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: Click or tap to enter a 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 the National Development Planning Agency (Bappenas) also identified the two islands as top priorities for climate resilience actions[2].

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 units[3].

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 incorporates 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.

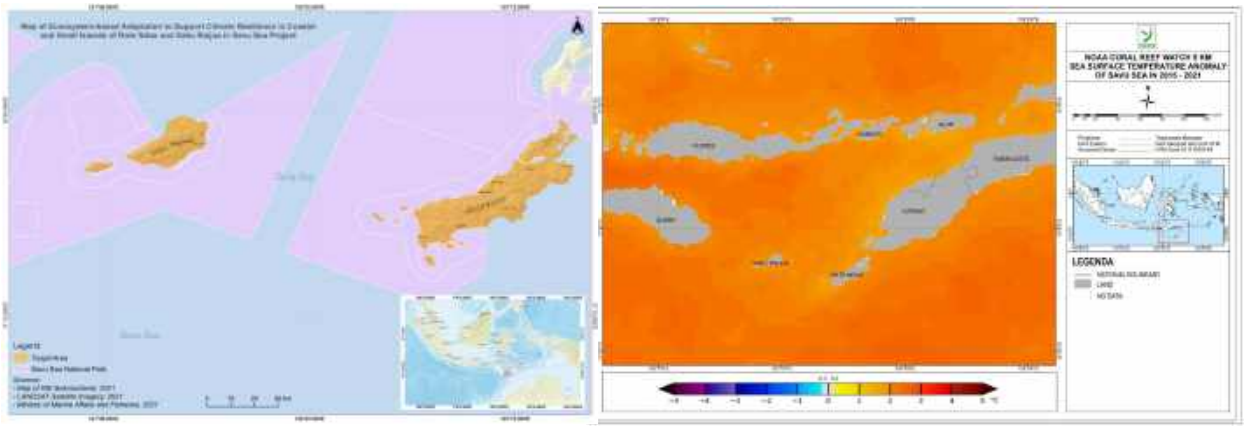


Figure 01 (left) Location in Rote and Sabu Island in Savu Seascape. Figure 02 (right). Distribution of temperature anomalies at Savu Sea, around Rote and Sabu, NTT (NOAA SSTA data 2015-2021, further analyzed and processed by YAPEKA).

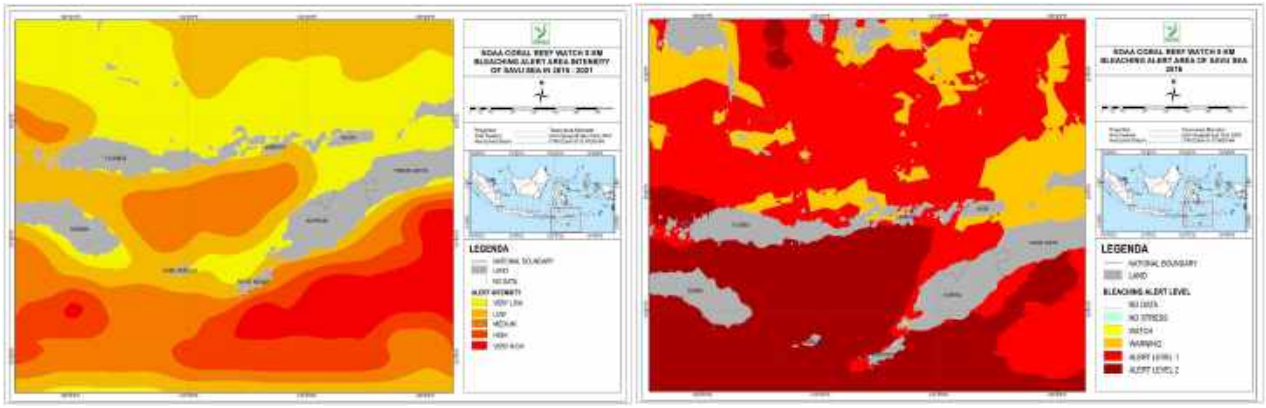


Figure 03 (left) Cumulative distribution and intensity of Coral Bleaching Alert (NOAA Bleaching Alert data 2015-2021, further analyzed by YAPEKA); and Figure 04 (right) Coral Bleaching Alert 2106 during strong El Nino event (Data: NOAA, processed by YAPEKA)

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 damages[5]. 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 Seroja[7].

8. Climate change also causes more frequent severe weather conditions, such as drought and flooding. Both Rote and Sabu islands are exposed to prolonged drought. 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 increase[8]

9. Coastal and marine ecosystem damage leads to consequences of ecosystem service losses and trigger negative cascading impacts on the socio-economic condition of coastal communities including livelihood system disruption which may also impair progress of reducing stunting phenomenon[9] 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 status[10].

10. 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.

Community Livelihoods

11. 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

[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.

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 *Dea Batu* (traditional method of collecting fishes trapped by stones on the coastal areas); Communities on the Rote and Sabu islands also dependent on dry land agriculture practices.

12. Project interventions will be at Rote Ndao and Sabu Raijua districts, 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 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.

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

13. 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 system[11]. 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:

14. **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 analysis[12]. 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.

15. **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 islands[13].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.

[11] 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.

[12] Ditjen PPI KLHK. 2021. Profil Kerentanan Perubahan Iklim Kawasan Segitiga Karang Indonesia.

[13] BKKPN Kupang. 2021. Coral Reef Condition Survey in TNP Laut Sawu.

16. **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.

17. **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 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 community 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.

18. **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

19. 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 management[14]

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

20. Ecosystem-based Adaptation (EbA) is a nature-based solution that harnesses biodiversity and ecosystem services to reduce vulnerability and build resilience to climate change[15]. 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 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.

Project/Programme Objectives

21. Objectives of this project 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.** 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 system 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.

[15] IUCN. 2017. IUCN issues brief: Ecosystem-based Adaptation.

22. 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 red boxes:

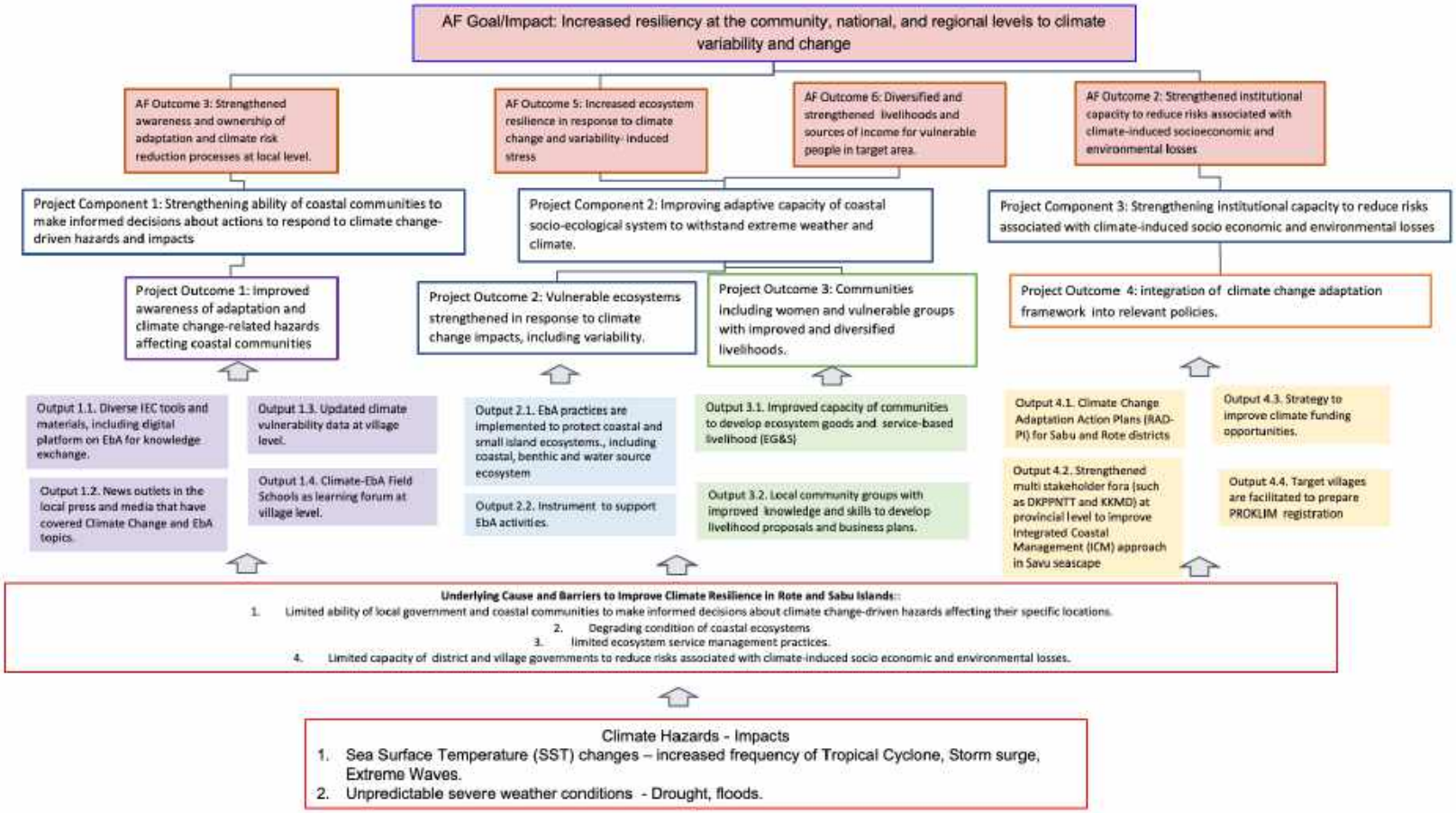


Figure 1. The Theory of Change (TOC)

