Participatory Action Research (PAR) on coastal vulnerability associated with TC in Rote and Sabu.	- Meeting package, transport participants, rent venue, stationary	The budget is to facilitate village meetings to collect participatory data/information on climate vulnerability. The budget will include meals for participants, rent venue, and logistical support. Participants will also be provide with transport allowance.
	- Expert on PAR	The budget is for hiring experts to be responsible in conducting PAR, including preparing methodology, data collection, analysis and reporting.
Output 1.4. Climate-EbA Field Schools as a learning forum at five target villages.		
Activity 1.4.1. Develop training modules on EbA practices for coastal communities.	- Airfare Jakarta - Kupang - Jakarta, Airport Transport CGK, KOE, Accomodation in Kupang, In - Out Transport, Boat Ticket Kupang - Rote - Kupang, Accomodation in Rote and Sabu, Boat Ticket Kupang - Sabu - Kupang, Perdiem, Rent Car, Rote and Sabu.	Travel and logistical arrangements are necessary to conduct field assessments conducted by experts and project staff, engage with local communities, and validate the training module based on real-life conditions. Accommodation and perdiem ensure the facilitation team can stay and work effectively in target locations.
	- Experts to develop Training Module	Engaging experts is crucial to ensure the module is well-structured, contextually relevant, and based on best practices in EbA implementation. The expert will incorporate scientific knowledge, local experiences, and participatory approaches into the training content.
	- Production Modules	Printing and digital production of training materials, including handbooks, presentations, and visual aids, to facilitate knowledge transfer during training sessions. These materials will be distributed to local stakeholders for long-term reference.

Activity 1.4.2. Conduct a series of training on climate-EbA for community groups at village level, including women and vulnerable groups to improve their knowledge and skills on climate and implementation of EbA approach and practices.	- Meeting Packages, Local Transport for participants, Meeting kit, Stationary, Rent Car Rote and Sabu	The budget is to facilitate a series of training at village level, which include Meeting Package (venue and meals), Local Transport for training participants, meeting kit and stationary for participants (e.g. note book, tumbler, etc); Car Rental is for trainers and project staff transportation in Rote and Sabu islands to access training locations.
	- Trainers	Payment for trainers with experience in EbA, including transportation and accommodation if necessary. The trainer will deliver relevant material to participants, especially women and vulnerable groups.
Activity 1.4.3. Provide supporting equipment for learning purposes in the field schools.	Equipment for Field School (e.g. in-focus projector, sample of coral rehabilitation frames, snorkeling equipment)	The budget is for procuring Equipment to support field school activities (e.g in-focus projector for presentation during training, snorkeling set, basic farming tools etc.) .
COMPONENT 2 Improving adaptive capacity of coastal socio-ecological systems to withstand extreme weather and climate		
Outcome 2. Vulnerable ecosystems strengthened in response to climate change impacts, including variability		
Output 2.1. EbA practices are implemented to protect and rehabilitate coastal and small island ecosystems, including coastal, benthic and water source ecosystems, in the five target villages.		
Activity 2.1.1. Conduct Project Inception Workshop and Mid-term Evaluation Workshop to collect inputs and reviews from project stakeholders (national, provincial and district government, local universities, local NGOs, and media) on project implementation plans.	- Airfare Jakarta - Kupang - Jakarta, Airport Transport CGK, KOE, Accommodation in Kupang, In - Out Transport, Boat Ticket Kupang - Rote - Kupang, Accommodation in Rote and Sabu, Boat Ticket Kupang - Sabu - Kupang, Perdiem, Rent Car, Rote and Sabu.	Flight return tickets for travel from Jakarta to Kupang, Accommodation in Kupang, in-out transport, boat ticket to Kupang-Rote-Kupang, accommodation in Rote and Sabu, perdiem, car rental in Rote and Sabu are necessary for EbA experts and other project team members to conduct the FPIC and prepare the EbA Implementation Plan in five target villages in Sabu and Rote.

	- Meeting Package, transport allowance for participants	Covers the costs for organizing village meetings and discussions with local stakeholders, including venue rental, meals, and materials needed for FPIC, and transport allowance for participants.
Activity 2.1.2. Conduct Free, Prior, and Informed Consent (FPIC) and EbA implementation planning in target villages in Rote and Sabu in five target villages.		
2.1.2.1. Mangrove Rehabilitation in 4 sites (Mebba, Holulai, Oelua and Fuafuni)	- Workforce for preparing land for rehabilitation, collecting mangrove seedings, and planting mangroves	The budget will include fee for local workers/communities in preparing land for rehabilitation, collecting mangrove seedings, and planting mangroves at village level.
2.1.2.2. Coral reef/Seagrass Rehabilitation in 2 sites (Holulai and Fuafuni)	- Workforce for preparing media and tools for corals transplantation, field work for coral rehabilitation, boat rental, diving equipment, underwater equipment rental.	The budget will include fee for preparing media and tools for coral transplantation; fee for field work for coral rehabilitation, boat rental, rent diving and underwater documentation equipment
2.1.2.3. Tree planting in Limanggu for water resource protection	- Workforce for preparing land for rehabilitation, collecting tree seedings for rehabilitation, and planting trees	The budget will include fee for workers/community to prepare land for rehabilitation, collecting seedlings and planting.
2.1.2.3. Village Meetings to Develop Conservation Management Plan for LMMA/OECM	- meeting package and transport for participants and experts/resource person, fee for meeting facilitators and moderators, fee for LMMA/OECM Expert,	The budget for meeting package will include venue and meals during meeting, transport allowance for participants of the meeting, meeting facilitators, moderator and experts are required to organize and provide technical assistance in preparing the conservation management plan
Activity 2.1.3. Implement EbA practices (rehabilitation and conservation) in five villages: Mebba, Limaggu, Holulai, Oelua and Fuafuni villages	- Air transport CGK-KOE, Accommodation in Kupang, In-Out Transport, Boat ticket Kupang-Rote Kupang, Accommodation in Rote and Sabu, Boat Ticket Kupang-Sabu-Kupang, Perdiem, car rental in Rote and Sabu	The budget is for M&E team to travel to the project sites in Rote and Sabu, including Air transport CGK to KOE, Accommodation in Rote and Sabu, Boat Ticket Kupang-Sabu-Kupang, Perdiem, car rental in Rote and Sabu
	-Travel Head Office Team (IE) for M&E missions.	The budget is for Head Office Team (Implementing Entity) to conduct M&E Missions to project sites
Activity 2.1.4. Conduct Monitoring and evaluation of EbA activities.	- Fee EbA Coral Experts, Fee Community Organizers (COs), Transport and communication allowance for COs,	At least two EbA experts are required and five Community Organizers are required to provide technical support for the implementation of EbA in five target villages. Transport and communication allowance are required for COs to support their daily activities to the project sites.

Activity 2.1.5. Provide technical assistance and facilitation of EbA implementation.		
Outcome 3. Communities including women and vulnerable groups with improved and diversified livelihoods		
Output 3.1. Improved capacity of communities to develop ecosystem goods and service-based (EG&S) livelihoods and business plans.		
Activity 3.1.1. Conduct Livelihood Training Need Assessment (TNA) and provide technical support on Livelihood activities in Target Villages.	- Fee for Livelihood Specialist	Livelihood specialist is required to prepare livelihood Training Need Assessment and to provide technical support in coordinating trainings and in community livelihood business incubation.
Activity 3.1.2. Facilitate Training for local communities on sustainable production of livelihood practices.	Boat transport Kupang-Rote, Boat Transport Kupang Sabu, Accomodation for Project Staff and Trainer, Perdiem for Project staff and Trainer, Fee for Trainer, Meeting Package, Transport Allowance, Training Kit and Banner	The training will be conducted in three villages (Holuai, Oelua and Mebba Villages). The budget will include boat transport Kupang-Rote, Kupang-Sabu, accomodation, and perdiem for project staff and trainers, fee for trainers. Meeting package is to cover venue and meals for participants. Banner and training kit are required for training activity. Participants will have transport allowance; Car rental is for project staff to visit the location in Sabu and Rote.
COMPONENT 3. Strengthening institutional capacity to reduce risks associated with climate-induced socio economic and environmental losses.		
Outcome 4. Local and village government with improved capacity and finance to implement adaptation measures		
Output 4.1. Coastal villages are facilitated to prepare PROKLIM registration.		
Activity 4.1.1. Organize a workshop to increase participation of coastal villages in Sabu and Rote in PROKLIM.	Air return transport CGK-KOE, accomodation in Kupang, Accomodation in Rote and Kupang, in-out transport, Boat Kupang-Rote-Kupang, car rental, Perdiem for project staff/resource persons	These budget items are to make sure participation of project staff and resource persons from Bogor/Jkt in the workshop.

	Meeting Package, local transport allowance for participants, boat transport Rote-Kupang, Boat Transport Sabu-Kupang, accomodation for participants from Rote and Sabu, meeting kits,banner	These budget items are for organizing the workshop, including venue rent and meal,meeting kit, workshop banner, transport and accomodation for participants from Rote and Sabu.
	Fee for resource persons from the central and provincial government	The budget is for resource persons from the central government and provincial government agencies.
Activity 4.1.2. Recruitment and Training of Village Government Facilitators/extension workers on PROKLIM Registration.	Air return transport CGK-KOE, accomodation in Kupang, Accomodation in Rote and Kupang, in-out transport, Boat Kupang-Rote-Kupang, car rental, Perdiem for project staff/resource persons	These budget items are to make sure participants of project staff and trainers from Bogor/Jkt to attend the training.
	Meeting Package, local transport allowance for participants, boat transport Rote-Kupang, Boat Transport Sabu-Kupang, accomodation for participants from Rote and Sabu, meeting kits,banner	These budget items are for organizing the training, including venue rent and meal,meeting kit, workshop banner, transport and accomodation for participants from Rote and Sabu.
	Fee for trainers	The budget is for fee of the trainers
Activity 4.1.3. Socialization of PROKLIM for coastal villages in Rote and Sabu.	Air return transport CGK-KOE, accomodation in Kupang, Accomodation in Rote and Kupang, in-out transport, Boat Kupang-Rote-Kupang, Boat Rent Kupang-Sabu-Kupang, car rental, Perdiem for project staff.	The budget items are for air transport, accomodation in Kupang and Rote, in-out transport, Boat Kupang-Rote for project staff to participate the workshop. Car rental is used for transport in Rote and Sabu; Perdiem is for project staff participating the workshop
	Meeting Package, transport allowance for participants, meeting kits,banner	Meeting package will include venue and meals for the workshop in Rote and Sabu; participants will be provide with transport allowance, meeting kit; banner for the workshop
	Fee for moderator/note taker	Fee for moderator/notetaker during the workshop
Activity 4.1.4. Organize village meetings to conduct FPIC and climate mitigation and adaptation data collection.	Meeting package, transport allowance for participants.	Meeting packages are for venue and meals for village meetings in target villages (50 villages)

	Fee for village facilitators to collect data	This budget is required to pay government village facilitators/extension workers to collect data required for PROKLIM registration from the village
Activity 4.1.5. Register the villages participating in the PROKLIM in SRN.	Fee for PROKLIM data entry operator; Fee for PROKLIM Data Manager	This budget items are to make sure proper data are stored for PROKLIM registration.
Output 4.2. Climate Change Adaptation Action Plans (RAD-PI) for Sabu and Rote districts.		
Activity 4.2.1. Facilitate workshops to prepare Adaptation Action Plans for Rote Ndao and Sabu Raijua Districts.	Fee for consultant package to develop Adaptation Action Plan in Rote and Sabu	A consultant/expert will be recruited to prepare draft and finalize the Adaptation Action Plan document for Sabu and Rote, in coordination with local stakeholders at district level.
Activity 4.2.2. Prepare Draft of Adaptation Action Plan Document for Rote and Sabu.	Air return transport CGK-KOE, accommodation in Kupang, Accomodation in Rote and Kupang, in-out transport, Boat Kupang-Rote-Kupang, car rental, Perdiem for project staff/experts	These budget items are required to mobilize project staff, consultant, and resource person from Bogor/Jakarta to Rote and Kupang, including air transport, in-out transport, car rental in Rote and Sabu, accommodation and perdiem
	Meeting Package, transport allowance for participants, meeting kits, banner	The budget will be used for renting venue and providing meals of the workshop. Workshop participants (including participants from Kupang) will be provided with transport allowance, and meeting kits (stationary)
	Local transport for Community Organizers, fee for moderator/note taker	Community organizers will be provided with local transport, and fee for moderator/note taker will be provided.
	Travel for head office//IE Team, consultant administration 2	The budget is for Head Office team(IE) consultant administration to participate in the workshop
Activity 4.2.3. Facilitate stakeholder consultation and socialization workshops on Adaptation Action for Rote Ndao and Sabu Raijua Districts.	Air return transport CGK-KOE, accommodation in Kupang, Accomodation in Rote and Kupang, in-out transport, Boat Kupang-Rote-Kupang, car rental, Perdiem for project staff/experts	These budget items are required to mobilize project staff, consultant, and resource person from Bogor/Jakarta to Rote and Kupang, including air transport, in-out transport, car rental in Rote and Sabu, accommodation and perdiem
	Meeting Package, transport allowance for participants, meeting kits, banner	The budget will be used for renting venue and providing meals of the workshop. Workshop participants (including participants from Kupang) will be provided with transport allowance, and meeting kits (stationary)

	Local transport for Community Organizers, fee for moderator/note taker	Community organizers will be provided with local transport, and fee for moderator/note taker will be provided.
	Travel for head office//IE Team, consultant administration 2	The budget is for Head Office team(IE) consultant administration to participate in the workshop
Output 4.3. Develop strategies to improve climate resilience funding opportunities for the local and village governments		
Activity 4.3.1. Develop policy brief on climate funding options in Rote and Sabu.	Fee for expert on climate funding	The expert will conduct assessment of climate adaptation funding opportunities in Rote and Sabu, and will prepare a policy brief on climate adaptation funding.
	Air return transport CGK-KOE, accommodation in Kupang, in-out transport, boat Kuang-Rote, boat Kupang-Sabu, car rental in Kuang and Sabu, Perdiem for project staff/experts	The budget is to conduct field visits to Rote and Kupang for the expert and project staff who will conduct the assessment of climate adaptation funding opportunities in Rote and Sabu.
Activity 4.3.2. Facilitate Exit Strategy Workshop at provincial level.	Air return transport CGK-KOE, accommodation in Kupang, in-out transport, car rental, Perdiem for project staff/experts	These budget items are required to mobilize project staff and resource person from Bogor/Jakarta to Kupang, including air transport, in-out transport, accommodation and perdiem
	Meeting Package, local transport allowance for participants, boat transport Rote-Kupang, Boat Transport Sabu-Kupang, accommodation for participants from Rote and Sabu, meeting kits, banner	The meeting package budget will cover the venue and meals during workshop in Kupang. Participants of the workshop will be provided with local transport allowance. Participants from Rote and Sabu will also be provided with boat transport Sabu-Kupang and Rote Kupang and accommodation in Kupang.
	Fee for project provincial coordinator	Provincial coordinator will be recruited and will be responsible in ensuring project coordination between government agencies and other stakeholders at provincial and local level. The provincial coordinator will be based in Kupang.

III.H. Disbursement Schedule

Table 27. Disbursement Schedule

	Upon signature of Agreement	One Year after Project Start a)	Year 2b)	Year 3	Year 4 c)	Total
Scheduled date	January 2027	January 2028				
Project Funds	505,067	413,236				918,303
Implementing Entity Fees	42,930	35,125				78,055
Total	547,997	448,361	0.00	0	0	996,358

Note: This table is available in a separate excel file.

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

IV.A. Record of endorsement on behalf of the government

121. Below is the record of endorsement on behalf of the government obtained during the preparation of this concept of the Project:

122. Table. Record of Endorsement on behalf of the Government.

Name and Position	Date of Endorsement
Imam Fauzi, S.S. M.Eng. Head of The Agency of the National Marine Conservation (Balai Konservasi Kawasan Perairan Nasional/BKKPN) Kupang, The Ministry of Marine Affairs and Fishery.	July 4, 2022.
Johanna E. Lisapaly, S.H., M.Si. Head of Provincial Development Research and Planning (BAPPELITBANDA) NTT Province.	July 7, 2022.
Drs. Haludin Abdullah, M.Si. Head of District Development Planning (BAPPEDA), Sabu Raijua District	July 5, 2022
Jermi. M. Hanging, PhD. Head of The Provincial Development Research and Planning Rote Ndao District.	July 12, 2022

Copies of endorsement letters on behalf of the government are provided in Annex 6.

IV.B. Implementing Entity Certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (President Decree No. 16/2015; P.13/MENLHK/Setjen/ OTL.0/1/2016; P.33/MENLHK/Setjen/Kum.1/3/2016; Indonesia Intended Nationally Determined Contribution/INDC; COP 21; Paris Agreement signed by Government of Indonesia; Book and Map of Information System of Vulnerability Index Data (SIDIK); Permen-KP No. 2 year 2013; Climate Change Adaptation National Action Plan) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

Laode Muhamad Syarif
Executive Director of Partnership for Governance Reform in Indonesia (Kemitraan)
Implementing Entity Coordinator

Date:

Tel. and email:

Project Contact Person:

Tel. And Email:

PART V: ANNEXES

LIST OF ANNEXES

Annex 1. Letter of Endorsement (LoE)

- A. LoE from Ministry of Marine and Fishery – Head of BKKPN Kupang
- B. LoE from Government of Nusa Tenggara Timur (Bappelitbangda Provinsi NTT)
- C. LoE from Government of Rote Ndao (Bappelitbangda Kabupaten Rote Ndao)
- D. LoE from Government of Sabu Raijua (Bappelitbangda Kabupaten Sabu Raijua)

Annex 2. Environment and Social Management Plan

Annex 3. Gender Analysis Report

Annex 4. Gender Inclusion Action Plan

Annex 5. Stakeholder Engagement Plan

Annex 6. Grievance Mechanism

Annex 7. Project Work Plan

Annex 8. Cover of Notarial Register

Annex 9. Audit Report

Annex 1. Letter of Endorsement from The Government of Indonesian

A. Letter of Endorsement from Ministry of Marine and Fishery (BKKPN Kupang)



KEMENTERIAN KELAUTAN DAN PERIKANAN
DIREKTORAT JENDERAL PENGELOLAAN RUANG LAUT
BALAI KAWASAN KONSERVASI PERAIRAN NASIONAL

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Nomor : B. 2014/BKKPN/TU.210/VII/2022 4 Juli 2022
Sifat : Biasa
Lampiran : -
Perihal : Surat Dukungan

Yth. Pimpinan Yayasan Kemitraan
Jl. Taman Margasatwa 26C, Ragunan, Pasar Minggu
Jakarta Selatan 12550

Menindaklanjuti surat Ketua-CEO YAPEKA Nomor 1077/PER/YAPEKA/VI/2022, tertanggal 30 Juni 2022, Perihal Permohonan Surat Dukungan, bersama ini kami sampaikan bahwa Kementerian Kelautan dan Perikanan (KKP) melalui Unit Pelaksana Teknis Balai Konservasi Kawasan Perairan Nasional (BKKPN) Kupang di Provinsi Nusa Tenggara Timur menyambut baik kegiatan yang akan dilaksanakan dengan tema ***Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Rajua Districts in Savu Sea*** oleh YAPEKA dan Konsorsium (Yayasan Penabulu dan CTSS-IPB) untuk diajukan ke ***Adaptation Fund*** melalui Yayasan Kemitraan sebagai *Implementing Entity*.

Kegiatan tersebut selain memberikan kontribusi penting bagi upaya mengurangi dampak perubahan iklim yang terjadi di Nusa Tenggara Timur, diharapkan juga mendukung pengelolaan kawasan konservasi Taman Nasional Perairan Laut Sawu serta pemberdayaan masyarakat di sekitarnya.

