ADAPTATION FUND

AFB/PPRC.34/Inf.12
11 September 2024

Adaptation Fund Board
Project and Programme Review Committee
Thirty-fourth Meeting
Bonn, Germany, 8-9 October 2024

PROPOSAL FOR INDONESIA

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: [Please select from the drop menu if the proposal is regular size or small size (<1Million)]

Country/Region: Indonesia
Project Title: Building Climate Changes Resiliency for Small and Remote Islands in Pangkajene Island (Pangkep) District
Thematic Focal Area: EbA
Implementing Entity: Partnership for Governance Reform (Kemitraan) of Indonesia
Executing Entities: Resilient-Climate Change Adaptation Consortium (Konsorsium Tangguh Adaptasi Perubahan Iklim/ (Kontan API - DFW Indonesia, Lembaga Maritim Nusantara, Yayasan Nypah Indonesia)
AF Project ID: AF00000374
IE Project ID: **Requested Financing from Adaptation Fund (US Dollars):**
Reviewer and contact person: Alyssa Gomes **Co-reviewer(s):**
IE Contact Person:

Technical Summary	The project "Building Climate Changes Resiliency for Small and Remote Islands in Pangkajene Island (Pangkep) District" aims to build climate change resilience of small and remote Climate Changes Resilience for Small and Remote Pangkajene Islands District. This will be done through the four components below: Component 1: Strengthening the resilience capacity of remote small island areas of Pangkajene Islands Regency to climate change through environmental, social community and economic approaches (USD 348,323); Component 2: Application of appropriate technology for climate change monitoring and early warning systems in remote small island areas. (USD 96,500); Component 3: Reduction of ecosystem stress from activities that utilize natural resources that are not environmentally friendly in remote small islands. (USD 243,753); Component 4: Strengthening policies, cooperation and learning in support of increasing resilience to climate change and disaster risk reduction (USD 117,285).

	Requested financing overview: Project/Programme Execution Cost: USD 117,285 Total Project/Programme Cost: USD 805, 861 Implementing Fee: USD 80,880 Financing Requested: USD 979,548 The proposal includes a request for a project formulation grant of USD 50,000. The first technical review raises several issues, such as the climate adaptation rationale, lack of a coherent theory of change, lack of clarity on the proposed actions and ESP and GP compliance as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.
Date:	11/27/2023

Review Criteria	**Questions**	**Comments**	**Response**
Country Eligibility	1. Is the country party to the Kyoto Protocol, or the Paris Agreement?	**Yes**	
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	**Not cleaed.** The proposal has not sufficiently mentioned the negative effects of climate change in Indonesia. **CR1:** Please include an overview of climate impacts and trends in Indonesia. The proposal aims to focus its intervention in the archipelago area of Pangkajene islands Regency (Pangkep) which consists of 133 islands spread over 11,464.44 km2 of water. Specifically, the project will focus on 2 out of the 4 districts in	**CR1** : Information has been added, see page 1 paragraphs 1 - 21

		Pangkep - Liukang Tangaya District and Liukang Kalmas District. The proposal mentions that there is no adequate climatological data covering the Liukang Kalmas and Liukang Tangaya areas. However, some of the observed impacts include: rainfall, temperature variation and sea-level rise. Poor soil conditions are resulting in poor water retention, temperature variation is impacting livelihoods and sea level rise is causing a range of impacts (coastal flooding, coastal erosion, seawater intrusion and the impact of storm surges and high waves and damage to marine ecosystems) that directly affect the livelihoods of fishing communities. The proposal focuses mainly on the development challenges in the archipelago. However, the proposal has not sufficiently clarified how climate change is exacerbating infrastructure, economic and human development. **CR2:** Please explain how climate change is exacerbating development challenges and inequalities.	**CR2 :** Information has been added, see page 8 paragraphs 22 - 27
Project Eligibility	1. Has the designated government authority for the Adaptation	**Yes.** As per the Endorsement letter dated 24 October 2023	**Yes**. Added as an attachment see page 38

	Fund endorsed the project/programme?		
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	**Yes.** The project is approximately 36 pages including the Annexes. **CAR1:** Please number all pages.	**Yes** The project is approximately 49 pages including the Annexes. **CAR1** : Revised with page numbers
	3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	**Not cleared.** The project provides a brief overview of the environmental and socio-economic context of small and remote islands. The overall project objective is to build resilience of small and remote islands. However, the proposal should first explain the actions/processes that will be put in place to adjust to the actual or expected climate and its effects (adaptation). **CR3:** Please strengthen the adaptation rationale in the proposal by explaining the suitability of activities in responding to the threats posed by the likely climate scenarios. Component 1 includes 3 main outputs focused on climate risk assessments, community-based adaptation, ecosystem-based adaptation etc. The components table includes several proposed	**CR3 :** Information has been added, see page 11 - 12 paragraphs 36 - 41