Project/Programme Components and Financing:

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 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 ecosystem. • Output 2.2. Instrument to support EbA activities.	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. • Output 3.2. Local community groups with improved knowledge and skills to develop livelihood proposals and business plans.	Outcome 3: Communities including women and vulnerable groups with improved and diversified livelihoods.	USD 109,574.
3. Institution and Governance	• Output 4.1. Climate Change Adaptation Action Plans (RAD PI) for Sabu Raijua and Rote Ndao Districts. • Output 4.2. Strengthened multi stakeholder fora (such as DKPPNTT and KKMD) at provincial level to improve Integrated Coastal Management (ICM) approach in Savu seascape • Output 4.3. Strategy to improve climate resilience funding opportunities for the local and village governments. • Output 4.3. Coastal villages are facilitated to prepare PROKLIM registration.	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. Total Project/Programme Cost			USD 831.064
5. Project Execution cost			USD 87.239
6. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			USD 78.056
Amount of Financing Requested			**USD 996,358**

Project/Programme Components and Financing:

Projected Calendar:

Milestones	Expected Dates
Start of Project/Programme Implementation	July 2024
Mid-term Review (if planned)	June 2025
Project/Programme Closing	June 2026
Terminal Evaluation	December 2026

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.

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

24. 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.

25. 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. This output will be achieved by conducting the following activities:
        - Activity 1.1.1. Conduct Knowledge Attitude Practices (KAP) baseline survey, mid-term evaluation 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 target villages as well as control villages in Sabu and Rote.
        - Activity 1.1.2. Design and production of IEC materials such as posters, calendar, and project merchandise. The IEC materials will address climate change issues including community preparedness for tropical cyclone 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.
        - Activity 1.1.3. 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.
        - Activity 1.1.4. Develop and implement communication strategies that considers gender and social inclusions. The project will recruit a Communication Specialist to implement this activity, including overseeing IEC content and production, public outreach/awareness activities, and monitoring and evaluating communication performance throughout the project.
    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, EbA implementation, livelihood activities, and the role of women and vulnerable groups in responding to climate change in Rote and Sabu Islands. This activity will be participated by journalists and influencers at national and local levels. The project will prepare press releases 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 village level 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 learning forum at five target villages which are registered as PROKLIM village. 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.
    - 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.
    - Activity 1.4.3. Provide supporting equipment for learning purposes in the field schools, such as, in focus projector, whiteboard, binoculars, etc.

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

26. 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 area.

27. 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.

28. To strengthen vulnerable coastal ecosystems in response to climate change impacts (Outcome 2), the project will produce:
29. Output 2.1. EbA practices are implemented to protect coastal and small island ecosystems, including coastal, benthic and water source ecosystems, in the five target villages. This output will be achieved by conducting the following activities:
    - Activity 2.1.1. Conduct FPIC and Rapid Socio-Ecological Assessment for EbA implementation in target villages in Rote and Sabu in five target villages. This activity will include coordination with village government as well as FGDs at village level participated by inclusive communities. The assessment will identify stakeholders of EbA practices, identify the need of EbA approach, suitability, and feasibility of EbA practices in terms of environment and social issues. Secondary data show that coastal ecosystems (mangrove, coral reefs and seagrass) rehabilitation and conservation are required at five villages: Mebba, Limangu, Holulai, Oelua and Fuafuni villages, while water harvesting, and water resource protection is required at Limanggu village. Rapid Assessment of socio-ecological conditions will be facilitated by village facilitators.
    - Activity 2.1.2. Implement EbA practices (rehabilitation and conservation) in five villages: Mebba, Limangu, Holulai, Oelua and Fuafuni villages. This activity will be implemented based on the rapid socio-ecological assessment for EbA implementation, including but not limited to: Mangrove rehabilitation, coral reef rehabilitation, water resource protection and setting local conservation area through Locally Managed Marine Area (LMMA)[16] or Other Effective Area-Based Conservation Measures (OECM)[17]. This activity will include FGDs at target villages and will revitalize existing customary laws for coastal ecosystem protection measures.
    - Activity 2.1.3. Conduct Monitoring of EbA activities. This activity will monitor the progress of EbA activities implemented and will be conducted on a quarterly basis.
    - Activity 2.1.4 Provide technical assistance and facilitation of EbA implementation. This activity will involve recruitment and mobilization of EbA experts at national and district levels, as well as Provincial coordinators.

30. Output 2.2. Instruments to support EbA activities. The project will provide instruments to support EbA activities, including small-scale green-grey infrastructures in target villages, including but not limited to developing living shoreline to protect and stabilize shoreline using plants or other natural elements[18] and embankment for water storage tanks. This output will be achieved by conducting the following activities:
    - Activity 2.2.1. Conduct Rapid Environmental and Social Assessment for EbA instruments. This assessment is required as part of environmental and social safeguards prior to construction of the EbA instrument. Indicative instruments required for EbA implementation in target villages are wave breakers for living shoreline and embankment for water storage tanks. An Environmental and Social Safeguard specialist will be recruited to conduct this activity.
    - Activity 2.2.2. Develop Detail Engineering and Design (DED) for EbA instruments and provide supervision to build EbA instruments, which will be performed by a consultant/Civil Work Specialist.
    - Activity 2.2.3, Build EbA instruments. Once the environmental assessment and DED have been prepared, the project will involve local communities for building the EbA instruments. The EbA instrument will be handed over to and maintain by local community group or village government who implement the EbA.

[16] Govan, H. et al. (2008). Locally Managed Marine Areas: A guide for practitioners. *The Locally Managed Marine Area Network*. p. 2
[17] IUCN. Other Effective Area-Based Conservation Measures.
[18] National Ocean Service. What is a living shoreline? https://oceanservice.noaa.gov/facts/living-shoreline.html

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

32. Output 3.1. Improved capacity of communities to develop ecosystem goods and service-based livelihood (EG&S). Activities to produce this project output are:
    - Activity 3.1.1. Conduct rapid local market assessments on potential livelihood opportunities at five target villages, such as production of processed products from mangrove, seaweed and fishes, palm and coconut-based products, mangrove crab and sea cucumber cultivation, and ecotourism. This activity will be conducted by a consultant/Livelihood Specialist.
    - 3.1.2. Facilitate Training for local communities on sustainable production of livelihood practices. The training will include technical production and business development aspects. Training activities will involve local trainers (such as from local university) and will be targeted to local community groups including women and vulnerable groups (small-scale fishers, farmers).

33. Output 3.2. Local community groups with improved knowledge and skills to develop livelihood proposals and business plans. Activities to achieve this output are:
    - Activity 3.2.1. Train local community groups including women and vulnerable groups on developing ecosystem goods and service-based livelihood proposal.
    - Activity 3.2.2. Provide equipment to support livelihood proposals for selected community groups.
    - Activity 3.2.3. Train community groups including women and vulnerable groups on developing business plans.
    - Activity 3.2.4. Provide Technical Assistance for livelihood activities. This will include the recruitment of a Livelihood Specialist.

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

34. This component will align with the Adaptation Fund Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses. Under this component the project will produce project outputs as follows:
35. Output 4.1. Climate Change Adaptation Action Plans (RAD-PI) for Sabu and Rote districts. These Climate Change Adaptation Plans will be synchronized with Climate Adaptation Plan at provincial level. To achieve this output the project will conduct the following activities:
    - Activity 4.1.1. 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.
    - Activity 4.1.2. Prepare Adaptation Action Plan Document for Rote and Sabu. The project will recruit a consultant to prepare draft of Adaptation Action Plan Document for Sabu and Rote.
    - Activity 4.1.3. 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.

36. Output 4.2: Strengthened multi stakeholder fora (such as DKPPNTT and KKMD) at provincial level to improve Integrated Coastal Management (ICM) approach in Savu seascape by introducing EbA approach to respond to climate change. DKPP NTT (Dewan Konservasi Perairan Provinsi Nusa Tenggara Timur) is a provincial level multi-stakeholder forum on marine conservation of NTT province, while KKMD is a provincial mangrove working group that will develop Mangrove Protection and Management Plan

(RPPM). The ICM aims to provide a better context to benefit from synergies and to level out inconsistencies across different policies and sectors. In this perspective stakeholders, involvement and vertical and horizontal integration among authorities and sectors are key factors of the ICM process. Project activities will include:

- Activity 4.2.1. Facilitate MSF (DKPP NTT/KKMD) workshops on ICM approach to increase climate resilience in Savu Seascape. The workshops will be conducted in Kupang and will involve stakeholders from the national and provincial and district governments, representatives of women and vulnerable groups, and academicians.
- Activity 4.2.2. Prepare and disseminate Policy Brief to integrate Climate Change issue with ICM in Savu Sea. The project team will prepare and disseminate a policy brief that addresses EbA approach and ICM in Savu Sea.