Demikian dukungan ini disampaikan, atas perhatian dan kerjasamanya kami ucapkan terima kasih

Kepala Balai Kawasan Konservasi
Perairan Nasional (BKKPN) Kupang



ditandatangani
secara elektronik

Imam Fauzi

Tembusan:
CEO YAPEKA

B. Letter of Endorsement from Provincial Government of Province NTT



PEMERINTAH PROVINSI NUSA TENGGARA TIMUR
BADAN PERENCANAAN PEMBANGUNAN PENELITIAN
DAN PENGEMBANGAN DAERAH
(BAPPELITBANGDA)

Jln Polisi Militer Nomor 2, Telp. 833462, 832975 Kupang

07 Juli 2022

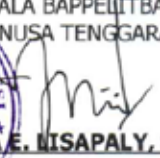
Nomor : BP4D. 045.1.2/IK. 195/07/2022
Lampiran : -
Hal : Pemberian Dukungan Kegiatan

Yth. Pimpinan Yayasan Kemitraan
di -
JAKARTA

Menindaklanjuti surat saudara nomor: 1071/PER/YAPEKA/VI/2022 tanggal 27 Juni 2019, perihal: Permohonan Surat Dukungan Bappelitbangda Provinsi Nusa Tenggara Timur terkait Rencana Kegiatan YAPEKA di Provinsi Nusa Tenggara Timur, maka kami sampaikan hal-hal sebagai berikut:

1. Pemerintah Provinsi Nusa Tenggara Timur menyambut baik kegiatan dengan tema ***Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Raijua Districts in Savu Sea*** untuk diajukan ke ***Adaptation Fund*** melalui Yayasan Kemitraan sebagai *Implementing Entity* yang dilaksanakan oleh YAPEKA dan Konsorsium (Yayasan Penabulu dan CTSS-IPB);
2. Untuk itu disampaikan bahwa kami memberikan dukungan sepenuhnya kepada YAPEKA, Yayasan Penabulu dan CTSS-IPB untuk pelaksanaan kegiatan tersebut dilaksanakan sesuai rencana yang telah dibuat;
3. Diharapkan melalui kegiatan ini dapat memberikan masukan serta kontribusi penting bagi upaya mengurangi dampak perubahan iklim yang terjadi di Provinsi Nusa Tenggara Timur secara umum dan Kabupaten Sabu Raijua serta Kabupaten Rote Ndao secara khusus.

Demikian disampaikan, atas perhatian dan kerjasamanya disampaikan terima kasih.

PL. KEPALA BAPPELITBANGDA
PROVINSI NUSA TENGGARA TIMUR, 
JOHANNA E. LISAPALY, SH., M.Si
Rebina Utama Madya
NIP. 196401101989032015

Tembusan :

1. Gubernur Nusa Tenggara Timur sebagai laporan;
2. Wakil Gubernur Nusa Tenggara Timur sebagai laporan;
3. Plt. Sekretaris Daerah Provinsi NTT sebagai laporan;
4. CEO YAPEKA.

C. Letter of Endorsement from District Government of Rote Ndao



PEMERINTAH KABUPATEN ROTE NDAO
BADAN PERENCANAAN PENELITIAN
DAN PENGEMBANGAN
(BAPELITBANG)
Kompleks Perkantoran Bumi Ti'i Langga Permai Lekunik – Ba'a
Telp. (0380) 8571032 Fax. (0380) 8571031

Ba'a, 12 Juli 2022

Nomor : 050/71/Bapelitbang 2.3
Sifat : Penting
Lampiran : -
Hal : Surat Dukungan Upaya
Pengurangan Dampak
Perubahan Iklim

Kepada
Yth. Pimpinan Yayasan Kemitraan
di -
Jakarta Selatan

Saat ini kondisi perubahan iklim sangat nyata dirasakan oleh masyarakat yang berada di Kabupaten Rote Ndao. Pasca siklon seroja, Pemerintah Kabupaten dan masyarakat melakukan upaya-upaya perbaikan dan pengurangan dampak. Pemerintah Kabupaten Rote Ndao memiliki komitmen untuk bersama-sama para pihak mengatasi permasalahan tersebut. Pemerintah Kabupaten Rote Ndao, Provinsi Nusa Tenggara Timur menyambut baik kegiatan dengan tema *Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Raijua Districs in Savu Sea* untuk diajukan ke *Adaptation Fund* melalui Yayasan Kemitraan sebagai *Implementing Entity* yang akan dilaksanakan oleh YAPEKA dan Konsorsium (Yayasan Penabulu & CTSS IPB).

Atas nama Pemerintah Kabupaten Rote Ndao, Provinsi Nusa Tenggara Timur, bersama ini kami sampaikan bahwa kami memberikan dukungan sepenuhnya kepada YAPEKA, Yayasan Penabulu dan CTSS IPB untuk pelaksanaan kegiatan tersebut. Diharapkan dari kegiatan ini dapat memberikan masukan kebijakan serta kontribusi penting di tingkat tapak bagi upaya mengurangi dampak perubahan iklim yang terjadi di Kabupaten Rote Ndao.

Demikian dukungan ini disampaikan, atas perhatian dan kerjasamanya diucapkan terima kasih.

Pt. Kepala Bapelitbang Kab.Rote Ndao, Y

Jermi M. Hanning, PhD
Pimpinan TK.I
NIP.19730615 199302 1 002

Tembusan :

1. Bupati Rote Ndao di Ba'a sebagai laporan;
2. Wakil Bupati Rote Ndao di Ba'a sebagai laporan;
3. CEO YAPEKA di Bogor;
4. Inspektur Kabupaten Rote Ndao di Ba'a.

D. Letter of Endorsement from District Government of Sabu Raijua



**PEMERINTAH KABUPATEN SABU RAIJUA
BADAN PERENCANAAN PEMBANGUNAN DAERAH**

Jalan El Tari
SEBA

Seba, 5 Juli 2022

No : 750/112/BAP-SR/VII/2022
Perihal : Surat Dukungan

Kepada
Yth. Pimpinan Yayasan Kemitraan
Jl. Taman Margasatwa 26C, Ragunan, Pasar Minggu
Jakarta Selatan 12550

Dengan hormat,

Menindaklanjuti surat Ketua-CEO YAPEKA Nomor : 1072/PER/YAPEKA/VI/2022, tertanggal 27 Juni 2022, Perihal Permohonan Surat Dukungan, Bersama ini kami sampaikan bahwa Pemerintah Kabupaten Sabu Raijua, Provinsi Nusa Tenggara Timur menyambut baik kegiatan dengan tema ***Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Raijua Districts in Savu Sea*** untuk diajukan ke ***Adaptation Fund*** melalui Yayasan Kemitraan sebagai *Implementing Entity* yang akan dilaksanakan oleh YAPEKA, Yayasan Penabulu dan CTSS IPB.

Atas nama Pemerintah Kabupaten Sabu Raijua, Provinsi Nusa Tenggara Timur, bersama ini kami sampaikan bahwa kami menyambut baik serta memberikan dukungan sepenuhnya kepada YAPEKA, Yayasan Penabulu dan CTSS IPB untuk pelaksanaan kegiatan tersebut. Diharapkan dari kegiatan ini dapat memberikan masukan serta kontribusi penting bagi upaya mengurangi dampak perubahan iklim yang terjadi di Kabupaten Sabu Raijua.

Demikian dukungan ini disampaikan, atas perhatian dan kerjasamanya diucapkan terima kasih.


Pt. Kepala Bappeda,
Ds. Haludin Abdullah, M.Si
Pembina Tk.I
NIP.19641231 198603 1 366

Tembusan : dengan hormat disampaikan kepada :

1. Bupati Sabu Raijua di Seba (Sebagai laporan);
2. Wakil Bupati Sabu Raijua di Seba
3. Sekretaris Daerah Kabupaten Sabu Raijua di Seba;
4. Asisten Perekonomian dan Pembangunan Sekda Kabupaten Sabu Raijua di Seba;
5. CEO YAPEKA di Tempat.

Annex 2. Environment and Social Management Plan

Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Raijua Districts in Savu Sea Project

YAPEKA

Introduction

YAPEKA is responsible for the preparation, implementation, and operation of the Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Raijua Districts in the Savu Sea Project that is proposed to the Adaptation Fund. All projects supported by the Adaptation Fund must comply with the **Adaptation Fund Environmental and Social Policy**. The objective of this safeguard system is to support the assessment of risks and potential impacts resulting from the Project by setting out the principles, guidelines, and procedures to assess, avoid, reduce, mitigate, and/or offset potential adverse environmental and social impacts and to enhance positive Project impacts and opportunities. This is to ensure that potential adverse environmental and social impacts that may be generated as a result of each project activity are identified, and appropriate safeguard instruments are prepared to avoid, minimize, mitigate and, in such cases where there are residual impacts, offset adverse environmental and social impacts.

The project's goal is to improve the resilience of coastal areas and small islands of Savu Sea against extreme weather and climate variability events by strengthening the knowledge management and capacity of local government and communities in implementing an Ecosystem-based Adaptation (EbA) and sustainable livelihood. Project components focus on knowledge management, implementation of EbA and sustainable livelihood, and capacity building that are unlikely to have adverse environmental and social impacts.

Screening of project activities against the Adaptation Fund Environmental and Social Policy identifies 9 principles as being applicable to this standard and requiring further attention. Below are the screening results of project activities on potential environmental and social impact and risks, based on the checklist of the Adaptation Fund Environmental and Social Principles.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>		
<i>Access and Equity</i>		
<i>Marginalized and Vulnerable Groups</i>		
<i>Human Rights</i>		
<i>Gender Equality and Women's Empowerment</i>		
<i>Core Labour Rights</i>		
<i>Indigenous Peoples</i>		
<i>Involuntary Resettlement</i>		
<i>Protection of Natural</i>		

<i>Habitats</i>		
<i>Conservation of Biological Diversity</i>		
<i>Climate Change</i>		
<i>Pollution Prevention and Resource Efficiency</i>		
<i>Public Health</i>		
<i>Physical and Cultural Heritage</i>		
<i>Lands and Soil Conservation</i>		

Most of the project activities are about knowledge management, capacity building and implementation of ecosystem-based adaptation and ecosystem service-based livelihood that are unlikely to have adverse environmental and social impacts. Project risks are fewer in number, smaller in scale and less widespread; and mitigation actions are in place at the environmental and social principles that might be triggered by the project (see Environmental & Social Management Plan/ESMP of this project in separate file). Therefore the project should be categorized as Category C.

The table below describes the Environmental and Social Management Plan of the project

Table A. Environmental and Social Management Plan.

Risk and risk rating	Mitigation Measures	Cost Estimate	Timeline
<i>Access and Equity</i>			
Beneficiaries of the Implementation of EbA and livelihood activities at village level might be influenced by local elite capture and cause unfair and inequitable access for the community to receive project benefits. (Low)	Implement consistent participatory and social equity framework; create specific consultation to the women and underprivileged groups; involve village representative board in planning and implementation	Integrated in project activities: 3.1.1. Conduct socialization and FPIC in target villages 3.2.2. Facilitate village meetings to develop action/management plan of LMMA in target locations. 3.3.2. Facilitate village meetings to develop water resource conservation action/management plan. 3.4.1. Conduct participatory initial assessment on CSA options 4.4.1. Facilitate village meeting to socialize sub-grants to communities including women's group	Q1 Q2 Q2 Q4 Q5

Process to allocate access to the project might not be transparent and not well coordinated with stakeholders; Selection of locations/villages for the implementation of EbA and livelihood activities might trigger jealousy among other villages (Low).	The project will prepare and disclose a Stakeholder Engagement Plan; and coordinate selection of locations/villages for the implementation of EbA and livelihood activities with the local government and other relevant stakeholders.	1.3.1. Facilitate Project Inception Workshop at provincial level participated by DKPPNTT and stakeholders from target districts 3.1.1. Conduct socialization and FPIC in target villages 3.2.2. Facilitate village meetings to develop action/management plan of LMMA in target locations. 3.3.2. Facilitate village meetings to develop water resource conservation action/management plan. 3.4.1. Conduct participatory initial assessment on CSA options 4.4.1. Facilitate village meeting to socialize sub-grants to communities including women's group	Q1 Q1 Q2 Q2 Q4 Q5
Marginalized and Vulnerable Groups.			
Marginalized and vulnerable groups might have limited access to participate in the project implementation. Most coastal communities are poor and marginalized small-scale fishers who are operating and managing fishery on a household basis and with limited fishing gear. Small scale fishery depends on ecosystem services provided by mangroves, coral reefs and seagrass. Degradation of these ecosystems will lead to decrease of fishery productions (Medium).	The project will ensure participation of marginalized and vulnerable groups in EbA and sustainable livelihood activities. The project will document meaningful participation of marginalized/vulnerable groups in project activities.	Integrated in activities: 3.1.5. Implement coastal ecosystem rehabilitation (mangrove ca. 10ha/village: Holulai, Oelua and Meba) 3.1.6. Implement coastal ecosystem rehabilitation (coral reef/seagrass) (Oelua and Fuafuni) 3.3.4. Develop demplot for water resource conservation site 3.4.3. Develop demonstration plot for CSA practice	Q3 Q3 Q4 Q4

Core Labour Right			
Forced or compulsory labour, child labour, discrimination and respect of employment and occupation (low)	Implement YAPEKA's Ethical Guidelines; update the guideline when necessary.	None	Through out project implementation
Protection of Natural Habitats			
EbA - Mangrove rehabilitation: - Construction works to develop hybrid infrastructure may use materials from illegal activities, such as sand from illegal sand quarry (Medium) EbA - Coral reef rehabilitation - Damage of coral reefs caused by boats and divers when collecting corals during coral transplantation. (Low) - Recruitment of coral reef fragments might cause even more damage to the source site (Medium) EbA - LMMA: - Management of coastal resources might	EbA -mangrove rehabilitation: - The project proponent will ensure subcontractors state that they will use legal materials in constructing hybrid infrastructure - Select local species; prepare transit nursery; mangrove rehabilitation training; select suitable locations based on ecology and hydrology assessment. EbA - coral reef rehabilitation: - Develop guidelines/SOP for collecting and transplanting corals; Train and brief divers prior to collecting corals to minimize damage of corals; throw boat anchors in areas without coral reef. - Apply strict	Integrated in activities: 3.5.1. Conduct rapid environmental assessment on local livelihood options at target villages. 3.5.4. Monitoring and reporting of construction works 3.1.2. Conduct rapid assessment on socio-ecological conditions in target villages prior to rehabilitation activities.	Q1 Q3-Q4 Q1

limit access to coastal resources and cause discontent among small-scale fishers (medium)	recruitment protocol as approved by BKKPN/BRIN; only recruit from local coral sources to reduce risks. EbA - LMMA: • Social-ecological assessment to understand the livelihood system; diversification of livelihood; intensive consultation with fishermen; diversification of fishing gears to optimize catch and compensate losses; cross-sectoral coordination to mobilize support for impacted fishers. • Social-ecological assessment to understand the livelihood system; provide code of conduct and guidelines for livelihood activities		
Conservation of Biological Diversity			
EbA -Livelihood: • Ecosystem-based livelihood might disturb the biological diversity of coastal ecosystems (Medium)	EbA -Livelihood: • Conduct viability assessment of ecosystem resources; establish no-take zone and/or local regulation in utilizing the resources.	Integrated in activities: • 3.5.1. Conduct rapid environmental assessment on local livelihood options at target villages. • 3.5.4. Monitoring and reporting of construction works • 3.1.2. Conduct rapid assessment on socio-ecological conditions in target villages prior to rehabilitation activities.	Q1 Q3-Q4 Q1
Climate Change			
EbA -Livelihood: • Use of fossil fuels for production of livelihood products that might increase GHG emission (Low) • Open burning of waste practices that might increase of GHG emission (Low)	EbA -Livelihood: • Limit the use of fossil fuel and use renewable energy when possible (e.g.solar panel for electricity) • Develop and socialize guidelines for proper waste disposal.	None	Throughout project implementation
Pollution Prevention and Resource Efficiency			
EbA - BWN mangrove restoration: • Polybag waste in mangrove nursery/planting	EbA - BWN mangrove restoration • Use recyclable mangrove poly-bags (e.g	Integrated in activities: • 3.1.5. Implement coastal ecosystem rehabilitation (mangrove ca. 10ha/village:	Q3

activities (Low) EbA - Spider Frame coral transplantation: • Use of epoxy plastic might pollute the waters (Low) EbA - Livelihood: • EbA - Livelihood: ecotourism and production of other livelihood products might produce waste and pollute the nearby ecosystems (Medium)	made of palm leaves), and proper plastic waste disposal. EbA - Spider Frame coral transplantation: • Use locally sourced materials; avoid/minimize plastic structure for growth substrate; fixing the artificial substrate into the sea floor to avoid loose materials EbA - Livelihood: • Prepare guidelines for waste management in ecotourism areas and livelihood activities, brief community groups implementing ecotourism and other livelihood activities on guidelines to manage the waste, proper waste disposal.	Holulai, Oelua and Meba) • 3.1.6. Implement coastal ecosystem rehabilitation (coral reef/seagrass) (Oelua and Fuafuni)	Q3
Public Health			
Project activities might transport people to one place to other places and gather people during indoor training and workshop events (Low).	The project will follow the current public health protocol, complying with local regulations. The project will report incidence and accident of project staff and stakeholders.	None	Throughout project implementation.

Annex 3. Gender and Social Inclusion Assessment Report



Gender and Social Inclusion Assessment Report or Sabu and Rote, NTT

Prepared for

Project Preparation on 'Ecosystem-based Adaptation
to Support Climate Resilience in Coastal and Small Islands of
Rote Ndao and Sabu Raijua Districts in the Savu Sea Project'



**Prepared by: Kaulina Silvitiani
Editor: Prianto Wibowo**

Published by: YAPEKA, 2023

I. INTRODUCTION

1.1. Background

East Nusa Tenggara (NTT) is one of the provinces in the southernmost part of Indonesia, covering the easternmost part of the Lesser Sunda Islands. East Nusa Tenggara Province has various potential natural resources, not only the potential for coastal and marine resources such as fisheries, seaweed cultivation, salt sources, and pearl cultivation potential. East Nusa Tenggara also has the potential for agricultural and plantation resources such as rice, corn, coconut, and onions. The people of East Nusa Tenggara also have a variety of unique local cultures and traditions. East Nusa Tenggara is a province consisting of 599 islands with a coastline of about 5,700 km and a sea area of 15,141,733 hectares that is very vulnerable to climate change.

The increasing effects of climate change in East Nusa Tenggara provide opportunities for higher potential hazards. The long dry season that causes drought impacts the community's high crop failure rate, resulting in the scarcity of food sources for local communities. The dry season is longer than in other regions, lasting eight months (April- November). The average air temperature in the region is 27.6° Celsius, with an average maximum temperature of 32.7° Celsius and an average minimum temperature of 16.2° Celsius. The occurrence of cyclones, floods, and large waves has damaged inland and coastal habitats that have an important role in providing ecosystem services, agricultural and plantation resources, coastal fisheries resources, and seaweed cultivation areas, as well as extreme weather that makes it difficult for fishers along the coast to go to sea.

Small islands are particularly vulnerable to climate change due to a combination of factors, including their small size, remoteness, and limited resources. Sabu and Rote islands in NTT Province are small islands that are affected by climate change.