		activities. The proposal is missing an explanation of how these activities are suited to adapt to the identified climate impacts. **CR4:** Please explain the relevant of the proposed outputs and activities to address to climate impacts and include a justification that the budget of only USD 348,00 is sufficient for the scope of activities proposed. The proposal includes 4 main components, while the Components and Financing Table includes specific details of proposed outputs and activities under each component, the Project Justification section only includes a general explanation under each component. The proposal is missing key information on the interventions, why they are justified for the climate context, the chronology of measures to be undertaken and by whom will they be undertaken. **CAR2:** Please include a description of the project outputs and activities under each component and explain their suitability to adapt to the climate challenges. **CR5:** Please explain how the stimulant grant/fund schemes work	**CR4 :** Information has been added, see page 12 paragraphs 41. The project outputs for each planned component have been reduced and readjusted. **CAR2** : Revised, see page 15 - 18 paragraphs 42 - 60 **CR5** : Information has been added, see page 15 paragraphs 45

		in terms of process, institutional arrangement and government, target beneficiaries etc. (activity 1.1.4. Community based climate adaptation measures with support of stimulant grant/fund schemes has been conducted in 16 villages). **CR6:** Please explain the relevance of output 3.1 as an adaptation solution (3.1.1. Database related to destructive fishing activities, 3.1.2. Increased public awareness on destructive and unsustainable fishing activities. And 3.1.3. Enhanced monitoring and law enforcement against destructive fishing). Under output 3.2, the project aims to put in place a waste management strategy. However, the proposal had not included details of the climate change adaptation measures integrated in waste management systems. Furthermore, when applied to an island setting, the circular economy principles can be particularly compelling given the resource constraints and vulnerabilities islands often face. **CR7:** Please include an explanation of the climate change adaptation	**CR6** : Information has been revise , see page 17 paragraphs 52 - 55 **CR7** : Information has been added, see page 17 paragraphs 55-56

		measures integrated in waste management systems **CR8:** Please explain if the project will incorporate a circular economy model (e.g., Waste Minimization and Recycling, regenerative and permaculture practices, water Reuse, biodegradable materials incl for fishing gear etc.) **CR9:** Please explain how climate information will be downscaled to the local community. **CAR3:** In the components section, please explain alignment with the AF Results Framework outcomes. Activities should support one or more AF Strategic Objectives.	**CR8** : Information has been added, see page 17 paragraphs 56 **CR9** : Information has been added, see page 16 paragraphs 48 - 51. Furthermore, the downscale of weather data in question is not like the usual downscale of climate data, but rather towards presenting information that is simple and easy to use by fishermen or island communities. Data from the climate stations that are built will be combined with weather data and information built by BMKG, then this data will be presented on a digital weather information board installed in a location with many residents/easiest to access. In addition, extreme weather warning data will not only be presented on the weather information board above, but will also be sent via SMS blast. **CAR3** : Revised, Yes, we have made revisions by including the alignment of the proposed plans with the AF SRF in each project

			components, see page 15 - 18 paragraphs 42 - 60
	4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Not cleared.** Table 1. includes a Composition of vulnerable communities in Liukang Kalmas and Liukang Tangaya sub-districts. The benefits are described in general terms without explaining tangible benefits. **CAR4:** Please outline benefits in all three areas (economic, social, and environmental). Where possible please quantify benefits. **CAR5:** Please identify marginalized and vulnerable groups and indigenous communities and outline benefits provided by the project/programme to those groups. The proposal mentions that the "project design will treat all gender, ethnicity, and religions equally, and embeds an effort to increase women's participation and contribution not only by its presence in all of proposed activities" **CR10:** Please explain with the help of an initial gender analysis, the gender gaps and how the project seeks to bridge these gaps. Compliance with the Gender Policy requirements may be demonstrated through an initial gender analysis, and/or assessment at the earliest stage of project/programme	**CAR4 :** Revised, see page 18-19, paragraphs 61-64 **CAR5** : Revised, see page 19 paragraphs 63 **CR10** : Information has been added, see page 20 paragraphs 66-67

		preparation to determine the different needs, capabilities, roles and knowledge resources of women and men. https://www.adaptation-fund.org/document/guidance-document-implementing-entities-compliance-adaptation-fund-gender-policy-2/	
	5. Is the project / programme cost effective?	**Not cleared.** An assessment is not possible at this time, as the project proposal is lacking sufficient explanation of the scope of interventions. Please see CRs 1-4 above.	
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	**Not cleared.** **CR11:** The section mentions alignment with the NAP, NDC and South Sulawesi Province medium term development planning (RPJMD). However please include an explanation of the project activities that are related to plans and strategies. South Sulawesi Provincial Regulation No 2/2019 concerning the Zoning Plan for Coastal Areas and Small Islands (RZWP3K) would be more relevant under technical standards. **CR12:** Please consider addressing compliance with this regulation in the appropriate section.	**CR11:** information has been added, see page 23 paragraphs 74 - 83 **CR12 :** Yes, see page 24 - 25 paragraphs 84 - 91