37. 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 and develop the policy brief. To conduct this activity, the project will also develop coordination with the local government of Sabu and Rote to have access of information on 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 policy briefs on sustainable funding schemes for climate adaptation in Sabu and Rote.

38. Output 4.4. 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 (*ca.* 40 villages) and Sabu (*ca.* 10 villages) islands to be registered as PROKLIM villages. Five of the villages will be supported to implement EbA activities. The project will conduct the following activities:
    - Activity 4.4.1. Develop coordination with The Directorate General for Climate Change Control (Ditjen PPI), the local agency of Environment and Forestry and local university to increase participation of coastal villages in PROKLIM.
    - Activity 4.4.2. Training of village facilitators on PROKLIM Registration. The project will recruit village facilitators to facilitate villages in participating the PROKLIM. These facilitators will be trained by trainers of PROKLIM including from The the Directorate General for Climate Change Control (Ditjen PPI).
    - Activity 4.4.3. Socialization of PROKLIM for coastal villages in Rote and Sabu. The socialization will be coordinated with the Directorate General for Climate Change Control (Ditjen PPI) and local government, participated by representatives of village government and community groups of coastal villages where climate risks are high.
    - Activity 4.4.4. Village Facilitators mobilization to Rote and Sabu islands. The project will mobilize the village facilitators to target coastal villages in both Rote and Sabu.
    - Acitivity 4.4.5. Organize village meetings to conduct FPIC and climate mitigation and adaptation data collection. The project will organize a series of village meetings at target villages to conduct FPIC and existing mitigation and adaptation activity data collection.
    - Activity 4.4.6. Register the villages participating in the PROKLIM in the National Registry Systam (SRN). The project will facilitate the registration process of coastal villages in SRN.

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

Impact Potentials

39. The project will impact *ca*. 9,271 beneficiaries (individuals) living in 3 villages of Rote Ndao and 2 villages in Sabu Raijua. The beneficiaries will include women, small-scale fishermen and poor communities, distributed who depend on 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 15% of the total population: 1,391 individuals (710 male and 681 female). As most of the populations are small-scale fishermen, it is assumed that around 60% of 1,391 individuals are small-scale fishermen (*ca*. 834 individuals) and they will become the beneficiaries of the project (see the figure below). Based on the assessment of gender and social inclusion conducted by YAPEKA, vulnerable groups to climate change are women and small-scale fishers. 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 at 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 area. As result, any shock to 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 300individuals consisting of 210 male and 90 female (30% of participants are women). Inclusion of women is key and their insight may become 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. Project Beneficiaries

District	Village	Demography data				Direct Beneficiaries (15 % from total population)	Specific Beneficaries (small-scale fisherme) (60% from beneficaries)	Coastline (m)	Paddy field (Ha)	Source
		Man	Woman	Total Population	Household					
Rote Ndao	Oelua	1201	1049	2250	489	338	203	1259		BPS. 2020. Statistics of Rote Barat Laut (Kecamatan Rote Barat Laut Dalam Angka)
	Holulai	734	810	1544	319	232	139	1239,8		
	Fuafuni	523	514	1037	279	156	93	7016		BPS. 2020. Statistics of Rote Barat Daya (Kecamatan Rote Barat Daya Dalam Angka) 2020. BPS Kabupaten Rote Ndao. Cetakan: CV. Azka Putra Paratama
Sabu Raijua	Mebba	1859	1750	3609	932	541	325	2177		BPS. 2020. Statistics of Kecamatan Sabu Barat 2020. BPS Kabupaten Kupang.
	Limaggu	419	412	831	226	125	75	1633	74	BPS. 2020. Statistics of Kecamatan Sabu Timur 2020. BPS Kabupaten Kupang.
	TOTAL	4736	4535	9271	2245	1391	834	13.325		

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

40. 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 this project are described in the following table:

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 resilience.	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.
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

No	Project Output	Economic Benefit	Social Benefit	Environment Benefit
				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 losses due to climate change impacts.	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.
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

No	Project Output	Economic Benefit	Social Benefit	Environment Benefit
				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 positive impact on 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 fishery caused by climate change.	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.
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 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 positive impact on environment.
18	Output 4.4. Target villages are	Improved resilience to climate change	Enhanced community resilience and adaptive	The implementation of adaptation actions can

No	Project Output	Economic Benefit	Social Benefit	Environment Benefit
	facilitated to prepare PROKLIM registration.	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	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.	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.

41. 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.

42. The Implementing Agency has conducted 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).

43. 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

44. Beneficiaries of the project are 9,271 (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 the6.65 km of coastline. Direct beneficiaries are approximately 15% of the population i.e. 1,391 individuals (710 male and 681 female), who are directly benefiting from EbA and sustainable livelihood activities implementation. Five target villages are positioned on 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 damage and losses to the ecosystem and infrastructures occurred.

45. 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 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.

	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
Economic retention	High leakage as the materials coming from outside	Low leakage, materials are locals

46. 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. In addition, 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 tranings and capacity building activities.

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

47. **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.

48. **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.

49. **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.

50. **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.

51. **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.

52. **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).

53. **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.

54. **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.

55. **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.

56. **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.

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

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

58. **Biodiversity Conservation and Sustainable Management of Living Natural Resources.**

- **Law No. 5/1990 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.
- **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.

59. 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.

60. 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.

61. 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).

62. 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

63. 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

64. 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.

65. The table below shows relevant conservation and climate change projects that were implemented 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, Ledekepaka, Molie, Lobohede, Gurimonearu dan 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 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 government 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	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 activities were focused on advocacy and awareness.	This proposed project will continue and expand the scope of awareness and implementation of EbA, livelihood and integrating climate adaptation framework into climate policies.

II.G. Learning and Knowledge Management

66. 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 repository of the knowledge and for using and sharing the knowledge for practices.

67. 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.

68. 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.

69. 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.

70. 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. 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

71. 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>
<tr><td colspan="3">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</td></tr>
<tr><th>Concern, needs</th><th>Inputs and opinion</th><th>Incorporation of findings into project design</th></tr>
<tr><td>Need to ensure that the project proposal should take into account government's policies and strategic planning on climate change.</td><td>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.</td><td>The project is in line with the GOI policy on climate resilience and at national level will contribute to replicate the Village Climate Program (PROKLIM) and registering the project's site in the SRN.</td></tr>
<tr><td colspan="3">Consulted Stakeholder : Agency for Marine National Conservation Area (BKKPN) Kupang</td></tr>
</table>

Consultation Technique: Discussion		
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		
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		
Concern, needs	**Inputs and opinion**	**Incorporation of findings into project design**
The forum concluded that Rote Ndao district is vulnerable to climate hazards, especially the vulnerable groups in coastal areas including women; and climate adaptation measures are needed.	The forum also identified sites/villages that required climate adaptation activities. In addition the forum also identified the need to have financial support from the government through ecological fiscal transfer mechanism.	The project will also facilitate the development of an EFT scheme to ensure financial support for climate adaptation activities.
Consulted Stakeholder: District agency for Environment, Rote Ndao (May 31, 2022) **Consultation technique**: Discussion		
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 emision.	Project activities will include EbA practices including mangrove restorations and management. This will have environmental co-benefits in offsetting GHG emision.
Consulted Stakeholder: District Government BAPPELITBANGDA, DLHK Sabu Raijua (May 24, 2022) **Consultation Technique**: FGD		
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	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 take into account ecotourism activity as part of Eba and

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.		to improve community livelihood.
Consulted Stakeholder: Women's group in Rote Multi Stakeholder Forum (May 21, 2022) **Consultation Technique**: FGD		
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 the field and lack of time to manage household i.e., children higher risk to stunting	More livelihood options/diversification to reduce women burden; Future project should contribute to improve protein intake/food diversification especially for infant/children	Livelihood activities in the project will take into account more livelihood options to reduce 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		
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	The future project should contribute to establish food security	Livelihood activities in this project will strengthen food security.

enough.		
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.		
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.

II.I. Justification for Funding Request

72. The table below describes the adaptation reasoning by highlighting the differences between the 'without project' scenario and the 'with project' scenario.