Using NOAA SSTA (Sea Surface Temperature Anomaly) data from 2015-2021, our heatmap analysis indicates Rote and Sabu islands within the Savu Seascape in the southeastern part of Indonesia suffer high sea surface temperature anomalies ranging from 2°C, up to 3°C maximum. Consequently, the Savu Sea area is prone to coral bleaching. The pattern of coral bleaching alerts is closely related to temperature anomalies surrounding the Rote and Sabu islands. An increase in sea surface temperature also causes the growth and development of mangroves to be disturbed. It will also cause cascading effects on the connected ecosystem through a chain of hydrometeorology and marine chemistry, increasing seagrass ecosystems' vulnerability. Coastal and marine ecosystem damage causes consequences of ecosystem service losses and triggers negative cascading impacts on the socio-economic condition of coastal communities, including livelihood system disruption in small islands including the Rote and Sabu islands.

Climate change does not recognize gender. The effects of climate change vary across individuals and populations, with dramatically different impacts based on gender, class, race, ethnicity, disability, geography, and more. Gender norms shape the way that climate change

affects populations. Thus, climate vulnerability can only be effectively addressed by understanding the effects of climate stressors on women, girls, men, and boys and how intersecting identities, geographies, and social positions contribute to those vulnerabilities¹. Studies have shown that men and women can adapt to climate change differently because of gender inequalities in access to and control of assets, services, and decision-making. Gender norms, roles, and biases present in communities, societies, places of work, and institutions further limit women's ability to adapt to climate change. Climate change can exacerbate gender inequalities and, in turn increase the vulnerability of communities and countries².

Climate change has a significant impact on dryland agriculture and small-scale fishery in Sabu and Rote islands. Climate change has led to changes in rainfall patterns, increased temperature and more frequent extreme weather events, which can affect crop yields and soil health. Erratic climate patterns make it difficult for poor small-scale fishers and traditional farmers to determine when to fish and to plant their crops, and they often face unfavorable conditions. These communities are vulnerable to climate change as they have limited knowledge and capacity to tackle climate change impacts. Social inclusion, including poor farmers and small-scale fishermen, is important to ensure that climate adaptation strategies are inclusive and responsive to the needs of the community. This can involve engaging with different groups in the community, including women, youth, and marginalized and underrepresented populations, to ensure that their voices are heard, and their needs are addressed.

A Project Proposal on 'Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Raijua Districts in the Savu Sea Project' will be prepared. To ensure Gender and Social Inclusion into the project, a gender and social inclusion assessment needs to be conducted.

1.2. Objectives of the Assessment

1. To identify gender inequality and social exclusion issues in coastal and small islands of Sabu and Rote.
2. To provide recommendations for the adaptation fund project to address gender issues in Sabu and Rote.

¹ USAID (2022), *Gender Analysis for The USAID Climate Strategy 2022-2030*.

² Value for Woman (2020), *Study of The Impacts of Climate Change on The Women and Men of The Caribbean: Pilot Programme for Climate Resilience Countries*, Inter-American Development Bank (IDB), IDB-TN-02064

II. METHOD

The Gender and Social Inclusion Assessment was conducted in Sabu and Rote islands, NTT Province. The assessment was to identify impact of climate change to gender and social inclusion in Rote and Sabu Islands, particularly in 5 targeted sites: Mebba and Limanggu villages (in Sabu Island); Holulai, Oelua and Fuafuni villages (in Rote Island). The assessment will take into account the vulnerability of men and women; and small-scale fishermen and dryland farmers who are considered as the most vulnerable groups in Rote and Sabu Islands.

The gender assessment conducted included gender roles and division of labors, gender participation and leadership in decision making, and access to control over resources; while the of social inclusion assessment included livelihood opportunities and existing traditional practices and customary law over coastal resource management. Findings from assessment of the gender and social inclusion are used as base-line for developing gender and social inclusion plan in Rote and Sabu Islands.

The Gender and Social Inclusion Assessment Framework is shown in Figure 1. Below:

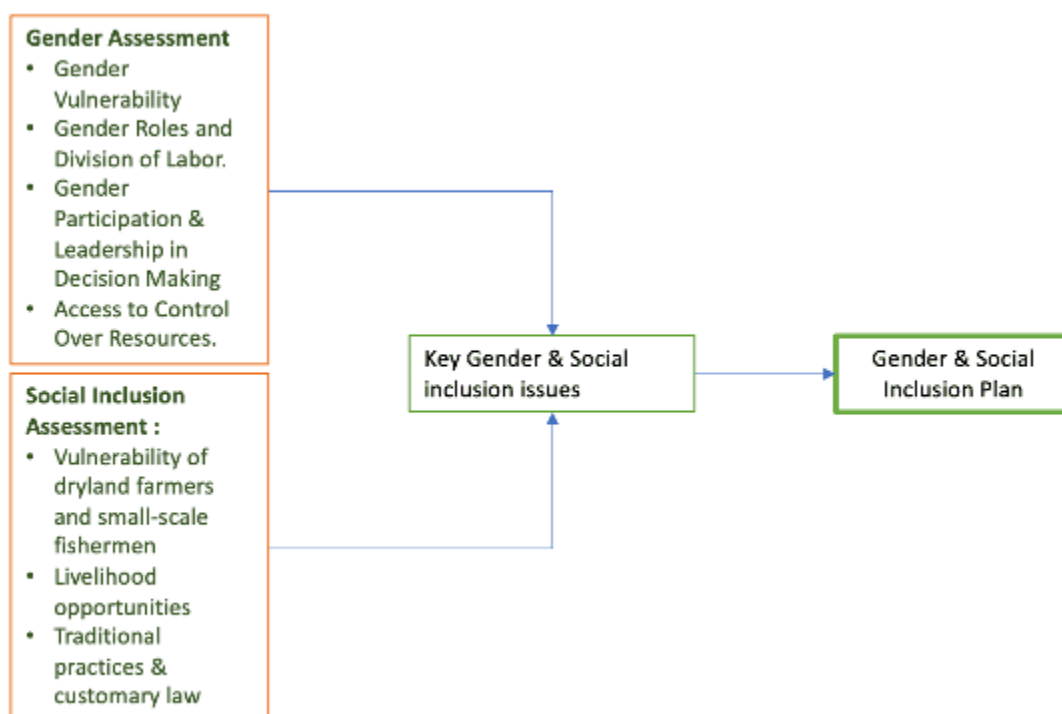


Figure I. Gender & Social Inclusion Assessment Framework.

On desk study, Focus Group Discussions, and in-depth interviews. FGDs and interviews were conducted in Sabu and Rote islands at district and village levels. Five target villages were selected for the assessment (2 villages in Sabu: Meba and Limanggu; and 3 villages in Rote: Oelua, Holulai and Fuafuni) and two control villages: Ledean Village in Sabu, and Oeseli village in Rote Island. FGDs and interviews were conducted during 12 – 22 August 2023.

Stakeholders involved in the FGDs, and interviews include:

- District government officials, who are responsible in developing climate policies and regulations as well implementing climate adaptation and mitigation programs.
- Village government officials, who are responsible in managing village development programs, including for climate adaptation and mitigation.

- Local community (including vulnerable groups: women's group, dryland farmers small-scale fishermen), who are affected by climate change.
- Local NGOs, who are working on community development and conservation activities at local/village level.

Table B. Gender and Social Inclusion Analysis Component.

Component assessed	Method	Source of Information
Climate vulnerability and risks	Desk study	Secondary information and publication
Gender roles and division of labor	FGD and Interview	Local government, local NGOs, Community leaders, Village communities
Leadership and decisionmaking	FGD and Interview	Local government, local NGOs, Community leaders, Village communities
Access to control over resources	FGD and Interview	Local government, local NGOs, Community leaders, Village communities
Livelihood opportunities	Interview	Community leaders, Village communities
Traditional knowledge/Customary law to manage natural resources	Desk Study FGD and Interview	Local government, local NGOs, Community leaders, Village communities



Figure II. FGD on Climate Change and Gender Issue at Rote Ndao District.



Figure III. FGD on Climate Change and Gender in Sabu Raijua District.



Figure IV. In-depth interviews with men and women in Holulai (left above), Oelua (Right above), Limanggu (Left below) and discussion with head of village at Limanggu (right below).

III. CLIMATE CHANGE VULNERABILITY

3.1. Climate Change and Natural Disaster in NTT

Climate change results from the increase in the earth's temperature, which is getting warmer (global warming). The sun's heat absorbed by the earth cannot be released back into the atmosphere because it is blocked by Greenhouse Gases (GHG), so it is reflected to the earth. The increase in GHG is caused by human activities that release too much carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Most carbon dioxide gas is produced by burning fossil fuels on an industrial scale, burning in vehicle engines, and cutting down trees. In addition to affecting the frequency and intensity of hydrometeorological disasters, warming temperatures also change the habitat of insects, such as mosquitoes, resulting in changes in the pattern of incidence and spread of malaria and dengue diseases²².

NTT has a type of tropical climate that falls into the semi-frame climate category. This category is characterized by a rainy season with an average of 3-4 months and a dry season of 8-9 months. The peak of the rainy season occurs from December to February, with the highest rainfall and the highest rainy days of 26 days in January. The average rainfall in NTT is 1,200 mm per year, with a base flow from 194 rivers of 122.50 m³/second or equivalent to 3.863 billion m³/year. If the population of NTT is 5,287,302 people (2017), then the community's water needs are approximately 6.345 billion m³ / year (with a standard of 1,200 liters per capita) or 201.19 m³ / second. Based on this data, NTT experiences a water deficit of 78.69 m³/second or 2.461 billion m³/year². These topographical conditions cause the agricultural production system in most lowland areas in NTT to be very limited to wetland and dryland agriculture.

NTT Province is an archipelago with several islands in the Circum-Pacific region, such as along the Flores Islands and its surroundings (including Lembata) and Timor Island. These islands are located on a volcanic path (Ring of Fire), so they have an unstable soil structure and can be categorized as fertile but prone to geological disasters. Almost all regions in NTT Province are at risk of geological and hydrometeorological disasters. As many as 75% of the disasters in NTT are hydrometeorological disasters, such as floods, droughts, forest and land fires, hurricanes, extreme waves, and many more triggered by climate. Although they do not cause as many casualties as geological disasters (earthquakes, tsunamis, volcanic eruptions), hydrometeorological disasters damage community livelihood assets and occur seasonally. This type of disaster will exacerbate poverty if not properly addressed. The risk of such disasters is evenly experienced by all regions in NTT, especially in steep slope areas, around rivers, and also areas with low rainfall, such as in East Sumba, Sabu, Rote and the southern part of South-Central Timor. Quite several major floods have occurred in NTT: Major flood disasters include 2000 in Malaka Regency (formerly Belu), 2010 in South Central Timor Regency, 2011 in Belu Regency, and the most recent disaster, the Tropical Cyclone (TC)

²² PEMPROV NTT, "RPJMD Perubahan Provinsi NTT 2018-2023", (2021).

Seroja. in 2021 which has S category 3 (Aus. Scale). This TC Seroja began forming south of East NusaTenggara, Indonesia, on April 3, 2021.

TC Seroja is a disaster with provincial status because it occurred in 16 districts/cities, including Rote Ndao Regency, and Sabu Raijua Regency. One of the significant impacts of Tropical Cyclone Seroja is the occurrence of extreme rainfall and strong winds. The extreme rainfall caused flash floods that hit several areas around the watershed which washed away infrastructure especially local houses and casualties, other impacts include waves reaching four to six meters in Rote Ndao and Sabu Raijua Regency Cyclone Seroja is a hydrometeorological disaster that triggers geological disasters, namely landslides. Climate conditions strongly influence hydrometeorological disasters. Climate change impacts sea level and temperature rise and causes changes in the pattern of hydrometeorological disasters. This results in longer droughts, frequent floods, and forest and land fires. The disaster situation is exacerbated by deforestation in upstream forest areas and watersheds that have been used as community agricultural land²³.

In addition, climate change is also causing small islands to be lost due to rising sea levels and coral reef bleaching due to rising sea temperatures. This effect disrupts marine and coastal biodiversity and the productivity of marine products. Another threat to small islands is abrasion. Abrasion has occurred in several coastal areas, such as Rote Ndao Regency, Sabu Raijua Regency, and other coastal areas. Abrasion is not only caused by rising seawater but also by anthropogenic factor such as sand mining. The average raw material for sand used for physical development in Rote Ndao Regency, Sabu Raijua Regency, and other regencies in NTT is taken from the beach, despite the prohibition of actions that cause pollution and/or destruction of the environment regulated in Law No. 32 of 2009 concerning environmental protection and management. Currently, there is a limited law enforcement on illegal sand mining, and mitigation to reduce sand mining should be with precaution not to initiate maladaptation practices.

The agriculture and marine fisheries sectors in NTT are vulnerable to the impacts of climate change. Most farmers in NTT are dryland farmers who depend on climate, rain intensity, wind, and air temperature to produce food. Agriculture, which consists of agriculture, forestry, hunting and fisheries, still dominates the economy of Rote Ndao and Sabu Raijua, accounting for 47% and 82.3% respectively of the economy. This indicates that the majority of the population in both districts work as farmers. The Geographical conditions of Sabu and Rote are not favorable for agriculture as they consist of dry land. However, people of both districts rely heavily on agriculture for their livelihoods, and water supply is a critical issue for agriculture in the area which is vulnerable to climate change.

Fishery sector in both Sabu and Rote is vulnerable to climate change. Fishermen's communities and livelihood opportunities are vulnerable to drought and seasonal changes, which can affect the availability and quality of fish and other seafood products. The

²³ R Kurniawan, et al., "The Impact of Tropical Cyclone Seroja to The Rainfal and Sea Wafe Height in East NusaTenggara", IOP Conference Series: Earth and Environtmental Science 925 (2021).

vulnerability of small-scale fishery in both districts are also caused by other factors such as poverty and environment degradation, under-capacity fishery sector and the recent covid-19 pandemic.

Climate change is also triggering the El Nino Southern Oscillation (ENSO) cycle, which will cause a shift in the atmospheric system, leading to widespread droughts and La Nina, which causes flooding. Droughts that occur in NTT cause crop failure and affect food production. Global sea level rise is currently reaching 2 mm per year, resulting in losses to thousands of islands and marine reef resources related to corals, mangroves, and fisheries. There is a risk of tidal flooding and seawater intrusion, which will seriously impact the aquaculture industry. Increasing sea surface temperatures will lead to the loss of coral reefs, cause changes in ocean circulation patterns and salinity, and likely reduce primary production. This has resulted in a decrease in the productivity of captured fish and marine products of fishers. Fishers must travel longer distances and change locations to get a catch, and this happens in Holulai Village in Rote Ndao Regency. In addition to capture-fishers, people in Rote Ndao and Sabu Raijua districts are seaweed farmers. The increase in seawater temperature has resulted in a decrease in seaweed productivity. Seroja storms have also caused seaweed farmers to lose money due to the breaking of seaweed ropes and sedimentation, resulting in crop failure.

One of the impacts of climate change strongly felt in the study locations in Rote Ndao district is the unpredictable seasons that make seaweed cultivation, one of the main sources of income, vulnerable to disease. The tidal flooding that often occurs in Mebba Village in Sabu Raijua District makes it difficult for the community to grow crops because the land is often inundated by seawater, making the land infertile and difficult to access clean water. Searching for marine animals in tidal areas has become much more difficult in almost all the study areas in both Rote Ndao and Sabu Raijua districts because species of fish, mollusks, and crustaceans that were once plentiful have become very difficult to find. Livestock have also become more susceptible to disease, such as sudden death in pigs.

FGD conducted in Sabu and Rote also suggest that climate change has a significant impact on access to clean water in both Sabu and Rote islands, affecting the availability and quality of water resources, while the hydrological potential of both islands, especially surface water, is generally relatively small. This condition makes it difficult to exploit surface water sources, especially in some areas of Rote Ndao and Sabu Raijua.

3.2. Gender and Traditional Group Vulnerability to Climate Change

Climate vulnerability in the social system is influenced by adaptive capacity and sensitivity. Vulnerability is determined by economic, institutional, and political capacities of different people affected by climate-related impact⁶, and climate change will be felt by different groups of people in different ways. Due to differences in socially constructed gender roles and social status, women and men experience

the impacts of climate change differently. Gendered impact of climate change can be described in Figure V below as cited from FAO publication.

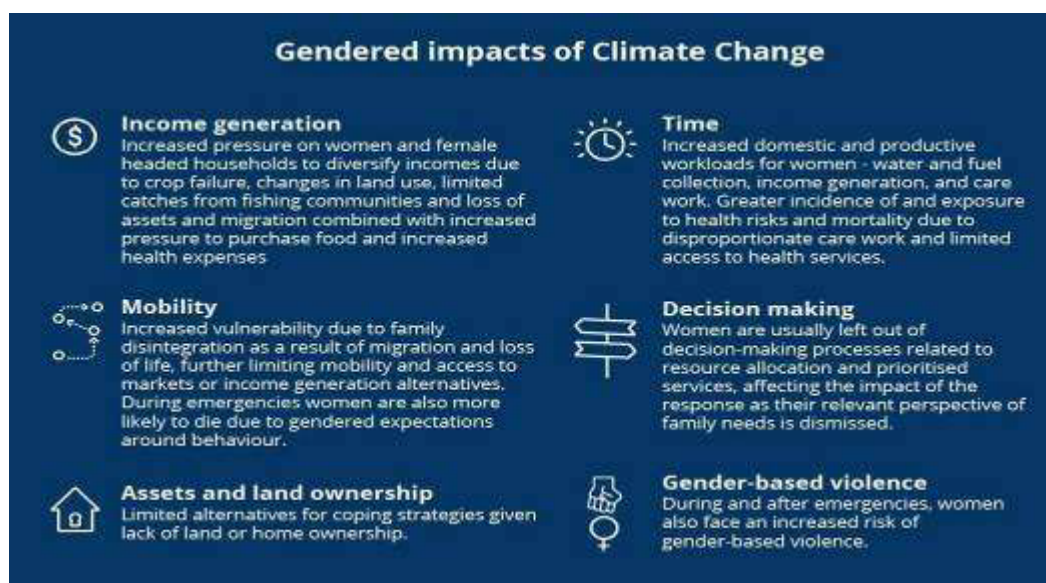


Figure V. Gendered Impacts of Climate Change⁷

Gender vulnerability to climate change in both Sabu and Rote islands is a significant issue that affects women and men differently. Climate risks and impacts have led to changing gender roles by undermining the food security of households and leading to increased workloads for women. Women also have limited access to resources such as land, water and credit which can affect their ability to adapt to climate change and cope with its impacts. For small-scale fishery for instance, bad weather conditions may cause fishermen to not be able to catch fishes, so women need to help their husbands to earn additional income and still carry out their domestic duties. Gender inequality also threatens women's autonomy and tends to limit women's control over the decisions that govern their lives and their access to basic resources and services. Therefore, in times of disaster or extreme weather, women tend to bear the brunt of reduced access and availability of already limited resources. Women are more likely to be exposed to disaster risks and losses related to their livelihoods and less able to adapt to changing climate conditions²⁴.

Vulnerable groups to climate change are mostly poor communities living as dryland farmers and small-scale fishermen. They are vulnerable to climate change as their source of income depend on dryland farms and coastal fisheries which are directly affected by unpredicted rainy season, storms, and strong sea waves, while small-scale fishermen only use small boats (boat size < 5GT) and traditional fishing gears. These dry land farmers and small-scale fishermen are mostly traditional communities who share common cultural practices, beliefs, and values that have been passed down through generations. These communities can be based on various factors, including shared interests, needs or identities. Traditional groups or communities often have deep connections to the land and natural resources and

²⁴ FAO, "The Role of Gender in Climate-Smart Agriculture", Climate Smart Agriculture (2017).

have developed traditional practices for managing these resources sustainably. Traditional communities also have limited access to information and knowledge, and livelihood opportunities, compared to 'modern' communities who are mostly traders and entrepreneurs and live in towns, and who have more access to information.