Without Project Scenario	With Project Scenario
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.	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.
Seaward mangrove formations are degraded and fragmented caused by extreme weather; landward mangrove formations under pressure from land conversion and unsustainable use	Mangrove rehabilitation activities assist the mangrove recovery process by implementation of Building with Nature framework (seaward and landward).
Gleaning areas in intertidal seagrass zones which are an important source of food and income by local communities are damaged by extreme weather.	Seagrass rehabilitation activities assist seagrass ecosystem recovery and gradually improve food systems for gleaning; more protein source choices from animals associated in seagrass
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.	Coral rehabilitation sites using grey infrastructures are implemented; rehabilitation sites will be done at 5-10 m depths to minimize temperature and mechanical stresses; more fishes available gradually.
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.	More options of EbA-based sustainable livelihood activities; coastal social-ecological systems are more resilient.
PROKLIM (climate resilient village, government program) is not gaining traction progressively due to massive relocation of funds to pandemic control efforts.	5 villages will be stimulated and participated into PROKLIM and will get support from the 2024-2028 government budget.
Women participation in EbA activities are limited	At least 30% women participants are involved in the planning, implementation, monitoring and learning process of EbA activities; more gender balanced community groups; more women-based groups emerge
Traditional communities and traditional practices are	More traditional practices are integrated into EbA

rarely connected with EbA activities	schemes (e.g., dea batu, papadak, hoholok); traditional communities are more involved in the EbA activities

II.J. Sustainability of Project Outcomes

73. The project exit 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. The project will also strengthen existing multi stakeholder fora at district and provincial level such as DKPPNTT and KKMD. The project will also produce diverse IEC tools including digital platform for knowledge exchange on climate change and EbA topics. The platform will be maintained by YAPEKA to ensure the sustainability of their uses. The local government of Rote and Sabu will also be encouraged to maintain the digital platform.

74. 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. Result of the climate vulnerability studies are integrated into district' s climate adaptation action planning process, that helps these tools are used consistently and effectively overtime. The establishment of Climate-EbA Field School to improve knowledge and skills in accessing and interpreting climate-extreme weather information also ensure the communities will have better knowledge on climate change and can use the knowledge to increase their resilience against climate change.

75. The sustainability of EbA practices at village level will be established by engaging local community groups in implementing protection and restoration of coastal ecosystem, climate smart agriculture and protection of water resources. 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 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.

76. 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.

77. 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 brief 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

78. 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.

79. 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.

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

80. 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).

Gender and Vulnerability Context

81. 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:

82. 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.

83. 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.

84. 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 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.

85. 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.

86. 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 mangroves, coral reef and seagrass bed.

87. 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

88. 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).

89. 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 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.

90. 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.

91. The Project Execution Unit (PEU) will be led by a Project Manager/Project Team Leader and supported by Operation Manager, M&E Manager, Consultants/Specialists, and other project staff.

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 administrative 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. ● 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.

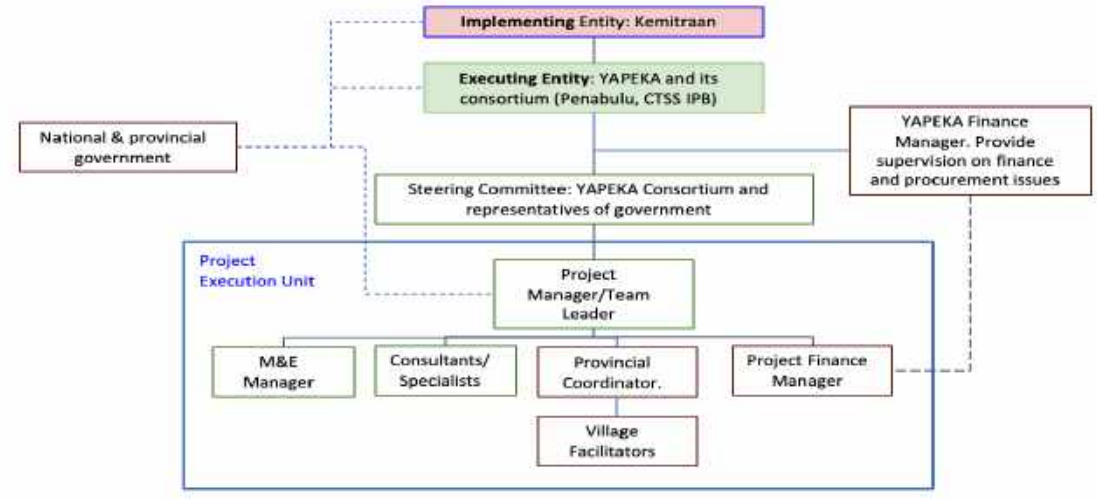


Figure: Project Organization Structure

92. 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).

93. 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

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

Risks	Mitigation measures
Financial Risks	
1. Miss-use of funds/fraud	- Implement YAPEKA's Guidelines for anti-corruption and grievance mechanisms. - Implement SOP on financial management and accounting systems. - Minimize cash transfers and cash advances. - Internal and external audit.
2. Lack of financial management capacity of NGOs partners/ sub-grantee.	- Training in financial management for NGO partners/community groups. - Conduct financial and administration monitoring/audit.
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.
2. Unreliable means of transportation to access project locations (Rote and Sabu islands) due to bad weather in Savu Sea.	- 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
3. Varied and	- Prepare a stakeholder engagement plan.

Risks	Mitigation measures
inconsistent level of participation of stakeholders.	- Layering approaches and tailored approaches to specific needs of stakeholders when necessary
4. Complaints/feedback from beneficiaries, stakeholders, public	- Grievance and accountability mechanisms in place and shared with stakeholders include handling complaint unit.
5. Project staff and stakeholders may be affected by the Pandemic Covid-19.	- Follow the Pandemic Covid-19 protocol. - Coordination of training/workshops and field activities with the local Pandemic Covid-19 task force.

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

95. Below is the project self-assessment of compliance with the Adaptation Fund Environmental and Social Policy and measures for environmental and social risk management:

Risk and risk rating	Mitigation Measures
Compliance with the Law	
According to Ministerial decree 5/KEPMEN-KP/2014 all project sites in marine area are located within Traditional Sustainable Fishery Zone. Therefore, project activities are in line with zone regulations. (Risk: Negligible)	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 Traditional Sustainable Fishery Zone.
According to NTT Governor Decree No 1/2011 regarding Spatial Planning 2010-2030, The project target village locations are not overlapped with conservation area like national park, nature reserve or wildlife sanctuary. Development in those area require specific license from Natural Resource Conservation Agency (BKSDA) – of the Ministry of Environment and Forestry (MOEF). (Risk: Negligible)	The project will maintain close communication with BKSDA about the project EbA activities to ensure legal compliance. Produce project maps outlining specified land use plan according to *Governor Decree No 1/2011*, showing no overlap between project sites and conservation area in terrestrial zone.
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	Although project include provision of EbA instruments such as construction of wave breaker for living coastline, this infrastructure is not a hard infrastructure and considered as hybrid (green-grey) 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 document for small

Risk and risk rating	Mitigation Measures
infrastructure will require specific permit to build (Risk: Low)	infrastructure (UKL-UPL or SPPL).
Access and Equity	
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 local leader(s) or respected person(s) present in the discussion. (Risk: Low)	The project will implement consistent participatory and social equity framework; create specific consultation to the women and underprivileged groups; involve village representative board in planning and implementation.
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
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 (Risk: Low-medium).	The project is focused to 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 will encourage marginalized/vulnerable groups to participate in project activities, document meaningful participation of marginalized/vulnerable groups in project activities.
Human Rights	
The project does not trigger human right issues. (Risk: Negligible).	-
Gender Equality & Women's Empowerment	

Risk and risk rating	Mitigation Measures
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.
Core Labor Right	
The project does not trigger core labor right issue. (Risk: Negligible)	-
Indigenous People	
There is no indigenous people in Sabu and Rote Islands. Communities are originated from other islands. (Risk: Negligible	-
Involuntary Settlement	
The project does not trigger any involuntary settlement. (Risk: Negligible)	-
Protection of Natural Habitats	
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	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.

Risk and risk rating	Mitigation Measures
goods and services including by developing ecotourism. However, some livelihood activities might deprive natural habitats (Risk: Low)	
Conservation of Biological Diversity	
In general, the project will not have 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 livelihood might disturb the biological diversity of coastal ecosystems if only focused on 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.
Climate Change	
Project activities do not contribute to climate change as project activities do not have land clearing activities and use considerable amount of energy from fossil fuels. The project also encourages the use of renewable energy such as solar panel to be used for production of fishery products for livelihood and ecotourism activity. (Risk: Negligible-).	-
Pollution Prevention and Resource Efficiency	
Project activities in the field might have impact to 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 polybags (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.
Public Health	
Project activities do not trigger public health issue, and in terms of COVID 19, the	-

Risk and risk rating	Mitigation Measures
project will follow Government's policy and regulation (Risk: Negligible)	
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).	-
Lands and Soil Conservation	
Project activities do not have negative impact on land and soil conservation as project activities will not cause land/soil erosion. (Risk: Negligible).	-

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

96. 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 M&E component budget of the project.

97. 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.