Small-scale fishermen and dryland farmers depend their livelihood on coastal resources and dry land agriculture, which are vulnerable to climate change impacts such as bad weather, changes of fishery resources and drought. Based on the FGD result, below are some factors that contribute to the climate vulnerability of traditional communities such as small-scale fishermen and dryland farmers in Sabu and Rote:

- Traditional groups may have limited perception and awareness of climate shocks and their impacts on local fisheries and dryland agriculture, which can limit their ability to adapt to changing conditions.
- Environmental degradation, including coral reef degradation and overfishing, can affect the productivity of fishing grounds and reduce the availability of fish stocks, which can affect the livelihoods of small-scale fishermen.
- Drought can affect the availability of water resources, including freshwater sources, which can affect dry land agriculture production and the productivity of fishing grounds and reduce the availability of fish stocks.
- Traditional groups may have limited opportunities to participate in decision-making processes related to climate change adaptation and mitigation, which limit their ability to influence policies and programs that affect their lives.

As described above, women and traditional communities particularly dry land farmers and small-scale fishermen are the most affected by climate change in Rote and Sabu Islands but are often neglected in making informed decisions about climate change-driven hazards affecting them. This condition is caused by combination of social, culture and economic factors such as unequal access to resources, discrimination of social norms and gender stereotypes, limited access to information and limited decision-making power of women and vulnerable groups.

Information related to climate change are often too technical to understand for dryland farmers and small-scale fishermen, which lead to low awareness of impact of climate change at community level, and climate impact mitigation measures are not well prepared by communities. For instance, the recent Seroja tropical cyclone that occurred in April 2021 was not anticipated by most of coastal communities as information on the cyclone was not available. Dryland farmers often have to undergo prolonged drought season without anticipating such condition.

IV. GENDER INEQUALITY AND SOCIAL EXCLUSION ISSUES

The phenomenon of gender inequality certainly cannot be separated from understanding gender construction in social life, including in coastal and small islands of Sabu and Rote. Gender is the difference in responsibilities between men and women and the function of social roles constructed by society²⁵. This division of roles is interpreted as a

²⁵ Suparman Abdullah, "Pembangunan Gender dan Benturan Tradisi", Jurnal Socius 13, No. 1 (September 2013)

socio-cultural difference and is a value that refers to social relationships, which provide different roles between men and women. This is due to biological differences that become natural and cultural in social life. These various standardized tasks for women and men are known as gender roles. In other words, gender roles are various activities, tasks, or work roles deliberately attached or identified as responsibilities for women and men. Therefore, gender roles are highly cultural and even personal²⁶.

The existing coastal and small island resources of Sabu and Rote and the social construct about the roles of women and men have shaped the segregated division of labor and roles between women and men, subsequently leading to the segregation of capacity between women and men. Segregation of capacity affects women's and men's access and control over resources, livelihood, women's participation in decision making and resilience to shock. Figure 3 below shows the gender inequities identified during FGD and field activities.

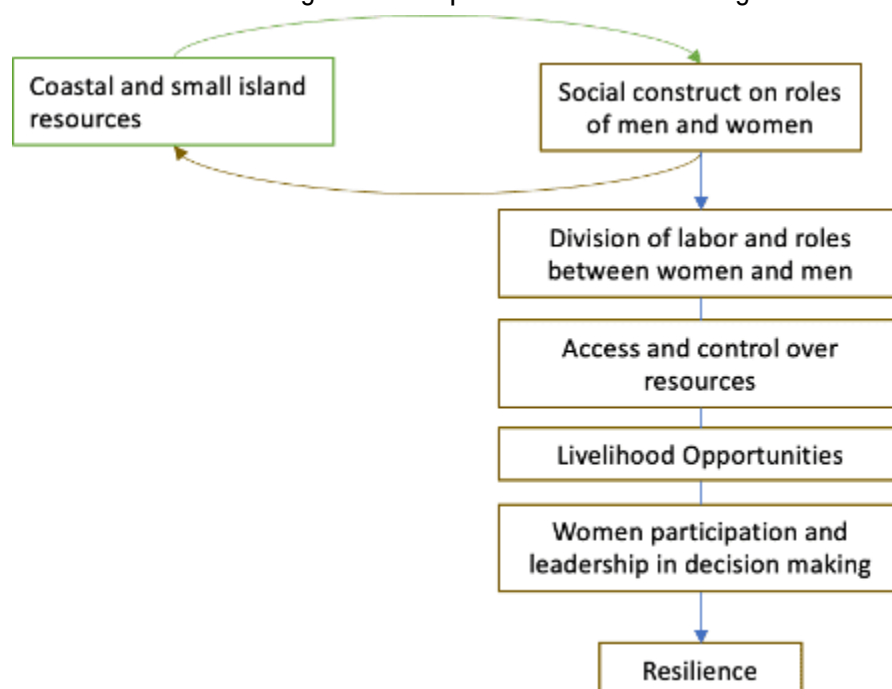


Figure VI. Gender Inequalities identified during FGD and Village Visits

4.1. Segregation of Gender Roles and Divisions of Labor

Gender roles cause different vulnerability between men and women. However, women are not only victims of adverse climate impacts due to their limitations, but they are also key active actors in the adaptation process. This ability is due to their deep knowledge of their environment, experience in managing natural resources (forests, water, biodiversity, and land), and involvement in climate-sensitive occupations such as agriculture, forestry, and fisheries. Women's roles are not only as caregivers and nurturers, but they usually form strong social networks in their communities that fulfill the prerequisites as agents of climate change. The concept of gender roles developed by Caroline Moser²⁷ introduced the triple roles

²⁶ Abdul Jalil and St. Aminah, "Gender Dalam Perspektif Budaya dan Bahasa", Jurnal Al-Maiyyah 11, No. 2 (Juli – Desember 2018): 279-284

²⁷ Caroline Moser, "Gender Planning and Development: Theory, Practice and Training", 2003

assigned to men and women in most societies low-income, namely productive, reproductive, and community-managing roles. Productive roles pertain to the earning of wages or payment by women and men and include both formal and informal work activities. The division of responsibilities and domestic tasks related to household well-being, such as childcare, cooking, house cleaning, and similar tasks, constitute reproductive roles. Community management and political roles are classified into two spheres: (1) Community managing roles, which are social activities inclusive of all community-level activities that extend reproductive roles conducted on a voluntary and unpaid basis; and (2) Political management roles, which involve community organizing activities carried out at the formal and political level, typically compensated through direct or indirect payment, and often associated with an increase in status and power.

Men and women have different roles for their families. Below are some findings from the assessment on gender roles and divisions of labor in Sabu and Rote:

Productive Roles. In both Rote Ndao and Sabu Raijua districts, women and men share productive roles by earning a living. However, the types of work activities are different and separated based on the roles established by the community. Men, who are socially constructed as responsible for being the head of the household and breadwinner, go to sea and even migrate outside the island to earn a living. Women who also participate in earning a living are only allowed to carry out activities around their place of residence, on the mainland, or the coast (see Table C).

Table C. Division of Fishing Labor between Women and Men in Fishery

Fishing Activities	Division of Labor	
	Male	Female
Checking fishing gears and equipment	√	
Fishing	√	
Collecting small fish, mollusks, crustaceans in the seashore (Makan Meting)		√
Fish cleaning		√
Fish drying		√
Seafood processing		√
Selling fish to the market		√

On the mainland, women have a wider variety of productive activities than men. They sell cakes or bakery, gasoline, and work in salt ponds, as do many women in Kelurahan Mebba.

Many women work as planting laborers, taking care of food crops such as rice and horticulture, as is done by women in Limaggu and Ledean Village in Sabu Raijua District and Fuafuni Village in Rote Ndao District. The abundant springs in these two areas make the land more fertile, making it suitable for farming (see Table 3). In Oelua and Holulai villages, women play a large role in seaweed cultivation and processing, as well as collecting small fish, mollusks, crustaceans, and octopus in coastal areas affected by tides, an activity commonly carried out by almost all NTT communities living on the coast (commonly called Makan Meting). Women also weave traditional cloth, weave mats from sea pandanus, and make bags from palm leaves.

Table D. Division of Labor between Women and Men in Agriculture

Agriculture Activities	Division of Labor	
	Male	Female
Land preparation	√	√
Selection of plants to be planted	√	
Sowing seeds		√
Planting seeds		√
Transporting water for watering plants	√	
fertilization	√	
Harvesting		√
Post-harvest process		√
Sale of crops	√	

However, there are many types of productive activities that women must carry out compared to men, and women still depend on the income earned by men. The lack of support for women in the final decision-making process discourages women from taking on more roles within the family, which is also related to perceptions formed by the community. For example, fishing is the role of men, while processing the catch is the task of women. Meanwhile, selling in large volumes is done by men. Women and men believe that affairs that require large and rational decisions are men's business. This role arises due to general perceptions that have long been formed in society.

Seaweed farming was conducted by family members, including women and men like they do in Limaggu, Fuafuni, Oelua, Holulai and Oeseli Village. The core processes in seaweed farming included providing inputs (seedlings and ropes), cleaning the ropes, tying seedlings to ropes, attaching these to the main rope at sea, daily maintenance at sea, collecting fallen

seaweed,harvesting, untying seaweed, sun drying, and selling it to traders²⁸.

In seaweed farming groups, women participate in activities requiring less mobility and are confined to a specific space. Conversely, men engage in decision-making tasks that demand high mobility (refer to Table 4). Men are also more likely to travel to production centers to facilitate transactions with seaweed seed traders, a task that women seldom perform due to limitations in time and space imposed by their reproductive roles²⁹.

Table E. Division of Labor between Women and Men in Seaweed farming

Seaweed Farming Activities	Division of Labor	
	Male	Female
Proving input (seedlings, ties ropes)	√	
Clean the ropes	√	√
Tying seedlings to rope		√
Attach to the main rope in the sea	√	
Daily maintainance in the sea	√	
Collect fallen seaweed		√
Harvest		√
Untie seaweed		√
Sun-drying process		√
Selling to traders	√	

The division of labor between women and men is influenced by society's deeply rooted stereotypes about gender. Women are often restricted to traditionally feminine tasks, while men are assigned more masculine tasks. For example, women pay more attention to detail and work tidier and faster than men, while men are relied upon more for their strength. This separate division of labor reinforces the social construction that femininity is women's sole domain and masculinity is men's exclusive domain. However, men can also experience challenges in expressing their masculinity. Not all men can meet societal expectations in carrying out the roles, workloads, and responsibilities of masculinity. Gender inequality can also cause men to be at a disadvantage.

^{11 28} Ria Fitriana, "Gendered Participation in Seaweed Production – Examples from Indonesia", Asian Fisheries Science Special Issue 30S (2017): 245-264

²⁹ Ima Susilowati, " Gender Assessment Report for Rote Ndao, NTT", ATSEA-2 Project (2021).

Reproductive roles. The division of roles based on gender sometimes impacts the treatment of inequality between men and women, which is often found in domestic relationships, namely husband and wife relationships. Women mostly assume reproductive roles in the household, while most men or husbands take little responsibility for reproductive roles in the household except when the woman or the wife is sick. In the study locations, respondents consisting of women and men believed that domestic household duties were the responsibility of women, namely the wife, and the duty of men was to earn a living. As times change, many men help their wives care for the household when the husband's main work is done. However, there are still many who perceive that the position of a woman or wife must submit to a man or husband who is the head of the family, where men who show their dominance make wives dependent on men's decisions and power in household relationships so that women are very vulnerable to experiencing physical and mental fatigue when they cannot share their reproductive roles with men or the husband.

Community Managing Roles. Like productive roles, community management roles are equally filled by both women and men. Men mostly dominate the political sphere at the community level, which corresponds with status, power, and decision-making. However, some keypositions at sector agencies at district level are filled by women, and some villages are led bywomen, such as in Mebba and Limanggu in Sabu island. In Holulai, Rote, although the village is led by men, most of the village staff are women; Meanwhile, women predominantly fill a social role centered on transferring domestic tasks to the community, encompassing cooking, washing dishes, and preparing meals. Women primarily occupy this role.



Figure VII. A woman and seagrass harvest.

Existing capacity building programs, implemented by the government, follow traditional gender roles without prior assessment of the unique abilities of both women and men. Economic capacity building in food processing and product manufacturing was provided specifically for women, as was done in Oelua Village, Rote Ndao District, as well as financial management training to help with household finances. Men received capacity-building activities related to fishing, agriculture, livestock, and horticulture. In contrast, women and men received equal capacity-building activities on seaweed cultivation in Limaggu Village, Sabu Raijua District, and Fuafuni Village, Rote Ndao District. Both genders also received capacity building in mangrove cultivation in Mebba Village of Sabu Raijua District and Holulai Village of Rote Ndao District. All capacity-building activities aimed to empower men and women economically, and no other topics were provided to either gender.

The FGDs also identified that there are gaps in productive, reproductive and community managing roles between men and women that affect climate vulnerability of both genders, and these gaps are exacerbated by limited access to resources and opportunities.

4.2. Access to and control over resources

Generally, men are synonymous with ease in obtaining employment opportunities, accessing resources in agriculture, capture-fisheries, and various other domains of work.

Meanwhile, women have many opportunities to manage resources in post-production activities, such as processing, small-scale marketing, and household finances under women's control. In addition to agricultural and horticultural products, marine products are one of the main livelihoods. To obtain these products, communities use equipment that supports their activities and supporting skills, such as good knowledge of the seasonal calendar and other related knowledge. These resources are mostly accessed and controlled by men. Men have access to tools and equipment as well as skills related to the resources that are their main source of income. This must be fulfilled as part of their inherent responsibilities as community members. They have access to government assistance programs to support the resource-based economy, such as fertilizer for farmers and boats, engines, fishing gear, and cool boxes for fishers. For women, it is not easy to access assistance in the form of fishing gear, machinery, and others because most government programs for women are processing or production programs, so the assistance provided by the government is related to this purpose. Women also have constraints in access to financial services, including policy and legal barriers, as well as cultural norms that prevent women from developing and growing enterprises and improving productivity.



Figure VIII. One of Water springs in Limanggu Village

In addition to resources directly related to agriculture and fisheries, clean water is a vital resource to which access is limited. Women's productive and reproductive roles make them more dependent on water than men in their gender roles. Limited access to water increases women's vulnerability to risks compared to men. In Sabu Raijua District, Kelurahan Mebba has limited access to clean water. Because it is located close to the coast and is often exposed to tidal flooding, the wells in the village have a brackish water taste, so obtaining clean water requires the community to buy tank water to meet clean water needs for at least one month. The cost must be Rp 200,000 per 500 liters of clean water. This water condition also applies in Rote Ndao Regency, namely in Holulai Village. To get clean water, they must come to the wells the government provides by carrying water cans.

4.3. Women Leadership and Women's Participation in Decision Making

According to Article 28 of the 1945 Constitution, men and women have the same rights and obligations as Indonesian citizens. The law is a reflection of a democratic state that provides the widest possible space for all people to take part, including women. Restricting women from various activities of state life is weakening gender politics and denying women's political power³⁰. Since the concept of gender developed, it is undeniable that the role of women in development has experienced renewal. For example, not a few women have occupied important positions in the political, governmental, and non-governmental sectors. However, the perception that has been formed for a long time in society, where women are identified with work in the domestic area or household, still needs to be considered

³⁰ Bhimo Rizky Samudro et al., "Eksistensi Kepala Daeah Perempuan Terhadap Performa Sosioekonomi Daerah", Gracias Logis Kreatif (2021).

more competent to work on extensive activities, for example, in the public area³¹.

During visits to villages in Sabu and Rote, two of seven villages are led by women: in Meba and Limanggu villages in Sabu. As Village head, these women have strong leadership in managing and developing their villages. Some of women active participation were also indicated in Holulai and Oelua, where women's group are active in managing mangroves.

Women are often involved in various fora from the village level to local government (meetings, deliberations, etc.). However, FGDs in Sabu and Rote were dominated by men although some women participated the FGDs as well. The obstacle to women who have attended the forum is the decision-making capacity and contribution of women in the forum should be improved so that women can respond to strategic needs and color and intervene in deliberations in the form of policies. Differences occur when women are in fora attended by women only and by women and men. In mixed-gender forums, women sometimes feel uncomfortable expressing their opinions because only men can control and make the final decision. Women's lack of access to resources and opportunities can limit their participation in decision-making processes and exacerbate gender inequity.

4.4. Livelihood

Rote Ndao

According to statistics released by the Rode Ndao District Agency in 2021, the population of Rote Ndao stands at 145,972, with 73,522 males and 72,450 females. Within the total population, 51,714 people live in poverty, constituting 28.08%, an increase of 4,050 compared to 2019. Additionally, the Human Development Index for Rote Ndao was 63.21 on the 0-100 scale in 2021, placing the regency at the 15th position out of 22 regencies in NTT Province. The food security and vulnerability index map in 2021 classifies the region as having a low level of food security (Priority 4) due to poverty, food expenditure, and stunting in children under age five. The Ministry of Women Empowerment and Child Protection and the National Statistical Agency also reported a significant disparity in the Gender Development Index of Rote Ndao, scoring 67.90 for males and 57.09 for females.

In 2021, most of the residents of Rote Ndao Regency work in the agricultural sector. Of the entire working population, 54.06% work in the agricultural sector. From an economic perspective, agriculture, farming, horticulture, plantation, livestock, and fisheries sectors remain the leading economic sectors in Rote Ndao, making the largest contribution of 48.80% to Gross Regional Domestic Income (PDRB)³². In 2021, Rote Ndao Regency produced 102,519.20 tons of rice production, and the most widely produced vegetable commodity was shallots, with a total production of 45,952 quintals, and cayenne pepper with 23,060 quintals. The plantation commodities that are most widely planted are coconut and Lontar, where in 2021, the production of each commodity will be 3,411.13 tons of coconut and 1,001.89 tons

³¹ Wayan Budiarta, "Kepemimpinan Perempuan dalam Sistem Kekerabatan Purusa: Legitimasi Sejarah atas Kepemimpinan Politik Perempuan", *Jurnal Ilmiah Ilmu Sosial* (2022) Vol 8:1 (22-33).

³² BPS Kab Rote Ndao (2022). Kabupaten Rote Ndao Dalam Angka 2022. Badan Pusat Statistik Kabupaten Rote Ndao.

of Lontar.

Meanwhile, marine capture fisheries production in 2021 will reach 2,642 tons, where the most widely used fleet is jukung. Apart from fish, there are non-fish catches, where the most caught are sea cucumbers, namely 34 tons. The fishery sector in Rote Ndao consists of 2,991 households engaged in fishing activities, with 2,435 households being full-time fishers while the remaining households depend on fisheries for additional income as major or minor fishers. Rote Ndao boasts significant potential for fishery and marine resources, encompassing diverse pelagic and demersal fish species such as *Rastrelling sp* (scad), *Stolephorus sp* (anchovy), *Lutjanus sp* (snapper), *Epinephelus sp* (grouper), as well as different varieties of seaweeds like *Euchema cottonii* and *hallymenia* as well as processing of fishery products such as salted fish, dodol seaweed and so on. The capture fisheries in Rote Ndao could yield a potential production of up to 17.87 tons per year, although only 30-40% of the total potential has been exploited. Meanwhile, the region has substantial potential for aquaculture, spanning 32.67 hectares. Seaweed farming is prevalent in Rote Ndao, with approximately 8,675 farmers relying on it as a livelihood, comprising over half the total number of fishers in the district³³.

Sabu Raijua

Based on its geographical position, Sabu Raijua Regency not only has land potential but also has enormous maritime potential where the area of sea waters is quite extensive with a total coastline length of approximately 1,026.36 km. In 2022, the Sabu Raijua District Agency released statistics indicating a population of 92,792 in Sabu Raijua. Of this figure, 47,359 are male and 45,433 are female. Within this population, 30,000 individuals live in poverty corresponding to 28.73%. Furthermore, the Human Development Index for Sabu Raijua was 28.73 on the 0-100 scale in 2022, ranking the regency at the 22nd spot out of 22 regencies in NTT Province. The region is classified as vulnerable to food security (Priority 3) according to the 2022 Food Security and Vulnerability Index map due to poverty, food expenditure, and stunting in children under five. The Ministry of Women's Empowerment and Child Protection and the National Statistical Agency reported a significant Gender Development Index disparity in Sabu Raijua, with males scoring 66.34 and females scoring 60.58¹⁸.

Approximately 80% of the population in Sabu Raijua Regency works in the primary sectors (agriculture and mining) and secondary sectors, especially industry. Sabu Raijua Regency has regional potential in the form of agriculture in the form of rice crops, horticulture, which is shallots, plantations that are dominated by coconut, areca nut, and cashew trees, and marine potential in the form of capture fisheries, seaweed cultivation, and salt ponds spread across several sub-districts³⁴. These sectors contributed 34.56% of Gross Regional Domestic Income in 2020 (GRDP)³⁵.

Labor force

³³ 17 Kabupaten Rote Ndao (2019, 07 May). Potensi Daerah: Perikanan. rotendaokab.go.id. Retrieve from <http://rotendaokab.go.id/list/potensi-daerah>.

³⁴ BPS Kab Sabu Raijua (2023). Kabupaten Sabu Raijua Dalam Angka 2022. Badan Pusat Statistik Kabupaten Sabu Raijua

³⁵ Pemkab Sabu Raijua (2022). Rencana Pembangunan Jangka Menengah Daerah (RPJMD) Kabupaten Sabu Raijua Tahun 2021-2026. Pemerintah Kabupaten Sabu Raijua

The total labor force in Rote Ndao Regency in 2021 is 95,587 people, of which 41% (39,580) are women, and there are 19,111 women who focus on being housewives. Sabu Raijua Regency in 2022 has a total labor force of 53,861 people, of which 45% (39,580) are women, and there are 6,057 women who focus on being housewives. These women mostly work in the agriculture, horticultural, and fisheries sectors, and the rest work in the government, education, trade, construction, manufacturing, transportation, and warehousing sectors. No statistical documents discuss the role of women in activities in the agricultural and horticultural sectors or activities in coastal and marine areas.

In focus group discussions conducted in Rote Ndao district (Fuafuni, Holulai, and Oelua) and in Sabu Raijua district (Mebba and Limaggu), respondents described several activities carried out by women in the agricultural sector and coastal areas. In the agricultural and horticultural sectors, most of the women work as daily laborers who clean the land or do the harvesting. Meanwhile, in the coastal area, the women collect clams, small fish, sea cucumbers, and octopus in the intertidal waters at low tide. Meanwhile, in seaweed aquaculture, women carry out pre-cultivation activities such as tying seaweed seeds, harvesting seaweed, selling, and processing.

Alternative Livelihood Opportunities

Alternative livelihoods can contribute to livelihood resilience, as they can provide a buffer against shocks and stresses that affect traditional livelihoods, such as climate change, natural disaster or economic downturns. Alternative livelihoods can also provide new income streams and diversify livelihood portfolios, which can increase the resilience of households and communities.

Women have a more diverse alternative livelihood than men that correspond to their greater varieties of productive activities. For instance, in Rote coastal areas, women's main source of livelihood is selling fish captured by the fishermen, an occupation known as *mamalele* in the local context. This main source of livelihood is fully dependent on men and so also other sources of livelihood in the processing of captures, such as selling salted fish and other processed seafood. Women have other sources of livelihood that are not dependent on fish captures, i.e. selling baking products, plaited products (floor mat, hats, basket, etc.), and woven products although not a primary source.

Based on discussion with villagers during village visits in Sabu and Rote, below are some alternative livelihoods that are potential to be developed:

Table F. Alternative Potential Livelihoods.

Village	Alternative livelihood Opportunities	Remark
Mebba	Handycraft	Mebba is relatively close to Seba city, the main city in Sabu Island. Most of the women who have families in Mebba work as housewives but have side jobs, such as as traders, gardeners, and making handicrafts to be sold to visitors. Making handicrafts is a promising livelihood opportunity for women as Mebba has become one of tourist attractions in Sabu as it has mangrove park and an ecotourism information center with the skeleton of a pilot whale for display.
	Ecotourism Activities	Since Mebba and its mangroves and ecotourism information center have been a potential ecotourism attraction, local communities have the opportunity to support the ecotourism activities, such as becoming ecotourism guides, providing culinary services for visitors, and even developing homestays. However, these local communities still need some capacity building. and training to develop the alternative livelihoods.
	Mangrove Crab Cultivation	Mangroves in Mebba are habitat for mangrove crabs. Some villagers have collected mangrove crabs for sale and consumption. Mangrove crab cultivation and enlargement can be an alternative livelihood to be developed for the community.

Village	Alternative livelihood Opportunities	Remark
Limaggu	Production of processed sugar-based products from Asian Palmyra palm trees (syrup, sweets, and snacks)	Asian Palmyra Palm is commonly found in Sabu, including in Limanggu village. This palm can produce a variety of products such as neera, vinegar, and sugar. Local community in Limanggu uses palm sap to make liquid sugar. Innovations can be developed to process the liquid sugar into other sugar-based products, such as palm sugar granules, candy, and sweet dishes. Adequate branding, packaging, and product innovation are needed to expand the palmyra palm sugar market segmentation. Production of Palmyra palm sugar-based products can be a livelihood opportunity for villagers including women's groups.
	Floating Net Karamba (Grouper Farming, lobster)	Most of the Limaggu people are traditional fishermen, they catch fish using fishing rods and gill nets with the target catch of reef fish such as snapper grouper and yellowtail. Floating net cages are potential to be developed in the coastal waters of Limanggu, and is expected to be one of the more stable alternative sources of livelihood for men.
	Development of innovations in seaweed cultivation and processing, both types and renewable technologies	Some coastal villagers in Limanggu cultivate seaweed. The type of seaweed cultivated is the <i>Cottoni</i> type with the basic bottom monoline method. Obstacles of seaweed cultivation which often occur are disease attacks during transition and rainy seasons. Innovation is needed in seaweed cultivation techniques to reduce disease attacks in certain seasons. Women has an important role in seaweed farming, and contribute a similar amount of labor to most processes in seaweed production as men do.
Oelua	Processed products of seaweed and fish	There are already groups of women who carry out production of processed products made from seaweed and fish, such as seaweed sticks and shredded fish. Seaweed raw materials come from Oelua Village, but fish shredded raw materials are purchased from the nearest market when the raw materials in the village are not enough. This alternative livelihood is still promising to be developed but needs innovations in product development, packaging, and marketing.
	Sea cucumber processing	Sea cucumbers are one of the fishery products in Oelua. Sea cucumbers are collected mostly by women during <i>Makan Meting</i> activity and sold in dried form. The sea cucumber can be processed into other products such as crackers that can increase selling point. Local communities also need to be provided with capacity building and training on sea cucumber cultivation to ensure sustainable use of the resources.

Village	Alternative livelihood Opportunities	Remark
Holulai	Seaweed and mangrove-based products	Holulai coastal village resources include mangroves and coastal waters suitable for seaweed farming. Production of seaweed and mangrove-based products such as candy, soap, etc. are potential to be an alternative livelihood for local villagers, especially for women.
	Ecotourism services	Since the mangroves of Holulai have been developed as an ecotourism attraction by the local government, proper community-based management of the ecotourism activities are required and can provide opportunities for local communities in providing ecotourism services, such as tour guides, and culinary service.
Fuafuni	Coconut-based products	Coconut trees are commonly found in Fuafuni villages. Coconut fruit is an important commodity for the people of Fuafuni Village. Villagers sell coconut fruits to other villages and towns. However, other coconut-based products, such as VCO, Copra have not been explored and developed while they have potential to be developed as alternative livelihood for local communities. Capacity building and technical training are still required for the community to develop such alternative livelihood.
	Production of processed sugar-based products from Asian Palmyra palm trees (syrup, sweets, and snacks).	As a common traditional practice in Rote and Sabu, Asian Palmyra Palm trees are used to produce liquid sugar. Taking the palm sap is done by men, and the process of making sugar is carried out by women and assisted also by men such as looking for firewood. Innovations can be developed to process the liquid sugar into other sugar-based products, such as palm sugar granules, candy, and sweet dishes. Adequate branding, packaging, and product innovation are needed to expand the palmyra palm sugar market segmentation. Production of Palmyra palm sugar-based products can be a livelihood opportunity for villagers including women's groups.



Figure IX. A woman-village head of Meba (second from the left) photographed in Ecotourism Information Center in Meba



Figure X. A man who harvest palmyra palm sap for sugar in Limanggu

4.5. Social Exclusion Issue

Inequalities and social stratification that exist in society can influence how climate change impacts certain people and groups, and those who are already marginalized are more vulnerable. They may be more vulnerable to physical risks caused by the impacts of climate

change, in part because they live on marginalized land, and they may be more sensitive to the impacts of climate change because of their livelihoods, such as farmers and fishers. Most importantly, they do not have the resources needed to adapt - or the power to decide how to protect themselves. This is the case for many poor women worldwide, with little economic, political, or legal power³⁶.

Social exclusion is a significant issue in development of NTT including in Sabu and Rote islands. For instance, small-scale fishermen and poor farmers are often excluded from development programs, as they often have limited access to resources such as finance, technology and infrastructure. They often have low incomes, which can make it difficult for them to invest in their businesses and improve their livelihoods. This is due to a range of factors, including limited access to markets, low prices for their catches and competition with larger-scale fishing operations. In addition, lack of policy support often causes the exclusion of small-scale fishermen and farmers in development.

Lack of recognition of customary rights and traditional knowledge can lead to the exclusion of traditional communities from natural resource management and conservation effort. Traditional community practices in managing natural resources, such as Hoholok/Papadak in Rote, are not yet fully implemented and supported by the local government, although the system can contribute to sustainable livelihoods in small-scale fishing villages. Hoholok/Papadak is one of the local wisdoms in Rote Ndao Regency and is still applied by the community. Hoholok/Papadak is a customary agreement that applies on land and at sea to manage natural resources so that it can benefit the fulfillment of community food sustainably and sustainably. "Hoholok/Papadak" literally has the same meaning, namely "prohibition". The word Papadak is used by people in the Central Rote area to the eastern region (Pantai Baru, East Rote and Landu Leko), while people in the Lobalain sub-district area use Hoholok to the western region (South Rote, Northwest Rote, West Rote and Southwest Rote)³⁷.

Currently, traditional resource management practices such as Hoholok/Papadak have started to be taken into account in development in some Rote locations. However, some challenges are still faced such as the need to strengthen traditional institutions, and inclusion of traditional groups and institutions in development planning. Ancestors inherited this customary rule in Rote's former kingdom (Nusak). Hoholok/Papadak applied in the land area aims to prevent conflicts between farmers and ranchers, overcome the theft of plantation and rice fields, prevent damage to water sources, manage agricultural products, distinguish what is allowed and what is not, and build ethics and values of togetherness so that there can be harmonious relationships between natural resource users in an area³⁸. The successful application of Papadak for terrestrial resources has encouraged local communities to adopt

³⁶ Jenny Yi-Chen, et al., "State of Gender Equality and Climate Change in ASEAN", ASEAN (2022), UN Women

³⁷ Yayasan Penabulu & Perkumpulan Desa Lestari, "Baseline Proyek "Amplifying Voice for Just Climate Action".

³⁸ N. C. Ketti, "Peranan Kearifan Lokal Papadak dalam Pengelolaan Pesisir dan Laut di Desa Nggodimeda dan Desa Siomeda, Kecamatan Rote Tengah", Jurnal Pengelolaan Lingkungan Berkelanjutan (2020), Vol 4 (2) : 513- 527.

the concept as a marine conservation strategy. Applying this customary law provides space for local communities to manage natural resource areas in their environment³⁹. Hoholok/Papadak has prohibitions and sanctions that are determined based on the parties' agreement. FKAPB Rote Ndao Regency then formed Manaholo (supervisors), who are tasked with overseeing the designated Hoholok/Papadak areas. Socialization of Hoholok/Papadak prohibitions and sanctions is carried out at all levels of society in Rote Ndao Regency by involving the Village Government, church congregations, community groups, and other stakeholders.

V. Climate Resilience

Gender inequality and social exclusion in Sabu and Rote may influence the climate resilience of the community in the two islands, which include the ability of social and economic systems to cope and adapt to the impacts of climate change. Factors that affect climate resilience in local communities can be complex and context specific. The FGDs address some factors influencing resilience include:

- Social capital, that refers to the networks, norms and trust that facilitate cooperation and collective action within a community.
- Vulnerability, which refers to the degree to which a community is exposed to climate-related hazards and the extent to which it is able to cope with and recover from those hazards. Vulnerability can be influenced by factors such as poverty, social status, and gender. In Sabu and Rote, women are often more vulnerable to the impacts of climate change than men, mainly because they are proportionally more dependent on threatened natural resources. Women's vulnerability to climate change stems from a number of factors, including social, economic, and cultural factors.
- Access to resources, such as financial, technical, and institutional resources can affect a community's ability to adapt to and cope with climate change. Communities with limited access to resources may be more vulnerable to climate-related hazards. Women often have less access to resources such as financial, technical, and institutional resources, which can affect their ability to adapt to and cope with climate change. This can be due to gender-specific issues such as inequalities in access to resources, including credit, extension and training services, information, and technology.
- Limited recognition of women/vulnerable group roles, participation and experiences in climate adaptation and sustainable livelihood activities.

In Sabu and Rote, women are perceived as having more capacity than men in coping and surviving from shocks or daily pressures, including when they lose their husbands. Focus group discussion with women groups confirmed this, indicating that women felt they could get back on their feet better to survive the shocks and pressures. Women do not need significant adjustment because they are used to assuming all three gender roles (productive

³⁹ Zahra Muthmainnah, et al., "Pengaruh Penerapan 'Papadak ' Terhadap Pengetahuan dan Partisipasi Masyarakat pada Upaya Konservasi Laut di Rote Tengah, Nusa Tenggara Timur", Jurnal Kebijakan Sosek KP(2020), Vol 10 (1) : 65-75

reproductive, community management); while men are vulnerable in the reproductive sphere. When women are not present, domestic affairs like food and childcare are ignored because men are not used to assuming reproductive roles. Such a construct has resulted in different coping behaviors between women and men when they lose their partners. In addition, women's social capital can play an important role in building climate resilience by enabling communities to work together to address climate-related challenges. For example, women's groups have been established to improve the production quality of local processed seaweed products.

Customary law can play an important role in managing natural resources and promoting climate resilience. Customary law can help to ensure that natural resources are managed in a way that is equitable, sustainable, and respectful of traditional knowledge and practices²⁴, and can provide a basis for community-based natural resource management, which can help to build resilience to climate change by promoting local knowledge participation²⁵. Sabu and Rote islands have a rich history of customary law in managing natural resources, particularly fisheries. Traditional fishing villages on Sabu and Rote islands have developed sustainable livelihoods based on customary practices and knowledge. These practices include the use of traditional fishing gears, such as handlines and traps, and the establishment of community-based management systems.

VI. Conclusions and Recommendations

Conclusions

Below are some conclusions from the gender and social inclusion assessment conducted in Sabu and Rote islands:

1. Sabu and Rote islands are small islands that are vulnerable to climate change. In terms of social vulnerability, women, and traditional communities, especially small-scale fishers, dry land farmers are the most vulnerable groups.
2. Key Gender and Social Inclusion issues include:
 - a. Women and traditional communities particularly dry land farmers and small-scale fishermen are the most affected by climate change in Rote and Sabu Islands but are often neglected in making informed decisions about climate change-driven hazards affecting them.
 - b. There are gaps in productive, reproductive and community managing roles between men and women that affect climate vulnerability of both genders, and these gaps are exacerbated by limited access to resources and opportunities.
 - c. Most of the climate change information/knowledge are very technical and not suitable for vulnerable groups in coastal area.
 - d. Limited recognition of women/vulnerable group roles, participation and experiences in climate adaptation and sustainable livelihood activities.
 - e. Customary law and institutions are not well recognized by the local government as way to implement climate adaptation actions and sustainable management of natural resources.

reproductive, community management); while men are vulnerable in the reproductive sphere. When women are not present, domestic affairs like food and childcare are ignored because men are not used to assuming reproductive roles. Such a construct has resulted in different coping behaviors between women and men when they lose their partners. In addition, women's social capital can play an important role in building climate resilience by enabling communities to work together to address climate-related challenges. For example, women's groups have been established to improve the production quality of local processed seaweed products.

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VII. Conclusions and Recommendations

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 - e. Customary law and institutions are not well recognized by the local government as way to implement climate adaptation actions and sustainable management of natural resources.

Annex 4. Social Gender Inclusion Action Plan

Based on the Gender and Social Inclusion Assessment findings, the following Gender and Inclusion Plan is prepared to be integrated in the Adaptation Fund Project Proposal on **Ecosystem-based Adaptation to Support Climate Resilience of Coastal and Small Islands of Rote and Sabu in Savu Sea**:

Impact:

There are no barriers for women and other vulnerable groups for actively participate in enhancing livelihood resilience and climate change adaptation activities, especially in coastal area of Sabu and Rote

Outcome:

Approximately 30% women and other vulnerable groups of project direct beneficiaries increase their awareness and able to contribute to implementing EbA and enhancing livelihood resilience and climate change adaptation

Output:

Increasing women and other vulnerable group participation in enhancing livelihood resilience and climate change adaptation activities, through:

Key Issues	Action	Target Indicator	Timeline	Align with Project Budget	Budget (\$)	Responsibility
Women and traditional communities particularly dry land farmers and small-scale fishermen are the most affected by climate change in Rote and Sabu Islands but are often neglected in making informed decisions about climate change-driven hazards affecting them.	- Consider inclusion of vulnerable groups including women, dryland farmers and small-scale fishermen in a participatory action research on coastal vulnerability assessment and in Climate Adaptation Action Plans. - Take into account	A Participatory Action Research (PAR) that considers the vulnerability of women, dryland farmers and small-scale fishermen.	Year 1	Activity 1.3.1 Conduct PAR on coastal vulnerability associated with tropical cyclone in Rote and Sabu	19,708	Executing Entity

Key Issues	Action	Target Indicator	Timeline	Align with Project Budget	Budget (\$)	Responsibility
	gender and social inclusion in local climate action plan.	● Climate Adaptation Action Plan at district level that considers inclusion of women and vulnerable groups.	· Year 2	● Activity 4.2.2 Prepare Draft of Adaptation Action Plan Document.	16,000	Local Government
	· Encourage participation of women in activity and stakeholder group meetings/workshops.	· At least 30% of women participating in meetings/workshops	· Start from Year 1	● Activity 4.1.3. Socialization of Proklim	49,038	Executing Entity
				● Activity 4.1.4 Organize village meeting to conduct FPIC on PROKLIM	106,667	
				● Activity 4.2.1. Facilitate workshop to prepare Adaptation Action Plan for Rote and Sabu	7,920	
				● Activity 4.2.3. Facilitate stakeholder consultation workshop on Adaptation Action Plan.	17,038	
				● Activity 4.3.2. Facilitate Exit Strategy	25,758	

Key Issues	Action	Target Indicator	Timeline	Align with Project Budget	Budget (\$)	Responsibility
				Workshop		
Men and women have different productive, reproductive, and community-managing roles that affect the climate vulnerability of both genders that are exacerbated by limited access to resources and opportunities.	Train local communities including women and vulnerable groups in implementing EbA and sustainable livelihood options.	Significant participation of women and Vulnerable groups in training/capacity building activities on EbA and sustainable livelihood options.	Start from Year 1	- Activity 2.1.3. Implement EbA practices in five target villages. - Activity 3.1.2 Facilitate training on sustainable livelihood practices.	143,759	Executing Entity
Most of the climate change information/knowledge are very technical and not suitable for vulnerable groups in coastal area.	Diversify design and channels of information, education and communication materials/programs based on target audiences.	Climate-EbA Field Schools disseminate information on climate and EbA for women and vulnerable groups	Start from Year 1	Activity 1.4.2. Conduct series of training on climate and EbA including for women and vulnerable groups.	22,625	Executing Agency
Limited recognition of women/vulnerable group roles, participation and experiences in climate	Document and disseminate women and vulnerable group roles, participation and experiences in climate	Communication materials (press releases, infographics, etc.) on women and vulnerable group roles,	Year 1	Activity 1.1.2. Develop Communication and Awareness Strategy to	30,414	Executing Agency