98. M&E component budget of the project is as follows:

Activity 1.1.1. KAP Surveys (Baseline, Endline) and Mid Term Evaluation	**$**	**27.873**
1.1.1.1. Consultant KAP Survey	$	5.333
1.1.1.2. Fee Enumerator for 7 villages	$	933
1.1.1.3. Merchandise production	$	2.800
1.1.1.4. Local Transportation for Enumerator	$	140
1.1.1.5. Mid Term Evaluation	$	4.667
1.1.1.6. Consultant - Senior M&E	$	14.000
Activity 2.1.3. Conduct Monitoring of EbA activities	**$**	**31.793**
2.1.3.1. Airfare Jakarta - Kupang - Jakarta.	$	6.400
2.1.3.2. Airport Transport CGK, KOE	$	800
2.1.3.3. Accomodation in Kupang	$	600
2.1.3.4. In - Out Transport	$	360
2.1.3.5. Boat Ticket Kupang - Rote - Kupang	$	600
2.1.3.6. Accomodation in Rote and Sabu	$	3.600
2.1.3.7. Boat Ticket Kupang - Sabu - Kupang	$	1.440
2.1.3.8. Perdiem	$	2.880
2.1.3.9. Rent Car, Rote and Sabu	$	1.000
2.1.3.10. Prepare Progress and Final Reports	$	33
2.1.3.11. Travel IE for Monitoring	$	14.080

III.E. 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	15 %	● 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 condition 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	● 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 specific needs and concerns of the target audience. Assumption • Network coverage is sufficient. • Conducive weather conditions for distribution of IEC materials.

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
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 group.	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: • 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 forum 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

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
					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 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, community shifts, and collapse, which can challenge the effectiveness of efforts to strengthen vulnerable ecosystems. Assumption: There is no severe condition that disturb the ecosystem.
Output 2.1. EbA practices are implemented to protect coastal and small island ecosystems., including	● Area covered by EbA Practices.	0	● 50 Ha.	● Map indicating EbA Area ● Visual	Risk ● There is a risk that EbA practices may not be

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
coastal, benthic and water source ecosystem.				Documentation	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
Output 2.2. instrument to support EbA activities	• Number of instruments constructed.	0	• 5	• Assessment report • DED • Environmental Document • Handing over document	Risk • Without adequate community engagement in the planning and implementation of EbA practices, there is a risk that the practices may not fully address the needs and priorities of local communities, potentially leading to incomplete or less relevant intervention. Assumption • Conducive weather condition • Building materials available locally
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 for women and vulnerable groups. • Percentage of increased	0	• 5 • 20%	• 2^{nd} – 3^{rd} Quarterly Report • KAP survey	• Livelihood diversification alone may not be sufficient to buffer individuals and households from shocks and stresses and may

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
	household income within the target communities (selected from samples)				even increase their vulnerability. This is because doing something 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
Output 3.2. Local community groups with improved knowledge and skills to develop livelihood proposals and business plans.	● Number of proposals selected and funded.	0	● 5	● Selection proses report. ● Selected and Funded proposal	Risk ● Lack of local/village policy and regulation support on community livelihood business from the local/village governments. ● There is a risk that the resources may be miss-used. Assumption Community willingness to apply for funding.

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
Project Outcome 4: Integration of climate change adaptation framework into relevant policy	● Number of local government policies incorporating climate change adaptation measures	0	1	● 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. 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 4.2 DKPPNTT is facilitated to integrated climate change issues into Integrated Coastal Management (ICM) Agenda	● Climate change issues integrated in ICM framework.	0	1	ICM Framework Document	Risk ● Integration of climate change issues are difficult to be accepted in various sectors. Assumption ICM stakeholders understand the importance of integrating CC issues into the framework
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

Project Result	Indicators	Baseline	Targets	Means of Verification	Risk & Assumption
Output 4.4. Target villages are facilitated to prepare PROKLIM registration	● Number of villages are facilitated	0	● 5	● Q3 report	Risk ● Lack of supportive political and institutional environment at village level ● Availability of required data Assumption ● All required data collected

III.F. 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.	AF Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level.	Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses.	135,229
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.	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.	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.	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

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 Information Education and Communication (IEC) tools and materials including digital platform on EbA for knowledge exchange.	$73.220
	1.2	Output 1.2. News outlets in the local press and media that have covered Climate Change and EbA topics.	$ 12.675
	1.3	Output 1.3. Updated climate vulnerability data at village level.	$ 18.875
	1.4	Output 1.4. Climate-EbA Field Schools as learning forum at village level	$ 30.458
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 coastal and small island ecosystems, including coastal, benthic and water source ecosytems, in the five target villages.	$ 219.805
		Output 2.2. Small infrastructure and facilities to support EbA activities	$ 61.600
	3	Outcome 3. Communities including women and vulnerable groups with improved and diversified livelihoods	$ 109.574
		Output 3.1. Improved capacity of communities to develop ecosystem goods and service-based livelihood (EG&S).	$ 32.528
		Output 3.2. Local community groups with improved knowledge and skills to develop livelihood proposals and business plans.	$ 77.046
. 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	$ 304.856
		Output 4.1. Adaptation Action. Plans for Sabu and Rote districts	$ 56.643
		Output 4.2. Strengthened DKPPNTT as a multi stakeholder forum to improve ICM approach in Savu seascape.	$ 7.480
		Output 4.3. Strategy to improve climate funding opportunities.	$ 15.711
		Output 4.4. Target villages are facilitated to prepare PROKLIM registration	$ 225.022
A. PROGRAM COST			$ 831.064
B. PROJECT EXECUTION COST			$ 87.239
C. IMPLEMENTING ENTITIY FEE			$ 78.056
TOTAL			$ 996.358

III.H. Disbursement Schedule

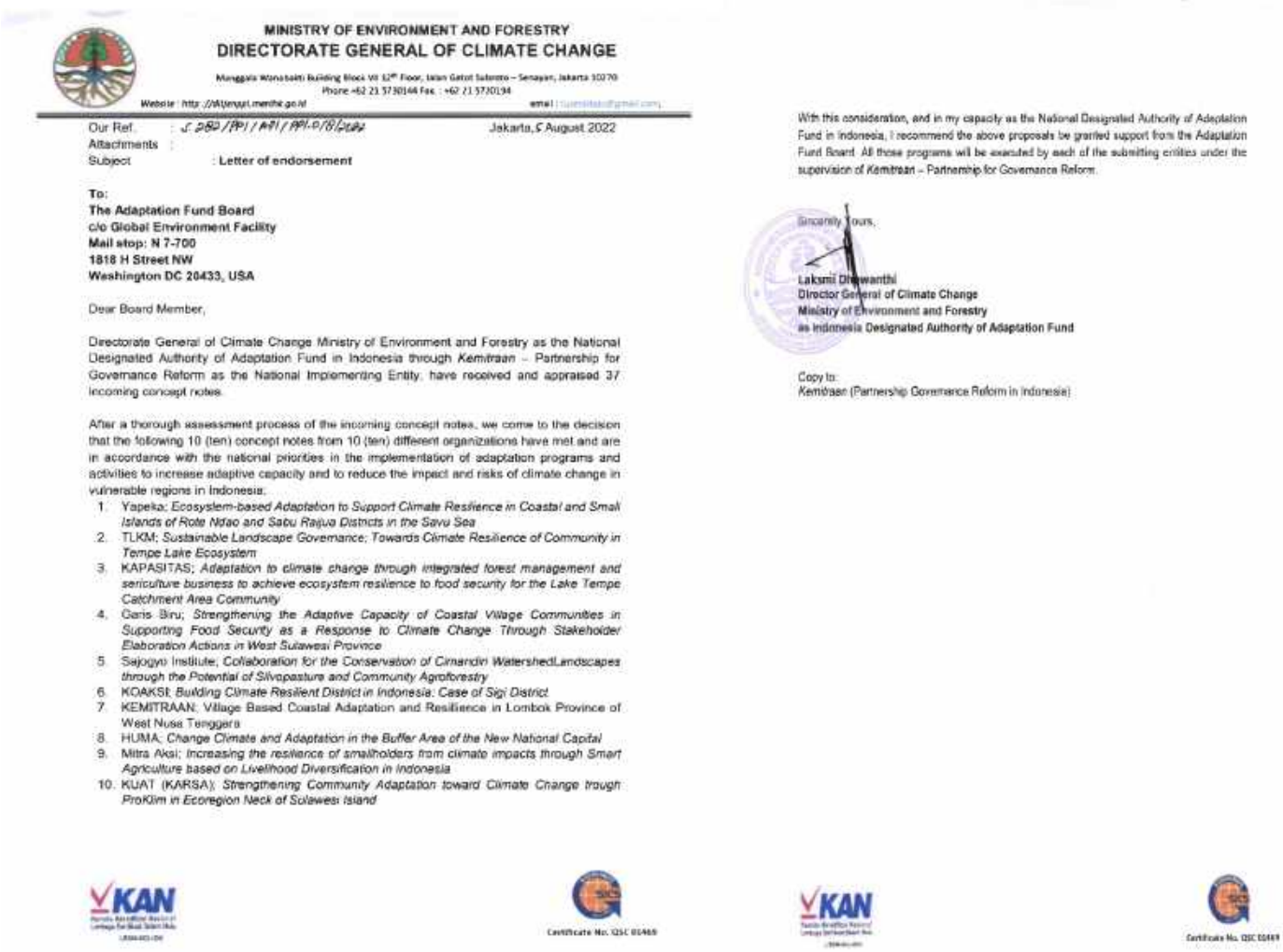
	Upon Agreement signature	One Year after Project Start[a/]	**Total**
Scheduled Date	July 2024	July 2025	
Project Funds	USD 423.185	USD 495.117	USD 918.302
Implementing Entity Fee	USD 35.971	USD 42.085	USD 78.056
Total	**USD 459.156**	**USD 537.202**	**USD 996.358**