Key Issues	Action	Target Indicator	Timeline	Align with Project Budget	Budget (\$)	Responsibility
adaptation and sustainable livelihood activities.	adaptation and sustainable livelihood activities.	participation and experience in climate adaptation and sustainable livelihood practices. ● Media coverage on women and vulnerable groups' role, participation and experience in climate adaptation and sustainable livelihood practices. ● Documentation of women and vulnerable group roles, participation and experiences in climate adaptation and sustainable livelihood activities in progress report (quarterly) and in project completion report.	· Year 1 · Year 2 · Start from Year 1	implement EbA that considers gender and social inclusion. ● Activity 1.1.3. Design and Production of IEC materials that recognize women/vulnerable groups roles and participation. ● Activity 1.2.1. Facilitate media trips that cover the stories of roles of women and vulnerable groups in responding climate change. ● Preparation of quarterly and final reports.	9,933 11,955	Executing Agency Executing Agency Executing Agency
Customary law and institutions are not well recognized by the local government as way to implement climate adaptation actions and sustainable management of natural resources.	Consider integration of customary law and institution in EbA practices especially in protection and sustainable use of natural resources.	● EbA practices that integrate customary law especially in protection and sustainable use of natural resources.	● Start from Year 1	● Activity 2.1.3. Implement EbA practices in target villages.	143,759	Executing Agency

Annex 5. Stakeholder Engagement Plan

Stakeholder	Areas of Influence/Interest	Project Phase	Engagement Approach	Engagement Tools	Frequency	Activities
Sub-Director of Climate Vulnerability Identification and Analysis, The Directorate General of Climate Change Control, the Ministry of Environment and Forestry	Government's policies and strategic planning on climate change, village climate program (PROKLIM) and registering the project's site in the SRN	Activities that support policies, governance and institutionalisation/village climate program	Consultation	Coordination meeting; workshop	Six-monthly	Policy and Regulation Workshop; Coordination Meeting
Agency for Marine National Conservation Area (BKKPN) Kupang	Policy, governance and regulation, effectiveness of marine, coastal and small island conservation area management (E-KKP3K), SOP, ecotourism and area utilisation, area monitoring, coastal area restoration	Planning, implementation and monitoring & evaluation	Consultation, participation/ involvement	Coordination meetings, workshops, participatory activities.	Quarterly/Six-monthly	Policy and regulation workshops, area utilisation SOPs, coordination meetings, training activities, coastal ecosystem restoration, sustainable livelihood
Climate Adaptation Multi Stakeholder Forum at Rote District	Forum for coordination and facilitation of stakeholders in supporting climate change adaptation in Rote Ndao	Planning, implementation and monitoring & evaluation	Consultation, participation/ involvement	Coordination meetings, workshops, participatory activities.	Quarterly/Six-monthly	Development of an EFT scheme to ensure financial support for climate adaptation activities
District Agency for Environment, Rote Ndao District	Environmental policy, Government Coordination	Planning, implementation and monitoring & evaluation	Consultation	Coordination meetings, workshops,	Quarterly/Six-monthly	EbA practices including mangrove restorations and management,

Stakeholder	Areas of Influence/Interest	Project Phase	Engagement Approach	Engagement Tools	Frequency	Activities
District Government BAPPELITBANGDA, DLHK Sabu Raijua	Environmental policy, Government coordination.	Planning, implemetation and monitoring & evaluation	Consultation, participation/ involvement	Coordination meetings, workshops,	Quarterly/Six- monthly	Policy and regulation workshop, rehabilitating and managing coastal ecosystems including in Sabu; Eba practices; community livelihood.
Women's group in Rote Multi Stakeholder Forum	Forum for coordination and facilitation of stakeholders Livelihood, area utilisation, participatory monitoring, community- based business development, utilisation of supporting infrastructure and equipment	Planning, implemetation and monitoring & evaluation	Consultation, participation/ involvement	Coordination meetings, workshops,	Quarterly	Gender mainstreaming, ecosystem restoration and management and livelihood activities.
Underprivileged group in Holulai Village, Rote Ndao	Livelihood, area utilisation	Planning and implemetation	Consultation, participation/ involvement	Village meeting, workshop	Quarterly	Capacity building, sustainable livelihood, ecosystem restoration, ecosystem services
Traditional groups in Sabu Raijua	Livelihood, area utilisation, participatory monitoring, community- based business development, utilisation	Planning, implemetation, and monitoring & evaluation	Consultation, participation/ involvement	Village meeting, workshop	Quarterly	Capacity building, traditional practives in sustainable

<i>Stakeholder</i>	<i>Areas of Influence/Interest</i>	<i>Project Phase</i>	<i>Engagement Approach</i>	<i>Engagement Tools</i>	<i>Frequency</i>	<i>Activities</i>
	of supporting infrastructure and equipment					livelihood, ecosystem restoration, and ecosystem services

Annex 6. Grievance Mechanism

1. Introduction

YAPEKA is responsible for the preparation, implementation, and operation of the Ecosystem-based Adaptation to Support Climate Resilience in the Coastal and Small Islands of Rote Ndao and Sabu Raijua Districts in the Savu Sea Project that is proposed to the Adaptation Fund. All projects supported by the Adaptation Fund must comply with the **Adaptation Fund Environmental and Social Policy**. The objective of this safeguard system is to support the assessment of risks and potential impacts resulting from the Project by setting out the principles, guidelines, and procedures to assess, avoid, reduce, mitigate, and/or offset potential adverse environmental and social impacts and to enhance positive Project impacts and opportunities. This is to ensure that potential adverse environmental and social impacts that may be generated as a result of each project activity are identified, and appropriate safeguard instruments are prepared to avoid, minimize, mitigate and, in such cases where there are residual impacts, offset adverse environmental and social impacts.

The project's goal is to improve the resilience of coastal areas and small islands of the Savu Sea against extreme weather and climate variability events by strengthening the knowledge management and capacity of local government and communities in implementing an Ecosystem-based Adaptation (EbA) and sustainable livelihood. Project components focus on knowledge management, implementation of EbA and sustainable livelihood, and capacity building that are unlikely to have adverse environmental and social impacts.

This document describes the Grievance Mechanism for the Project “**Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Raijua Districts in Savu Sea Project**” (hereafter referred to as “the Project”), outlining the procedures that YAPEKA will follow to address any comments, suggestions, questions and complaints that stakeholders may have about the Project and its activities. This Grievance Mechanism is part of the Environmental and Social Policy (ESP). It also complies with AF's Complaint and Handling Mechanism Policy, Indonesian requirements as well as YAPEKA's internal policies and procedures. Details on the Project description and legislative framework can be found in the Environmental and Social Management Plan (ESMP).

Projects funded under the Adaptation Fund are required to have established a provisional Grievance Mechanism, including completion of any necessary pre-cursory assessments and consultations to understand customary and other grievance management mechanisms with the Project Affected People. The scope and scale of this Grievance Mechanism are proportionate to the nature and scale of the potential risks and impacts of the Project. This Grievance Mechanism is provisional and will be updated and established regularly of project implementation.

A grievance is considered to be any complaint, comment, question, concern, or suggestion about the way a project is being implemented. It may take the form of specific complaints about impacts, damages or harm caused by the project, non-conformity with the AF and

YAPEKA safeguards, concerns about access to the project stakeholder engagement process or about how comments and concerns about project activities, or perceived incidents or impacts, have been addressed.

For this project, the main project components are:

The main project components are

1. Project Component 1: Strengthening ability of coastal communities to make informed decisions about actions to respond to climate change-driven hazards and impacts.
2. Project Component 2: Improving adaptive capacity of coastal socio-ecological systems to withstand extreme weather and climate.
3. Project Component 3: Strengthening institutional capacity to reduce risks associated with climate-induced socio-economic and environmental losses.

As such, grievances that may arise could include:

- Stakeholders and communities in the target villages of Rote Ndao and Sabu Raijua District are important in supporting the improvement of the resilience of coastal areas and small islands of the Savu Sea against extreme weather and climate variability events by strengthening the knowledge management and capacity of local government and communities in implementing an Ecosystem-based Adaptation (EbA) and sustainable livelihood. The program should carry out a participatory process with the stakeholders and community in the target areas of Rote Ndao and Sabu Raijua Districts. However, in the program implementation, potential grievances will arise for example, about differences in the perspectives of management and utilisation of coastal and marine resources in and around Savu Sea National Park between community and management authority, involvement of the local community in the coastal conservation and sustainable livelihood by management authority and the local government, exposure to climate. Social jealousy between villages and villagers who receive assistance or capacity building from the project and those who did not get assistance. The livelihood intervention does not have a significant impact on the income of the coastal communities.

1.1 Purpose of the Grievance Mechanism

A Grievance Mechanism is a free, open and accessible mechanism principally designed for Project Affected People and is accessible to all project stakeholders and project staff (including contractors and their workers). The Grievance Mechanism helps YAPEKA understand whether there is a potential breach of the AF's ESP (principles and standards) and procedures as well as the procedures and commitments set out in the Project ESMP. If the grievance submitted is determined to be eligible, a process is then followed to identify the root cause of the grievance and ensure that issues of non-compliance with the ESP are rectified. Some grievance cases may require remedial actions to redress potential harm resulting from failure to respect the ESP provisions or preventative measures to avoid repetition of non-compliance.

Specifically, this Grievance Mechanism aims to:

- Guide YAPEKA in addressing complaints comments, questions, concerns and suggestions from Project Affected People and other rightsholders and stakeholders, related to the

- Project and its activities in a fair and transparent, and practical manner;
- Identify and manage stakeholder concerns and thus support effective risk management for the Project;
- Provide stakeholders fearing or suffering adverse impacts from the Project with the assurance that they will be heard and assisted promptly;
- Build and maintain trust with all stakeholders thereby creating an enabling environment in which to operate, and
- Prevent adverse consequences of failure to adequately address grievances.

As such, the Grievance Mechanism does not intend to substitute for any existing grievance procedures (e.g., those established by the Savu Sea National Park authorities or local government), but instead complements and builds on existing procedures, while ensuring that YAPEKA can identify, register (Annex 1) and respond to grievances appropriately. This Grievance Mechanism reflects and operates under the good practice principles illustrated in Figure 1 below.

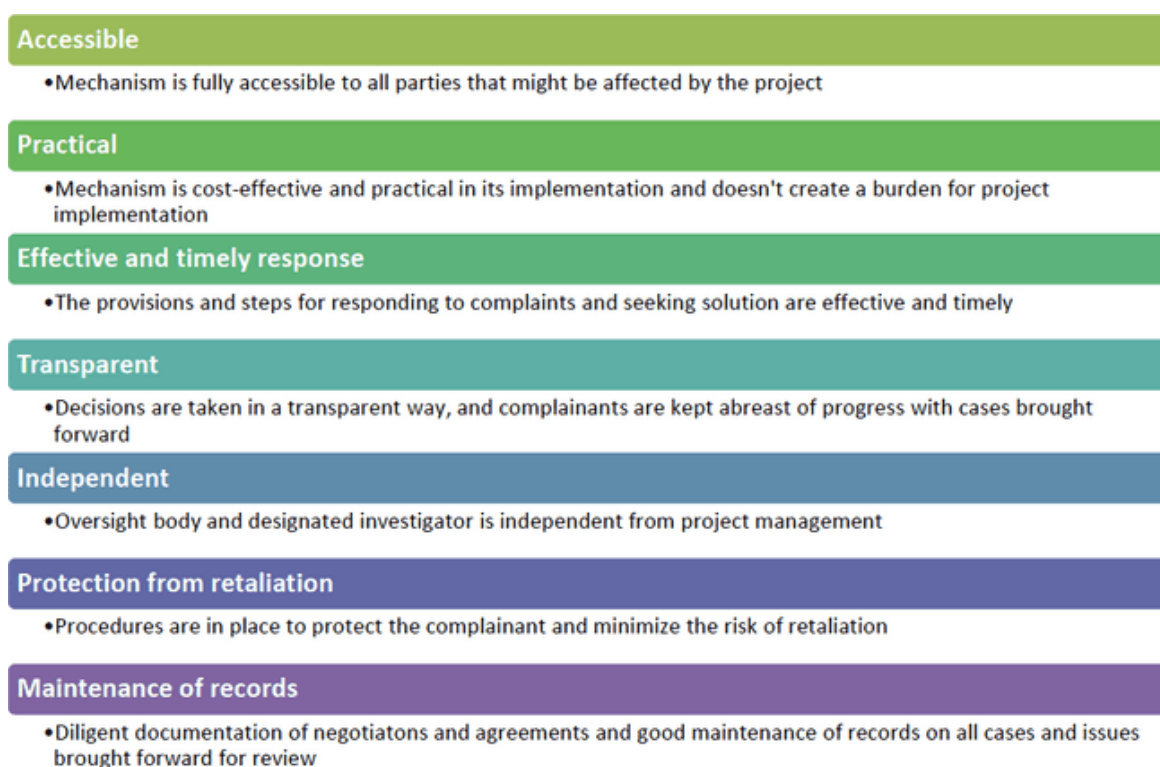


Figure XI: Good practice of the ESMS Grievance Mechanism (Source: IUCN 2020a)

2. Eligibility

YAPEKA is working on establishing the eligibility criteria for the Grievance Mechanism and this will be finalised during the first six months of the Project. In this version of the Grievance Mechanism, criteria of eligible grievances include:

- Any community, organisation, project stakeholder or affected group (including individuals) who believes it is or may be negatively affected by any project activities implemented by YAPEKA, and/or owing to the project's failure to follow the AF and YAPEKA's Environmental and Social Policy and other compliances as set out in the ESP, during the design or implementation of the Project activity is considered a "Project Affected Party" and is entitled to submit a complaint;
- Negative impacts can include all forms of project impact, including direct and indirect impacts of project activities. As with the scope of application of the AF ESP, negative effects are not restricted to the activities of YAPEKA, but include the effects of activities of project partners¹ (including collaborating project partners such as Savu Sea National Park authorities and local government) that are financially or technically supported by the Project;
- Any Project Affected Party may file a complaint;
- Representatives (a person or local organisation) can submit a complaint on behalf of a Project Affected Party, but they must provide concrete evidence of authority to represent them, and
- Anonymous complaints will be considered.

On the other hand, the current criteria for ineligible grievances include:

- Complaints with respect to actions or omissions that are not technically or financially supported by the Project, or about parties that are not partners or collaborating partners in the Project;
- Complaints about issues outside of the Project scope, including outside of the Project area;
- Complaints filed:
 - o After the date of official closure of the Project; or
 - o 18 months after the date of the official closure of the Project in cases where the complaint addresses an impact resulting from project activities that were not, and reasonably could not have been, known prior to the date of official closure.
- Complaints that relate to the laws, policies, and regulations of Indonesia, unless this directly relates to YAPEKA's obligation to comply with the AF ESP principles, standards and procedures;

¹ Note that in these cases, where the Project cannot effectively respond to a grievance because it is related to a government partner, and it is outside of the lead NGOs mandate to respond to such grievances, the grievance can be registered (see Annex 1), and the government partner informed of the nature of the grievance. The affected party would be informed of the mandate of the lead NGO and directed towards the appropriate channels to report the grievance to the government partner. How this works in practice varies considerably. Projects should consider this eventuality when planning activities, particularly in projects with law enforcement and access restrictions, and encourage and support partners to establish or improve Grievance Mechanisms where this is the case.

- Complaints that relate to AF's and YAPEKA's non-project-related housekeeping matters, such as finance, human resources and administration; and
- Complaints submitted by the same claimant on matters they submitted to the Grievance Mechanism earlier, unless new evidence is provided, or the project has not responded to this complaint in the timeframe illustrated below.

Each grievance will be reviewed by Monitoring & Evaluation (M&E) Manager in order to determine if it is eligible or ineligible. If the complaint is not eligible, the M&E Manager will inform the complainants stating the reason for ineligibility and this will be documented (See Annex 1 for Grievance Register Template).

Project staff and contractors:

In addition to Project Affected Parties, this Grievance Mechanism should be available for project staff, including contractors and volunteers working in key positions [unless the lead NGO has a separate mechanism in place already]. YAPEKA must ensure that its contractor(s) use or establish their own Grievance Mechanism for all workers. Where this is not feasible, this Grievance Mechanism should be made available to all the contractor's personnel. This will be included in all contracts and agreements that YAPEKA enters into with contractor(s). All workers will be informed of the grievance procedures and new workers will be informed when they join the project. Information on contact points will be posted on staff information boards and on-site information boards.

3. Grievance Procedures

The grievance resolution procedure for the Project is a three-stage process, described in the next process. In order to be practical and cost-effective, the resolution of complaints will be sought at the lowest possible level. This procedure aims to address stakeholder concerns promptly, effectively and transparently.



Figure XII. Three-stage process of the grievance mechanism (Source: IUCN 2020a/Modified)

Stage 1: Local-level resolution sought

The best approach to resolving grievances involves YAPEKA and the Project Affected Party reviewing the conflict and deciding together on a way forward that advances their mutual interests. This reflects the fact that local and country authorities often have better information on and understanding of the causes of disputes arising from project implementation. 'Deciding together' approaches are usually the most accessible, natural, unthreatening and cost-effective ways for communities and project

management to resolve differences.

Grievance procedures

1. Submission of a grievance:

- a) The Project will identify one Contact Person in each project village to act as a conduit for any grievances from groups or individuals who do not feel confident to raise the complaint directly. This person may or may not be involved in the project implementation and will be made known to the community. Ideal candidates are respected individuals such as religious leaders, teachers or village elders. Women will be encouraged to stand as the Contact Person. Where possible they will be selected by open vote, e.g., during project inception. The Contact Person will be made familiar with the project and the partners and will be named on signs/ relevant information in each project village detailing this grievance mechanism, where this is appropriate.
- b) Alternatively, stakeholders/ Project Affected Parties shall be able to use the following methods to submit a grievance:
Each group in seven villages have identified their grievance mechanism. YAPEKA and Consortium will follow their suggestions. The methods are varied including discussion with the village and community leaders, direct verbal to YAPEKA field staff. There is no signal telecommunications to most of the villages so they cannot send by WA/SMS/text message and email. They have to go to Tanjung Belit to do this.
- c) Complaints may be submitted in writing, or in person to the project field offices or the YAPEKA office in Kupang, East Nusa Tenggara Province (details also to be provided on signs in each village).
- d) The grievance is then recorded and classified in a Grievance Log or Register (written and/ or electronic) by the responsible staff of YAPEKA. See example Grievance Register in Annex F.1. This register should be maintained in a location accessible only to the responsible staff members, and not shared with outside parties².

² In some cases, sharing the Grievance Register with an outside party can be required. In these cases, personal information should first be redacted from the register, and the terms of sharing and use are clearly stated. The World Bank Environmental and Social Framework (2017) also requires that during the project, a record documenting the responses to all grievances received is made publicly available: this record can be based on the Grievance Register, but removing all personal information.

- e) When submitting a grievance, the complaint should include the following information [responsible project staff will support complainants submitting verbal complaints to include all of this information]:
 - I. Complainant's name and contact information;
 - II. If not filed directly by the complainant, proof that those representing the affected people have authority to do so;
 - III. The specific project or program of concern includes the location;

IV. The harm that is or may be resulting from it;

- f) The complaint can be filed in the local languages (Bahasa Indonesia). If the grievance has not been submitted anonymously and regardless of whether confidentiality is requested, the identity of the complainant(s) will be maintained only by the M&E Manager or the project staff member working in the field site who has handled the case directly. When working to resolve the case, the identity of the complainants will be maintained within as small a group as possible to assure protection against retaliation.

2. Acknowledgement and addressing the grievance:

- a) The grievance is formally acknowledged through a personal meeting appropriate, within 10 working days of submission. If the grievance is not well understood or if additional information is required, clarification should be sought from the complainant during this step.
- b) The M&E Manager will investigate the validity of the grievance, including whether it is related to a contractor. They will then refer the grievance to the appropriate 'responsible staff member'. The root cause will be investigated, and the risk category (i.e., the risk that the grievance poses to the Project Affected Person and the Project is ranked as high, medium or low) identified. The M& E Manager will manage regular meetings to update the process refer to the activities.
- c) A response is developed by the responsible staff with input from others, as necessary. Projects should consider the use of existing customary conflict resolution mechanisms, which would be identified during pre-cursory consultations with communities. This can include working with existing customary mechanisms or establishing a project conflict resolution "committee" for the management of complex grievance issues. This can include project staff, local authorities and traditional leaders/ community representatives.
- d) Required actions are implemented to deal with the issue, and completion of these is recorded in the grievance register.
- e) The response is signed-off by the responsible staff. The sign-off may be a signature on the grievance register or in correspondence that should be filed with the grievance to indicate agreement.
- f) The response is communicated to the affected party; the response should be carefully coordinated. The responsible staff ensures that a suitable approach to communicating the response to the affected party is agreed upon and implemented. The response will be provided 20 working days after report receipt of the grievance.

The response to a grievance will be provided 20 working days after receipt of the grievance.

- g) The response of the complainant is recorded to help assess whether the grievance is closed or whether further action is needed. The responsible staff should use appropriate communication channels to confirm whether the complainant has understood and is satisfied with the response. The complainants' responses should be recorded in the Grievance Register. Ideally, both parties should sign off the grievance to confirm closure. Alternatively, a written confirmation that the grievance has been closed satisfactorily should be obtained.
- h) The grievance is closed with a sign-off from the responsible staff, who determines whether the grievance can be closed or whether further attention and action are required. If further attention is required, the responsible staff should return to Step 2 to re-assess the grievance and then take appropriate action. Once the responsible staff has assessed whether the grievance can be closed, he/she will sign off to approve the closure of the grievance on the Grievance Register or by written communication.

Stage 2: Submission to the relevant national-level body office

Where the response of any grievance through Stage 1 is considered unsatisfactory to the aggrieved party, a stakeholder can lodge a complaint with the YAPEKA M&E Manager.

1. The M&E Manager will assess the eligibility of the complaint and respond as to whether or not it is eligible, following the above criteria (within 10 business days after receiving the complaint).
2. If the complaint is deemed eligible, YAPEKA will devise a plan and timeframe to investigate, which will be communicated to the complainant, ideally within 10 business days of the complaint being logged.
3. The YAPEKA team will then look into the matter, with additional technical support if required (e.g., from the National Office, or an independent third party). Based on the results, the team will then work with concerned parties to develop and implement an action plan and timeframe to resolve any issues.
4. A summary of the concern raised, actions taken, conclusions reached, follow-up plan and timeframe for completion will be documented (in the Grievance Register) and communicated as agreed between the parties. YAPEKA will facilitate support to further clarify, assess, and resolve further issues as needed.

In cases where issues are not being properly addressed by the grantees, a stakeholder can directly submit a grievance to the National (Stage 3 below).

Stage 3: Submission to Project Complaints Management System

In the event of serious complaints or those that cannot be resolved promptly, lead NGOs are obligated to inform the Kemitraan/AF of the details. In addition, Kemitraan/AF maintains a separate channel of communication open to local stakeholders if issues are not being properly addressed by the grantees.

The Lead NGO may provide mediation as an option where Project Affected Parties are not satisfied with the proposed resolution. Ultimately, stakeholders may turn to court following the existing legislation of the host country, and this grievance procedure should not impede access to other judicial or administrative remedies that are available under the Law.

Table G. Contact details to be provided on communications regarding the project Grievance Mechanism

	Step 1: Local Project Team	Step 2: National YAPEKA	Step 3: Kemitraan/AF
Name	Fredrik J. N.	M&E Manager	To Whom it May Concern
Position	Field Coordinator	M & E Manager	Kemitraan Head Office/AF
Email	fngili46@gmail.com	info@yapeka.or.id	info@kemitraan.or.id
Phone	+62 852-7698-8555	+62 251 8340043	+62 21 22780580
Address	Perumahan Karya Kencana No. 7, Kelapa Lima, Kota Kupang, Nusa Tenggara Timur 85228	Jl. Kresna Raya No. 56, RT 05/RW 14, Bantarjati, Kec. Bogor Utara, Kota Bogor, Jawa Barat 16153	Jl. Taman Margasatwa 26C Ragunan, Pasar Minggu, Jakarta Selatan 12550

A template for the Grievance Form is presented in excel format separately.

4. Informing Stakeholders about the Grievance System

For the Grievance Mechanism to be effective and accessible, YAPEKA will take active steps to inform all relevant project stakeholders of the existence and scope of the Grievance Mechanism and the relevant provisions of the ESP. Stakeholders must be aware of the eligibility criteria for a grievance and the mechanism for grievance submission. This should ideally be completed during the stakeholder consultation during project design [before project proposal submission] and would be completed no later than the first quarter of project implementation.

YAPEKA will align the Grievance Mechanism procedures with good practice, meaning it will be:

- Accessible: All field offices and field staff will have information on the Grievance Mechanism and how to register complaints; all stakeholders will have information on the Grievance Mechanism and how to register complaints;
- Practical: The mechanism established ensures that it is simple and viable and does not create a burden for project implementors or project stakeholders;

- Transparent: Decisions will be taken fairly and transparently and the complainants will be kept updated on the process;
- Independent: The oversight body and designated team will be independent of project management where the grievance/ complaint originates; and
- Time-Bound: The process for resolution will be comprehensive and completed promptly.

This will be done by translating the Grievance Mechanism into *Bahasa Indonesia*, ensuring that the information is delivered in a culturally appropriate way reaching all relevant stakeholder groups, including women, village government, youth, local community/traditional community and vulnerable groups. Various methods will be used to raise awareness about the Grievance Mechanism and procedures including verbal communication (e.g., through consultation meetings, training, project website as well as at local offices in the project area(s) in Kupang. The grievance can be submitted in Bahasa Indonesia.

Accessibility also requires that complaint submission, handling and recording are designed in such a way that stakeholders have confidence in the mechanism and that procedures are in place to protect complainants from any form of retaliatory action, including provisions for disciplinary or other appropriate action in case of violations of this principle. YAPEKA will ensure that all stakeholders are aware of this.

5. Serious Incident Reporting

YAPEKA will report all serious incidents caused by or related to the Project that have or could have significant negative impacts on people or the environment, to the AF. The purpose of reporting serious incidents is to ensure that appropriate responses and corrective actions are taken promptly to minimise, mitigate and/or remedy the impacts as well as to avoid repeat occurrences.

A serious incident in this context is defined as: “any unplanned or uncontrolled event with a materially adverse effect on workers, community members or the environment within the project’s Area of Influence or events that have the potential to have material or immaterial adverse effects on the project execution or give rise to potential liabilities or reputational risks” (Source: *IUCN 2020b, Reporting Serious Incidents*). Serious incidents can include, for example,

- Fatalities, serious injuries and accidents at work;
- Fatalities, serious injuries and accidents affecting local communities and others;
- Violations of human rights, including sexual and gender-based violence and harmful child labour;
- Forced evictions;
- Conflicts, disputes and disturbances leading to loss of life, violence or the risk of violence; and
- Environmental impacts.

As such, and due to the risks of association, serious incidents that relate to collaborating partners that the Project technically or financially supports should also be reported, if they occur in the project area, even if they are not directly related to a project activity.

In the case of a serious incident, the incident will be reported by YAPEKA to the Kemitraan/AF and the Kemitraan/AF within 48 hours of YAPEKA receiving information of the incident occurring. In cases where detailed information is not immediately available, a draft report will be prepared by YAPEKA and submitted, with a more comprehensive update being prepared once the details have been established. The report will state whether the incident will be subject to a formal inquiry, criminal investigation or legal proceedings to determine the circumstances of the incident, responsibilities and root causes.

If the incident is not subject to a formal inquiry or legal proceedings, the report will follow the template provided in Annex 3 (Serious Incident Report), including

- A detailed description of the incident and its effects on workers, local communities, the environment etc.;
- An analysis of the root causes, covering the management and control measures that were in place at the time and any failings identified in regard to management or procedures; and
- Details of any response provided, actions taken to remedy the situation, and to prevent its recurrence.

If the incident is subject to a formal inquiry or legal procedure, the findings of the inquiry will be summarised, using the template in No. 8 and 9 below, along with a link to and/or an electronic copy of the inquiry's final report, if it is made available to the public. YAPEKA will inform the Kemitraa/AF about any ongoing or future issues related to the incident that may require attention, such as grievances, claims for compensation or other legal action taken by the victims' families.

6. Maintaining Records and Monitoring Actions

All grievances, whether eligible or not, will be recorded in a Grievance Register (No. 7). This register documents all complaints, suggestions, comments, and questions submitted by stakeholders in a categorical way under five main headings:

1. Grievance registration: including the subject of the complaint, description of complaint and eligibility criteria;
2. Acknowledgement: YAPEKA acknowledges receipt of the grievance within 10 working days;
3. Investigation (of eligible grievances only): YAPEKA investigates the root cause, whether the claim is true or false and proposes corrective actions;
4. Response: YAPEKA provides a response to the complainant; and
5. Close out: YAPEKA closes the grievance once it has been adequately addressed and remedied and a response provided to the complainant.

Agreed action plans will establish timeframes for regular process monitoring towards the resolution of the grievance. M&E Manager will coordinate the monitoring by organising periodic checks, bringing together the concerned parties and relevant technical advisors for meetings or other communication on the status of action plans, until they are completed. YAPEKA will assess the effectiveness of this complaint's resolution process on an annual basis and identify any needs for improvement.

The Grievance Mechanism and accompanying excel spreadsheet (Grievance Register; No. 7) will be maintained, saved in a secure place and updated regularly. Examples of basic indicators commonly used to monitor and evaluate the effectiveness of a Project's Grievance Mechanism are listed below, and all can be monitored simply through the use of the Grievance Register template and serious incident forms:

- Number of grievances received and recorded (disaggregated by eligible and ineligible) during the reporting/ review period;
- Number of grievances acknowledged on time/not acknowledged on time, including why;
- Number of grievances where the investigation was/was not completed on time, including why;
- Number of grievances resolved and unresolved.
- Number of serious incidents;
- The number of serious incidents is still open (inquiry or corrective actions on-going) and closed.

[illegible]

Template for Public Grievance Form

Public Grievance Form	
Reference No. (assigned by Implementation Partner):	
Please enter your contact information and grievance. This information will be dealt with confidentially. Please note: If you wish to remain anonymous, please enter your comment/ grievance in the box below without indicating any contact information – your comments will still be considered.	
Full Name	
Anonymo us submissio n	☐ I want to remain anonymous
Please mar k how you wish to be contacted (mail, telephone, e- mail, discussion, in writing	☐ By mail (please provide mailing address): _____
	☐ By telephone (please provide telephone number): _____
	☐ By e-mail (please provide e-mail address): _____
	☐ Discussion of submitted in writing to the field office
Preferred language for communicatio n	☐ Bahasa Indonesia ☐ English ☐ Other, please specify:
Description of incident or grievance:	What happened? Where did it happen? Who did it happen to? What is the result of the problem?
Date of incident/grievance:	☐ One time incident/ grievance (date _____) ☐ Happened more than once (how many times? _____) ☐ On-going (currently experiencing problem)
What would you like to see happen to resolve the problem?	

Template for a Serious Incident Report

Serious Incident Report	
General Information	
Project name, country, region	
Executing Agency	
Person and agency submitting the information	
Organisations, agencies and/or companies involved in the incident	
Details of the people affected, status (e.g., if they are working as rangers, volunteers, etc.), names, ages, gender. Details of the community or communities involved	
Details of the Incident	
Date and time the Incident occurred	
Location	
Type of Incident	<i>Fatalities, serious injuries and accidents at work</i> ☐ <i>Fatalities, serious injuries and accidents affecting local communities and others</i> ☐ <i>Violations of human rights or accusation of human rights violations, incl. sexual and gender-based violence and harmful child labour</i> ☐ <i>Forced Eviction</i> ☐ <i>Conflicts, disputes and disturbances leading to loss of life, violence or the risk of violence</i> ☐ <i>Environmental incidents</i> ☐
Detailed chronological description of the Incident and its circumstances (if possible, with photos)	
Root Cause Analysis	

Detailed description of key causal factors (internal and external), potential management failings and identification of			
absent/ inadequate/ failed/ unused management and control measures (e.g., non-compliances with ESP standards or measures)			
Specification of relevant roles and responsibilities of the agencies, authorities and others involved			
Reaction to the incidents by the victims, involved families or communities as well as local/ national/ international media			
Agency or agencies responsible for investigation of the case. What is the scope of the investigation? Does this include a root cause analysis?			
Response and Corrective Actions			
Description of the response (if available) and agencies involved			
Description of any corrective actions, plans or next steps to prevent the incident from recurring or follow up to close the case or proceed with further investigations (include action plan with responsibilities and schedule)			
Incident Report Approval			
	Position	Name	Date
Prepared by			
Approved by (Kemitraan/AF)			

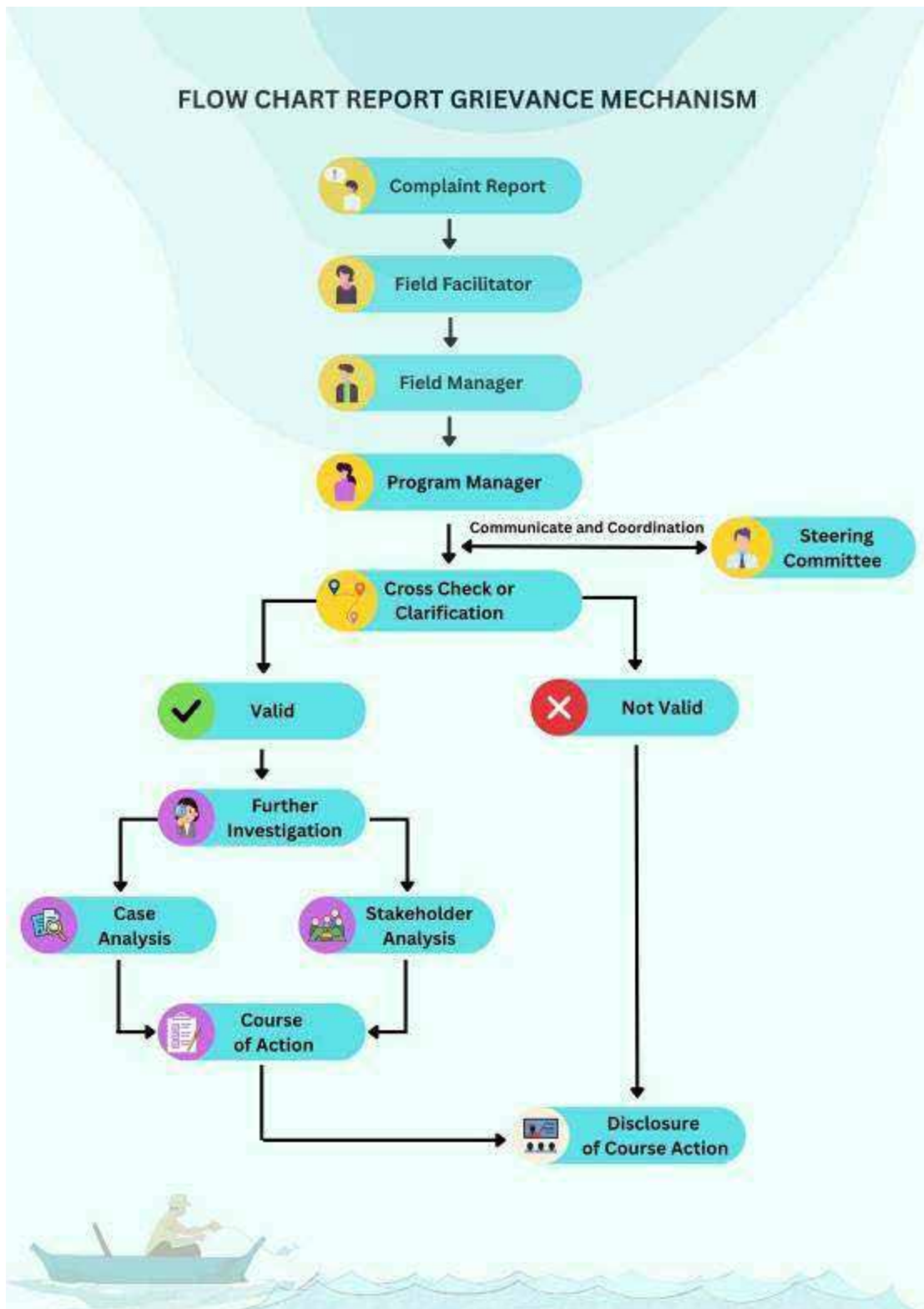


Figure XIII. Flow Chart Report Grievance Mechanism

Annex 7. Project Work Plan

Code	Description	Month																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	COMPONENT 1. Strengthening ability of coastal communities to make informed decisions about actions to respond to climate change-driven hazards and impacts.																								
1	Outcome 1: Improved awareness of adaptation and climate change-related hazards affecting coastal communities																								
1.1	Output 1.1: Diverse IEC tools and channels, including digital platform on EbA for knowledge exchange.																								
1.1.1	Activity 1.1.1. Conduct Knowledge Attitude Practices (KAP) baseline survey, and endline surveys.																								
1.1.2	Activity 1.1.2. Develop a communication and awareness strategy to implement EbA that considers gender and social inclusions.																								
1.1.3	Activity 1.1.3. Design and production of IEC materials including but not limited to such as posters, digital content, calendar, and project																								
1.1.4	Activity 1.1.4. Design and production of a Guide to EbA Practices for Coastal and Small Islands.																								
1.2	Output 1.2: News outlets in the local press and media that have covered Climate Change and EbA topics.																								
1.2.1	Activity 1.2.1. Facilitate media trips to cover climate issues, EbA implementation, livelihood activities, and the role of women and vulnerable groups in responding to climate change in Rote and Sabu Islands.																								
1.3	Output 1.3: Updated climate vulnerability data at village level, which include assessment of vulnerability and developing adaptation strategies																								
1.3.1	Activity 1.3.1. Conduct Participatory Action Research (PAR) on coastal vulnerability associated with TC in Rote and Sabu.																								
1.4	Output 1.4: Climate-EbA Field Schools as a learning forum at five target villages.																								
1.4.1	Activity 1.4.1. Develop training modules on EbA practices for coastal communities.																								
1.4.2	Activity 1.4.2. Conduct a series of training on climate-EbA for community groups at village level, including women and vulnerable groups to improve their knowledge and skills on climate and implementation of EbA approach and practices.																								
1.4.3	Activity 1.4.3. Provide supporting equipment for learning purposes in the field schools.																								
	COMPONENT 2 Improving adaptive capacity of coastal socio-ecological systems to withstand extreme weather and climate																								
2	Outcome 2: Vulnerable ecosystems strengthened in response to climate change impacts, including variability																								
2.1	Output 2.1: EbA practices are implemented to protect and rehabilitate coastal and small island ecosystems, including coastal, benthic and water source ecosystems, in the five target villages.																								
2.1.1	Activity 2.1.1. Conduct Project Inception Workshop and Mid-term Evaluation Workshop to collect inputs and reviews from project stakeholders on project implementation plans.																								
2.1.2	Activity 2.1.2. Conduct Free, Prior, and Informed Consent (FPIC) and EbA implementation planning in target villages in Rote and Sabu in five target villages.																								
2.1.3	Activity 2.1.3. Implement EbA practices (rehabilitation and conservation) in five villages: Mebba, Limaggu, Holulai, Oelua and Fualuni villages																								
2.1.3.1	Implement EbA practices in Holulai Rote Ndao (Sediment traps, mangrove and seagrass rehabilitation, Enactment of village regulation to protect coastal ecosystems)																								
2.1.3.2	Implement EbA practices in Oelua, Rote Ndao (mangrove nursery, mangrove rehabilitation, enactment of village regulation to protect coastal ecosystems)																								
2.1.3.3	Implement EbA practices in Fualuni, Rote Ndao (temporary closure for sea cucumber cultivation, Traditional Ecological Knowledge Conservation, Enactment of village regulation to protect coastal ecosystems)																								
2.1.3.4	Implement EbA practices in Mebba, Sabu (mangrove nursery, mangrove rehabilitation, enactment of village regulation to protect coastal ecosystems)																								
2.1.3.5	Implement EbA practices in Limaggu, Sabu (plant vegetation barrier along the coastline, Plant trees in riparian and water protection areas)																								
2.1.4	Activity 2.1.4. Conduct Monitoring and evaluation of EbA activities.																								
2.1.5	Activity 2.1.5. Provide technical assistance and facilitation of EbA implementation.																								