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

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

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

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



MINISTRY OF ENVIRONMENT AND FORESTRY
DIRECTORATE GENERAL OF CLIMATE CHANGE

Manggala Wanabakti Building Block VII 12th Floor, Jalan Gatot Subroto – Senayan, Jakarta 10270
Phone +62 21 5730144 Fax. : +62 21 5730194
Website : http://ditjenppi.menlhk.go.id email : [redacted]

Our Ref. : S.280/PPI/API/PPI.0/8/2022 Jakarta, 5 August 2022
Attachments :
Subject : Letter of endorsement

To:
The Adaptation Fund Board
c/o Global Environment Facility
Mail stop: N 7-700
1818 H Street NW
Washington DC 20433, USA

Dear Board Member,

Directorate General of Climate Change Ministry of Environment and Forestry as the National Designated Authority of Adaptation Fund in Indonesia through *Kemitraan* – Partnership for Governance Reform as the National Implementing Entity, have received and appraised 37 incoming concept notes.

After a thorough assessment process of the incoming concept notes, we come to the decision that the following 10 (ten) concept notes from 10 (ten) different organizations have met and are in accordance with the national priorities in the implementation of adaptation programs and activities to increase adaptive capacity and to reduce the impact and risks of climate change in vulnerable regions in Indonesia:

1. Yapeka; *Ecosystem-based Adaptation to Support Climate Resilience in Coastal and Small Islands of Rote Ndao and Sabu Raijua Districts in the Savu Sea*
2. TLKM; *Sustainable Landscape Governance; Towards Climate Resilience of Community in Tempe Lake Ecosystem*
3. KAPASITAS; *Adaptation to climate change through integrated forest management and sericulture business to achieve ecosystem resilience to food security for the Lake Tempe Catchment Area Community*
4. Garis Biru; *Strengthening the Adaptive Capacity of Coastal Village Communities in Supporting Food Security as a Response to Climate Change Through Stakeholder Elaboration Actions in West Sulawesi Province*
5. Sajogyo Institute; *Collaboration for the Conservation of Cimandiri WatershedLandscapes through the Potential of Silvopasture and Community Agroforestry*
6. KOAKSI; *Building Climate Resilient District in Indonesia: Case of Sigi District*
7. KEMITRAAN; Village Based Coastal Adaptation and Resilience in Lombok Province of West Nusa Tenggara
8. HUMA; *Change Climate and Adaptation in the Buffer Area of the New National Capital*
9. Mitra Aksi; *Increasing the resilience of smallholders from climate impacts through Smart Agriculture based on Livelihood Diversification in Indonesia*
10. KUAT (KARSA); *Strengthening Community Adaptation toward Climate Change trough ProKlim in Ecoregion Neck of Sulawesi Island*

With this consideration, and in my capacity as the National Designated Authority of Adaptation Fund in Indonesia, I recommend the above proposals be granted support from the Adaptation Fund Board. All these programs will be executed by each of the submitting entities under the supervision of *Kemitraan* – Partnership for Governance Reform.

Sincerely Yours,

Laksmi Dhewanthi
Director General of Climate Change
Ministry of Environment and Forestry
as Indonesia Designated Authority of Adaptation Fund

Copy to:
Kemitraan (Partnership Governance Reform in Indonesia)

101. 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 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.

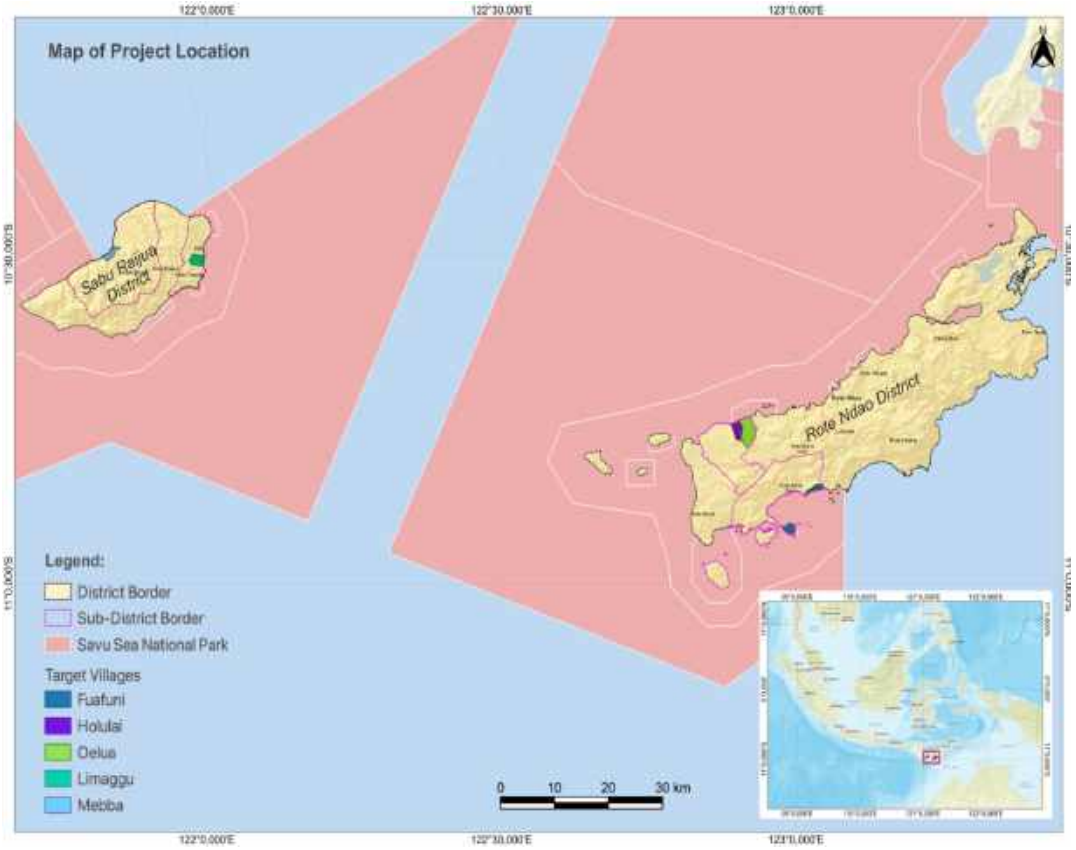
Laode Muhamad Syarif
Executive Director of Partnership for Governance Reform in Indonesia (Kemitraan)
Implementing Entity Coordinator

Date: July 15, 2022	Tel. and email: +62-21-2278-0580 laode.syarif@kemitraan.or.id

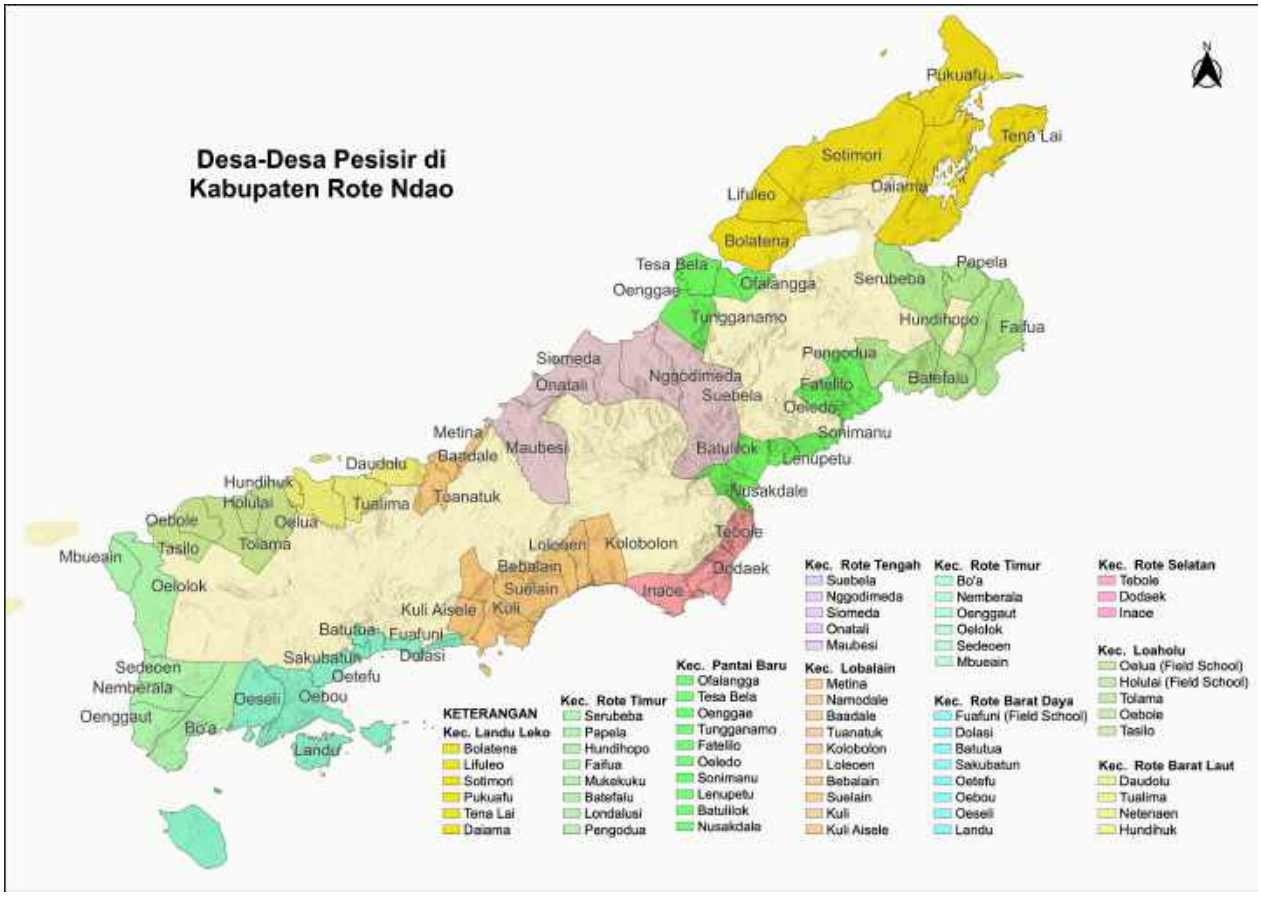
Project Contact Person: Eka Melisa

Tel. And Email: +62-818-764-746; eka.melisa@kemitraan.or.id

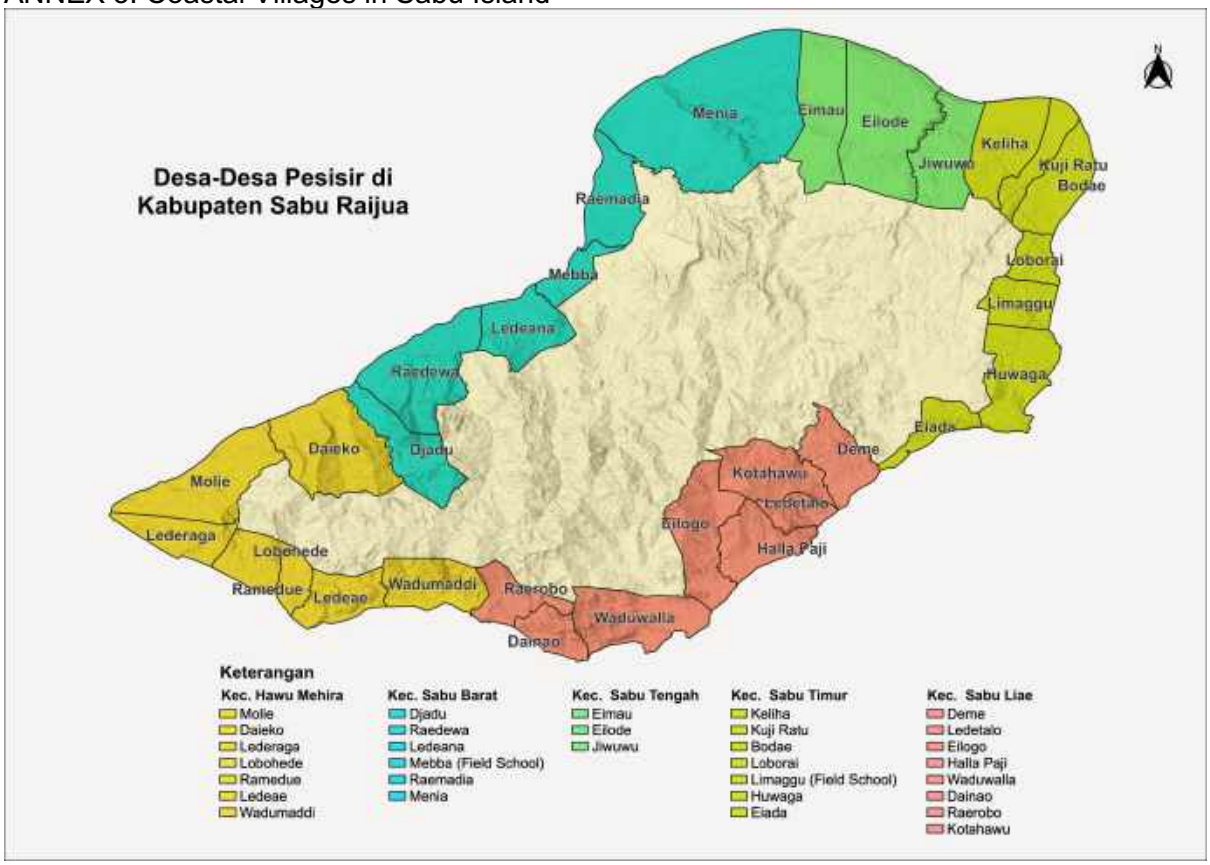
ANNEX 1. Map of Project Locations



ANNEX 2. Coastal Villages in Rote Island



ANNEX 3. Coastal Villages in Sabu Island



Annex 4.

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

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 and implementation 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.

Self-screening of project activities against the Adaptation Fund Environmental and Social Policy identifies 2 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**
Compliance with the Law		
Access and Equity		
Marginalized and Vulnerable Groups		
Human Rights		
Gender Equality and Women's Empowerment		
Core Labour Rights		
Indigenous Peoples		
Involuntary Resettlement		

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Protection of Natural Habitats		
Conservation of Biological Diversity		
Climate Change		
Pollution Prevention and Resource Efficiency		
Public Health		
Physical and Cultural Heritage		
Lands and Soil Conservation		

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 B.

The table below describes the self-screening of the project using the Environmental and Social Management Plan:

Table 1 Environmental and Social Management Plan

Risk and risk rating	Mitigation Measures	Cost Estimate	Timeline
Compliance with the law			
According to Ministerial decree 5/KEPMEN-KP/2014 all project sites in marine area are located within Traditional Sustainable Fishery Zone. Therefore, project activities are in line with zone regulations. (Risk: Negligibles) According to NTT Governor Decree No 1/2011 regarding Spatial Planning 2010-2030, The project target village locations are not overlapped with conservation area like national park, nature reserve or wildlife sanctuary. Development in those areas require specific license from the BKSDA –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)	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 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 specified land use plan according to *Governor Decree No 1/2011*, showing no overlap between project sites and conservation area in terrestrial zone. Although the project includes provision of EbA instruments such as construction of wave breakers for living coastline, this infrastructure is not a hard infrastructure and considered as hybrid (green grey) infrastructure. The project will conduct further consultation 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 document for small infrastructure (UKL-UPL or SPPL).	No specific cost for mitigation measure. The mitigation measure cost will be included in the facilitation process, coordination meetings and relevant IEC materials.	Q1-Q8

Risk and risk rating	Mitigation Measures	Cost Estimate	Timeline
Access and Equity			
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 local leader(s) or respected person(s) present in the discussion. (Risk: Low)	The project will implement consistent participatory and social equity framework; create specific consultation to the women and underprivileged groups; involve village representative board in planning and implementation.	The mitigation measure cost will be Integrated in project activities: • 1.3.2. Conduct Participatory Action Research (PAR) on coastal vulnerability associated with TC in Rote and Sabu. • 1.4.3. Conduct training on climate-EbA materials for community groups at village level, including women and vulnerable groups to improve their knowledge and skills on climate and implementation of EbA practices. • 2.1.1. Conduct FPIC and socialization of EbA in target villages. • 2.1.5. Initiate community-based conservation of natural ecosystems through Locally Managed Marine Area (LMMA)/OECM • 3.2.1. Train local community groups including women and vulnerable groups on developing livelihood business proposal. • 4.4.1. Socialization of PROKLIM at target villages in Sabu and Rote	Q2 Q3 Q3 Q3-Q4 Q5 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 (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	The mitigation measure cost will be Integrated in project activities: • 1.3.1. Conduct workshops on coastal vulnerability at district level.	Q2 Q2 Q5

Risk and risk rating	Mitigation Measures	Cost Estimate	Timeline
		• 2.1.1. Conduct FPIC and socialization of EbA in target villages. • 4.4.1. Socialization of PROKLIM at target villages in Sabu and Rote	
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 (Risk: Low-Medium).	The project will encourage 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.	The mitigation measure cost will be Integrated in project activities: • 1.1.1. KAP Survey (Baseline, Mid-term, Endline) • 1.3.2. Conduct Participatory Action Research (PAR) on coastal vulnerability associated with TC in Rote and Sabu. • 2.1.4. Implement EbA practices (rehabilitation and conservation) in five villages: Mebba, Limangu, Holulai, Oelua and Fuafuni villages. • 2.1.5. Initiate community-based conservation of natural ecosystems through Locally Managed Marine Area (LMMA)/OECM. • 3.2.1. Train local community groups including women and vulnerable groups on developing livelihood business proposal. • 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	Q1 Q2 Q3 Q4 Q5 Q7