Code	Description	Month																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
3	Outcome 3. Communities including women and vulnerable groups with improved and diversified livelihoods																								
3.1	Output 3.1. Improved capacity of communities to develop ecosystem goods and service-based (EG&S) livelihoods and business plans.																								
3.1.1	Activity 3.1.1. Conduct Livelihood Training Need Assessment (TNA) and provide technical support on livelihood activities in Target Villages.																								
3.1.2	Activity 3.1.2. Facilitate Training for local communities on sustainable production of livelihood practices.																								
COMPONENT 3. Strengthening institutional capacity to reduce risks associated with climate-induced socio economic and environmental losses.																									
4	Outcome 4. Local and village government with improved capacity and finance to implement adaptation measures																								
4.1	Output 4.1. Coastal villages are facilitated to prepare PROKUM registration.																								
4.1.1	Activity 4.1.1. Organize a workshop to increase participation of coastal villages in Sabu and Rote in PROKUM.																								
4.1.2	Activity 4.1.2. Recruitment and Training of Village Government Facilitators/extension workers on PROKUM Registration.																								
4.1.3	Activity 4.1.3. Socialization of PROKUM for coastal villages in Rote and Sabu.																								
4.1.4	Activity 4.1.4. Organize village meetings to conduct FPIC and climate mitigation and adaptation data collection.																								
4.1.5	Activity 4.1.5. Register the villages participating in the PROKUM in SRN.																								
4.2	Output 4.2. Climate Change Adaptation Action Plans (RAD-PI) for Sabu and Rote districts.																								
4.2.1	Activity 4.2.1. Facilitate workshops to prepare Adaptation Action Plans for Rote Ndao and Sabu Raijua Districts.																								
4.2.2	Activity 4.2.2. Prepare Draft of Adaptation Action Plan Document for Rote and Sabu.																								
4.2.3	Activity 4.2.3. Facilitate stakeholder consultation and socialization workshops on Adaptation Action for Rote Ndao and Sabu Raijua Districts.																								
4.3	Output 4.3. Develop strategies to improve climate resilience funding opportunities for the local and village governments																								
4.3.1	Activity 4.3.1. Develop policy brief on climate funding options in Rote and Sabu.																								
4.3.2	Activity 4.3.2. Facilitate Exit Strategy Workshop at provincial level.																								

Annex 8. Notarial Registered

AKTA :
PERNYATAAN KEPUTUSAN RAPAT
PERKUMPULAN PEMBERBAYAN MASYARAKAT DAN
PENYIDIKAN KONSERVASI ALAM

NOMOR : 03.-

TANGGAL : 19 Februari 2018.-

- S A L I N A N -

PENGHADAP :
- Tn. MUHTADIN

NOTARIS

CAHRIANI, SH., M.Kn.

SK. Menteri Hukum dan HAM RI
No. AHU-04 AH.02.02-Th. 2010 Tanggal 25 Januari 2010

KANTOR :
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Annex 9. Audit Report



HERU SATRIA RUKMANA & REKAN
REGISTERED PUBLIC ACCOUNTANTS KMK NO. 1210/KM.1/2021

The Original Report included herein is in Indonesian Language

No. 00006/2.1352/AU.1/11/1520-1/1/11/2022

Laporan Auditor Independen / Independent Auditors' Report

Dewan Pengurus dan Pengawas / Boards of Management and Supervisory Perkumpulan Pemberdayaan Masyarakat dan Pendidikan Konservasi Alam (YAPEKA)

Kami telah mengaudit laporan keuangan Perkumpulan Pemberdayaan Masyarakat dan Pendidikan Konservasi Alam ("YAPEKA"), yang terdiri dari laporan posisi keuangan tanggal 31 Desember 2020, serta laporan aktivitas, dan laporan arus kas untuk tahun yang berakhir pada tanggal tersebut, dan suatu ikhtisar kebijakan akuntansi signifikan dan informasi penjelasan lainnya.

Tanggung jawab manajemen atas laporan keuangan

Manajemen bertanggung jawab atas penyusunan dan penyajian wajar laporan keuangan tersebut ini sesuai dengan Standar Akuntansi Keuangan di Indonesia dan Pernyataan Standar Akuntansi Keuangan No. 45 (PSAK 45): Penyajian Laporan Keuangan Entitas Berorientasi Nirlaba, dan atas pengendalian internal yang dianggap perlu oleh manajemen untuk memungkinkan penyusunan laporan keuangan yang bebas dari kesalahan penyajian material, baik yang disebabkan oleh kecurangan maupun kesalahan.

Tanggung jawab auditor

Tanggung jawab kami adalah untuk menyatakan suatu opini atas laporan keuangan tersebut berdasarkan audit kami. Kami melaksanakan audit kami berdasarkan Standar Audit yang ditetapkan oleh Institut Akuntan Publik Indonesia. Standar tersebut mengharuskan kami untuk mematuhi ketentuan etika serta merencanakan dan melaksanakan audit untuk memperoleh keyakinan memadai tentang apakah laporan keuangan tersebut bebas dari kesalahan penyajian material.

Suatu audit melibatkan pelaksanaan prosedur untuk memperoleh bukti audit tentang angka-angka dan pengungkapan dalam laporan keuangan. Prosedur yang dipilih bergantung pada pertimbangan auditor, termasuk penilaian atas risiko kesalahan penyajian material dalam laporan keuangan, baik yang disebabkan oleh kecurangan maupun kesalahan. Dalam melakukan penilaian risiko tersebut, auditor mempertimbangkan pengendalian internal yang relevan dengan penyusunan dan penyajian wajar laporan keuangan entitas untuk merancang prosedur audit yang tepat sesuai dengan kondisinya, tetapi bukan untuk

We have audited the accompanying financial statements of Perkumpulan Pemberdayaan Masyarakat dan Pendidikan Konservasi Alam ("YAPEKA"), which comprise the statement of financial position as of December 31, 2020 and the statement of activities, statement of changes in net assets and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Indonesian Financial Accounting Standards and Specially Statement of Financial Accounting Standards (SFAS 45): Presentation of Financial Statements of Non Profit Oriented Entities and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Standards on Auditing established by the Indonesian Institute of Certified Public Accountants. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.

Honour Satisfaction Reliable

Ruko Perintis Waringin Regency Blok A
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HERU SATRIA RUKMANA & REKAN
REGISTERED PUBLIC ACCOUNTANTS KMK NO. 1210/KM.1/2021

The Original Report included herein is in Indonesian Language

No. 00006/2.1352/AU.1/11/1520-1/1/II/2022

Laporan Auditor Independen (Lanjutan) / Independent Auditors' Report (Continued)

tujuan menyatakan opini atas keefektifitasan pengendalian internal entitas. Suatu audit juga mencakup pengevaluasian atas ketepatan kebijakan akuntansi yang digunakan dan kewajaran estimasi akuntansi yang dibuat oleh manajemen, serta pengevaluasian atas penyajian laporan keuangan secara keseluruhan.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

Kami yakin bahwa bukti audit yang telah kami peroleh adalah cukup dan tepat untuk menyediakan suatu basis bagi opini audit kami.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opini

Opinion

Menurut opini kami, laporan keuangan terlampir menyajikan secara wajar, dalam semua hal yang material, posisi keuangan Pemberdayaan Masyarakat dan Pendidikan Konservasi Alam tanggal 31 Desember 2020, serta aktivitas dan arus kasnya untuk tahun yang berakhir pada tanggal tersebut, sesuai dengan Standar Akuntansi Keuangan di Indonesia dan PSAK 45.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of Perkumpulan Pemberdayaan Masyarakat dan Pendidikan Konservasi Alam as of December 31, 2020, and its activities and cash flows for the year then ended, in accordance with Indonesian Financial Accounting Standards and PSAK 45.


Heru Satria Rukmana & Rekan

Heru Satria Rukmana, SE., Ak., M.M., CA., CPA
Ijin Akuntan Publik No. AP. 1520
(License of Public Accountant No. AP. 1520)

4 Februari 2022

February 04 01, 2022

Ekshibit A

Exhibit A

**PERKUMPULAN PEMBERDAYAAN MASYARAKAT
DAN PENDIDIKAN KONSERVASI ALAM
LAPORAN POSISI KEUANGAN
31 DESEMBER 2020 DAN 2019
(Disajikan dalam Rupiah, kecuali dinyatakan lain)**

**PERKUMPULAN PEMBERDAYAAN MASYARAKAT
DAN PENDIDIKAN KONSERVASI ALAM
STATEMENT OF FINANCIAL POSITION
31 DECEMBER 2020 AND 2019
(Expressed in Rupiah, unless otherwise stated)**

	Catatan /			
	2020	Notes	2019	
A S E T				A S S E T S
ASET LANCAR				CURRENT ASSETS
Kas dan bank	335,382,945	3	421,465,503	Cash on hand and cash in banks
Uang Muka Program	139,961,215	4	-	Advance Program
Biaya dibayar dimuka	33,333,333	5	29,166,667	Prepaid expenses
Total Aset Lancar	508,677,493		450,632,170	Total Current Assets
ASET TIDAK LANCAR		6		NON-CURRENT ASSETS
Harga Perolehan	321,098,276		321,098,276	Acquisition costs
Akumulasi penyusutan	297,403,526		275,619,586	Accumulated depreciation
Nilai Buku	23,694,750		45,478,690	Net Book Value
Total Aset Tidak Lancar	23,694,750		45,478,690	Total Non-Current Assets
TOTAL ASET	532,372,243		496,110,859	TOTAL ASSETS
LIABILITAS DAN ASET BERSIH				LIABILITIES AND NET ASSETS
LIABILITAS JANGKA PENDEK				CURRENT LIABILITIES
Utang program	-	7	-	Programme liabilities
Total Liabilitas Jangka Pendek	-		-	Total Current Liabilities
Aset bersih				Net assets
Sisa dana		8		Fund balances
Tanpa Pembatasan dari Pemberi Sumber Daya	295,531,000		378,610,410	Without Restrictions from The Resource Grantor
Dengan Pembatasan dari Pemberi Sumber Daya	236,841,244		117,500,449	With Restrictions from The Resource Grantor
Total aset bersih	532,372,243		496,110,859	Total net assets
TOTAL LIABILITAS DAN ASET BERSIH	532,372,243		496,110,859	TOTAL LIABILITIES AND NET ASSETS

Lihat Catatan atas Laporan Keuangan pada Ekshibit E terlampir yang merupakan bagian yang tidak terpisahkan dari Laporan Keuangan secara keseluruhan

See accompanying Notes to Financial Statements on Exhibit E which are an integral part of the Financial Statements taken as a whole

These Financial Statements are Originally issued
in Indonesian Language

Ekshibit B

Exhibit B

PERKUMPULAN PEMBERDAYAAN MASYARAKAT
DAN PENDIDIKAN KONSERVASI ALAM
LAPORAN AKTIVITAS
TAHUN YANG BERAKHIR 31 DESEMBER 2020 DAN 2019
(Disajikan dalam Rupiah, kecuali dinyatakan lain)

PERKUMPULAN PEMBERDAYAAN MASYARAKAT
DAN PENDIDIKAN KONSERVASI ALAM
STATEMENT OF ACTIVITIES
YEAR ENDED 31 DECEMBER 2020 AND 2019
(Expressed in Rupiah, unless otherwise stated)

Notes	2020			2019			
	With Restrictions From The Resource	Without Restrictions From The Resource	Total	With Restrictions From The Resource	Without Restrictions From The Resource	Total	
Penerimaan							Revenues
Donasi	4,918,776,370	-	4,918,776,370	3,471,979,708	-	3,471,979,708	Donation
Kontribusi	-	149,969,923	149,969,923	-	455,140,000	455,140,000	Contribution
Total penerimaan	4,918,776,370	149,969,923	5,068,746,293	3,471,979,708	455,140,000	3,927,119,708	Total revenues
Pengeluaran							Expenditures
Biaya Program	3,381,621,294	-	3,381,621,294	2,578,721,610	-	2,578,721,610	Activity cost
Gaji, Upah	993,687,066	57,482,000	1,051,169,066	770,858,885	52,857,385	823,716,270	Salary, Wages
Biaya Operasional	225,007,150	36,828,232	297,688,715	174,550,687	135,000,000	309,550,687	Operational cost
Biaya Depresiasi	316,075,226	21,783,940	337,859,166	245,197,311	58,104,569	303,301,880	Depreciation cost
Total pengeluaran	4,916,390,736	116,094,172	5,032,484,908	3,769,328,494	245,961,954	4,015,290,448	Total expenditures
Surplus / (Defisit)	2,385,634	33,875,751	36,261,384	297,348,786	209,178,046	88,170,740	Fund balance assets
Penghasilan Komprehensif Lain							Other Comprehensive Income,
Aset neto yang dibebaskan	116,955,161	116,955,161	-	-	-	-	Net assets Released from Restriction
Total Penghasilan Komprehensif	119,340,795	83,079,410	36,261,384	297,348,786	209,178,046	88,170,740	Total Comprehensive Income

Lihat Catatan atas Laporan Keuangan pada Ekshibit E terlampir yang merupakan bagian yang tidak terpisahkan dari Laporan Keuangan secara keseluruhan

See accompanying Notes to Financial Statements on Exhibit E which are an integral part of the Financial Statements taken as a whole

These Financial Statements are Originally issued
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Ekshibit C

Exhibit C

PERKUMPULAN PEMERDAYAAN MASYARAKAT
DAN PENDIDIKAN KONSERVASI ALAM
LAPORAN AKTIVITAS
TAHUN YANG BERAKHIR 31 DESEMBER 2020 DAN 2019
(Disajikan dalam Rupiah, kecuali dinyatakan lain)

PERKUMPULAN PEMERDAYAAN MASYARAKAT
DAN PENDIDIKAN KONSERVASI ALAM
STATEMENT OF ACTIVITIES
YEAR ENDED 31 DECEMBER 2020 AND 2019
(Expressed in Rupiah, unless otherwise stated)

Notes	2020			2019			
	With Restrictions from The Resource Grantor	Without Restrictions from The Resource Grantor	Total	With Restrictions from The Resource Grantor	Without Restrictions from The Resource Grantor	Total	
ASET NETO							NET ASSETS
Saldo Awal	117,500,449	378,610,410	496,110,859	414,849,235	169,432,364	584,281,599	Beginning Balance
Surplus tahun berjalan	2,385,634	33,875,751	36,261,384	-297,348,786	209,178,046	88,170,740	Current Year Surplus
Aset neto yang dibebaskan dari pembatasan	116,955,161	-116,955,161	-	-	-	-	Net Assets Released from Restriction
Saldo Akhir Aset Neto	236,841,244	295,531,000	532,372,243	117,500,449	378,610,410	496,110,859	Ending Balance Net Assets
Penghasilan Komprehensif Lain							OTHER COMPREHEN INC
Saldo Awal	-	-	-	-	-	-	Beginning Balance
Penghasilan komprehensif tahun berjalan	-	-	-	-	-	-	Current Year Comprehensive Income
Saldo akhir penghasilan komprehensif lain	-	-	-	-	-	-	Ending Balance Other Comprehensive Income
TOTAL ASET NETO	236,841,244	295,531,000	532,372,243	117,500,449	378,610,410	496,110,859	TOTAL NET ASSETS

Ekshibit D

Exhibit D

PERKUMPULAN PEMBERDAYAAN MASYARAKAT DAN
PENDIDIKAN KONSERVASI ALAM
LAPORAN ARUS KAS
TAHUN YANG BERAKHIR 31 DESEMBER 2020 DAN 2019
(Disajikan dalam Rupiah, kecuali dinyatakan lain)

PERKUMPULAN PEMBERDAYAAN MASYARAKAT DAN
PENDIDIKAN KONSERVASI ALAM
STATEMENT OF CASH FLOWS
YEAR ENDED 31 DECEMBER 2020 AND 2019
(Expressed in Rupiah, unless otherwise stated)

	2020	2019	
ARUS KAS DARI AKTIVITAS OPERASI			CASH FLOWS FROM OPERATING ACTIVITIES
Perubahan aset neto dengan pembatasan dari pemberi sumber daya	119,340,795	(297,348,786)	Changes in net assets with restrictions from the resource grantor
Perubahan aset neto tanpa pembatasan dari pemberi sumber daya	83,079,410	209,178,046	Changes in net assets without restrictions from the resource grantor
Penyesuaian:			Adjustment
Penyusutan aktiva tetap	21,783,940	58,104,569	Depreciation of fixed assets
Arus Kas Dari Aktivitas Operasi	58,045,324	30,066,171	Cash Flows From Operating Activities
Sebelum Perubahan Modal Kerja			Before Changes in Working Capital
Penurunan (Kenaikan) Aktiva Lancar dan Kewajiban lancar			Decrease (Increase) Current Assets and Current Liabilities
Penurunan (kenaikan) uang muka	139,961,215	-	Decrease (increase) in advances
Penurunan (kenaikan) Biaya dibayar dimuka	4,166,667	-	Decrease (increase) in Prepaid expenses
Arus kas bersih diperoleh dari /digunakan untuk aktivitas operasi	86,082,558	30,066,171	Net cash flows provided by (used in) operating activities
ARUS KAS DARI AKTIVITAS INVESTASI			CASH FLOWS FROM INVESTING
Penambahan aktiva tetap	-	26,117,000	Additions to fixed assets
Arus Kas Bersih Dari Aktivitas Investasi			Net Cash Flows from Investing Activities
PENAMBAHAN (PENGURANGAN) KAS DAN SETARA KAS – BERSIH	86,082,558	56,183,171	ADDITION (REDUCTION) CASH AND CASH EQUIVALENTS - NET
KAS DAN SETARA KAS PADA AWAL TAHUN	421,465,503	477,648,674	CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR
KAS DAN SETARA KAS PADA AKHIR TAHUN	335,382,945	421,465,503	CASH AND CASH EQUIVALENTS AT END OF YEAR
Lihat Catatan atas Laporan Keuangan pada Ekshibit E terlampir yang merupakan bagian yang tidak terpisahkan dari Laporan Keuangan secara keseluruhan			See accompanying Notes to Financial Statements on Exhibit E which are an integral part of the Financial Statements taken as a whole