Risk and risk rating	Mitigation Measures	Cost Estimate	Timeline
		change in Rote and Sabu Islands.	
Human Rights			
The project does not trigger human right issues. (Risk: Negligible).	No specific mitigation measure	Not applicable.	-
Gender Equality & Women's Empowerment			
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.	The mitigation measure cost will be Integrated in project activities: • 1.1.1. KAP Survey (Baseline, Mid-term, Endline) • 1.3.2. Conduct Participatory Action Research (PAR) on coastal vulnerability associated with TC in Rote and Sabu. • 2.1.4. Implement EbA practices (rehabilitation and conservation) in five villages: Mebba, Limangu, Holulai, Oelua and Fuafuni villages. • 2.1.5. Initiate community-based conservation of natural ecosystems through Locally Managed Marine Area (LMMA)/OECM. • 3.2.1. Train local community groups including women and vulnerable groups on developing livelihood business proposal. • 1.2.1. Facilitate media trips to cover climate issues, EbA	Q1 Q2 Q3 Q4 Q5

Risk and risk rating	Mitigation Measures	Cost Estimate	Timeline
		implementation, livelihood activities, and the role of women and vulnerable groups in responding to climate change in Rote and Sabu Islands	
Core Labour Right			
The project does not trigger core labor right issue. (Risk: Negligible)	No specific mitigation measure.	Not applicable	
Indigenous People			
There are no indigenous people in Sabu and Rote Islands. Communities are originated from other islands. (Risk: Negligible).	No specific mitigation measure.	Not applicable	
Involuntary Settlement			
The project does not trigger any involuntary settlement. (Risk: Negligible)	No specific mitigation measure	Not applicable	
Protection of Natural Habitats			
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	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.	The mitigation measure cost will be Integrated in project activities: 3.1.2. Facilitate Training for local communities on sustainable production of livelihood practices.	Q4

Risk and risk rating	Mitigation Measures	Cost Estimate	Timeline
might deprive natural habitats (Risk: Low)			
Conservation of Biological Diversity			
In general, the project will not have 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 livelihood might disturb the biological diversity of coastal ecosystems if only focused on 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.	The mitigation measure cost will be Integrated in project activities: 2.1.2. Conduct Rapid Assessment on socio-ecological conditions in target villages, 2.2.1. Conduct Rapid Environmental and Social Assessment for EbA instruments.	Q2 Q3
Climate Change			
Project activities do not contribute to climate change as project activities do not have land clearing activities and use considerable amount of energy from fossil fuels. The project also encourages the use of renewable energy such as solar panel to be used for production of fishery products for livelihood and ecotourism activity. (Risk: Negligible)	No specific mitigation measure.	Not applicable	
Pollution Prevention and Resource Efficiency			

Risk and risk rating	Mitigation Measures	Cost Estimate	Timeline
Project activities in the field might impact to 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 polybags (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.	The mitigation measure cost will be Integrated in project activities: 2.1.4. Implement EbA practices (rehabilitation and conservation) in five villages: Mebba, Limangu, Holulai, Oelua and Fuafuni villages. 3.2.5. Provide Technical Assistance for livelihood activities.	Q3-Q4 Q4-A8
Public Health			
Project activities do not trigger public health issue, and in terms of COVID 19, the project will follow Government's policy and regulation (Risk: Negligible).	No specific mitigation measure	Not applicable	
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).	No specific mitigation measure	Not applicable	
Lands and Soil Conservation			
Project activities do not have negative impact on land and soil conservation as project activities will not cause land/soil erosion. (Risk: Negligible).	No specific mitigation measure	Not applicable	

Annex 5. WORKPLAN

	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8
Outcome 1. Improved awareness of adaptation and climate change-related hazards affecting coastal communities								
Output 1.1. Diverse Information Education and Communication (IEC) tools and materials including digital platform on EbA for knowledge exchange.								
1.1.1. KAP Survey (Baseline, Mid-term, Endline)	X				X			X
1.1.2. Design and production of IEC materials such as posters, calendar, project merchandise.		X		X		X		X
1.1.3. Design and production of digital platform on EbA Tools (including concept, assessment on users, design, data and train users).		X	X					
1.1.4. Develop and implement communication strategy that considers gender and social inclusions.		X	X	X	X	X	X	
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.							X	
Output 1.3. Updated climate vulnerability data at village level.								
1.3.1. Conduct workshops on coastal vulnerability at district level.		X						
1.3.2. Conduct Participatory Action Research (PAR) on coastal vulnerability associated with TC in Rote and Sabu.		X						
Output 1.4. Climate-EbA Field Schools as learning forum at village level								
1.4.1. Conduct workshop in Rote and Sabu to develop Field School training modules and materials.			X					
1.4.2. Conduct Training of Trainers for technical and village facilitators on the field schools' training materials.			X					
1.4.3. Conduct training on climate-EbA materials for community groups at village level, including women and vulnerable groups to improve their knowledge and skills on climate and implementation of EbA practices.			X					
Outcome 2. Vulnerable ecosystems strengthened in response to climate change impacts, including variability								
Output 2.1. EbA practices are implemented to protect coastal and small island ecosystems, including coastal, benthic and water source ecosytems, in the five target villages.								
2.1.1. Conduct FPIC and socialization of EbA in target villages.		X						

2.1.2. Conduct Rapid Assessment on socio-ecological conditions in target villages, which will identify stakeholders of EbA practices, identification of the need of EbA approach, feasibility of EbA practices in terms of environment and social issues.		X						
2.1.3.Develop technical design (DED) for EbA practices (including but not limited to coastal ecosystem rehabilitation, water resource management, and climate smart agriculture).		X						
2.1.4. Implement EbA practices (rehabilitation and conservation) in five villages: Mebba, Limangu, Holulai, Oelua and Fuafuni villages.			X	X				
2.1.5. Initiate community-based conservation of natural ecosystems through Locally Managed Marine Areea (LMMA)/OECM			X	X				
2.1.6. Train community groups on community-based monitoring				X				
2.1.7. Conduct Monitoring of EbA Activities		X		X		X		
2.1.8. Provide Technical Assistant and Facilitation of EbA Implementation	X	X	X	X	X	X	X	X
Output 2.2. Small infrastructure and facilities to support EbA activities								
2.2.1. Conduct Rapid Environmental and Social Assessment for EbA instruments			X					
2.2.2. Develop Detail Engineering and Design (DED) for EbA instrument and provide supervision to build EbA instruments.			X					
2.2.3. Build EbA instruments.			X	X				
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 livelihood (EG&S).								
3.1.1. Conduct rapid local market assessments on potential livelihood opportunities at target villages.				X				
3.1.2. Facilitate Training for local communities on sustainable production of livelihood practices.					X			
Output 3.2. Local community groups with improved knowledge and skills to develop livelihood proposals and business plans.								
3.2.1. Train local community groups including women and vulnerable groups on developing livelihood business proposal.					X			
3.2.2. Workshop to select community proposals					X			
3.2.3. Provide equipment to support livelihood proposal for selected community groups.						X		
3.2.4. Train community groups including women and vulnerable groups on developing business plans.						X		
3.2.5. Provide Technical Assistance for livelihood activities.			X	X	X	X	X	
Outcome 4. 'Local and village government with improved capacity and finance to implement adaptation measures								

Output 4.1. Adaptation Action. Plans for Sabu and Rote districts								
4.1.1. Facilitate workshops to prepare Adaptation Action Plans for Rote Ndao and Sabu Raijua Districts				**X**				
4.1.2. Prepare Draft of Adaptation Action Plan for Rote and Sabu.					**X**	**X**	**X**	
4.1.3. Facilitate stakeholder consultation and socialization workshops on Adaptation Action								**X**
Output 4.2. Strengthened DKPPNTT as a multi stakeholder forum to improve ICM approach in Savu seascape.								
4.2.1. Facilitate DKPPNTT workshops on ICM approach to increase climate resilience in Savu Seascape				**X**				
4.2.2. Prepare and disseminate Policy Brief on ICM in Laut Sawu					**X**			
Output 4.3. Strategy to improve climate funding opportunities.								
4.3.1. Conduct Local Government Climate Budget Tagging and Climate Change Budget Analysis (CCBA) and develop policy brief on climate funding options in Rote and Sabu.						**X**	**X**	
4.3.2. Facilitate workshop to identify climate funding opportunities							**X**	
4.3.3. Facilitate workshop to disseminate the Policy Brief on Climate Funding Scheme								**X**
Output 4.4. Target villages are facilitated to prepare PROKLIM registration								
4.4.1. Socialization of PROKLIM at target villages in Sabu and Rote					**X**			
4.4.2. Collect baseline and climate change and other required data of target villages for PROKLIM registration.					**X**	**X**		
4.4.3. Facilitate development of Climate Adaptation Plan at target villages						**X**	**X**	