		CAR6: Please present an alignment with the adaptation-related plans, strategies and targets as well as the most important relevant sectoral plans and strategies	**CAR6 :** Revised, see page 23 paragraphs 74-83
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	**Not cleared** Technical standards are mentioned but the proposal has not sufficiently explained to process for compliance or what activities they apply to. **CAR7:** Please update this section by systematically listing all relevant regulations and technical standards and specify which activities they will apply to. **CAR8:** Please clarify compliance with Presidential Regulation no 97 in the year 2017, regarding the National Strategy and Policy of the Management for Household Waste and Similar Waste and Presidential Regulation no. 83/2018 regarding Marine Debris Management	**CAR7 :** Revised, see page 24-25 paragraphs 84-90 **CAR8 :** Revised, see page 25 paragraphs 91
	8. Is there duplication of project / programme with other funding sources?	**Not cleared.** The section is not addressed. **CAR9**: Please identify all relevant potentially overlapping projects / programmes and state lack of overlap / complementarity in a logical manner. Kindly check list of other projects that may exist in the	**CAR9 :** Revised, see page 25 paragraphs 92

		country and that may be relevant, in terms of synergies and complementarities.	
	9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	**Not cleared** Learning activities under output 4.2 relate to dissemination of lessons. The output does not include a strategy for collecting lessons. **CR13:** Please explain with relevant outputs and activities how the project enables keeping track of experiences gained and analyzes them periodically to enrich the global, national, and local knowledge on climate change adaptation in a small and remote island context.	**CR13 :** information has been added, see page 25 paragraphs 93-95
	10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Not cleared.** Some initial consultation with national, subnational and village level government bodies. Initial consultations with beneficiaries, including gender and vulnerable groups have not taken place. **CAR10:** Please include an initial consultation report, describe the outcomes of consultations and how stakeholder needs are reflected in the project design.	**CAR 10 :** Revised, outcomes of the initial consultation has added, see see page 26-27 paragraphs 96 - 98 and annex page 39, 43, 47
	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	**Cleared** The proposal demonstrates that taken solely, without additional funding from other donors, the project will help achieve these objectives.	

	12. Is the project / program aligned with AF's results framework?	**Not cleared** **CAR11:** Please demonstrate alignment with the AF's SRF. https://www.adaptation-fund.org/wp-content/uploads/2019/10/Adaptation-Fund-Strategic-Results-Framework-Amended-in-March-2019-2.pdf	**CAR11 :** Revised, Yes, we have made revisions by including the alignment of the proposed plans with the AF SRF in each project components, see page 15 - 18 paragraphs 42 - 60 And Page 32 in PART III.
	13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	**Not cleared.** The project has not explained how sustainability of the project will be ensure for EbA activities, weather monitoring systems, waste management facilities/ treatment plants and community-based subprojects. It is also unclear if the requested budget is sufficient for the scope of the project. **CAR12:** Please describe how sustainability will be ensured across all areas of sustainability, including but not limited to economic, social, environmental, institutional, and financial. **CR14:** Please explain the arrangements for operation and maintenance of the infrastructure or installations to be developed, policies and governance arrangements to be developed and implemented, knowledge to be	**CAR12 :** Revised, see page 29-30 paragraphs 111 - 115 **CR14 :** information has been added, see page 29-30 paragraphs 113 - 116

		generated, management and other capacity to be improved, etc.	
	14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Not cleared.** **CAR13:** Please include a risk category (A, B or C). The risk assessment checklist is included but the conclusions presented in the risks table are not substantiated. Considering the target areas near protected areas, intervention sites in or near critical habitats, risk findings will need to be revised and justified. The aim of the project is to deliver adaptation benefits to vulnerable small and remote island communities that have been impacted poor sanitation and health conditions, extreme weather events, livelihood loss and gender inequalities. An initial gender assessment is not included, as a result data for gender roles, activities, needs, and available opportunities and challenges or risks for men and women is not explained. **CAR14:** Please further revise the risk finds for principles on - access and equity, compliance with law, gender empowerment, marginalized and vulnerable groups, soil conservation, public health and	**CAR13** : Revised, see page 31 paragraph 117-120 **CAR14 :** Revised, see page 31, table of risk assessment checklist

		physical and culture heritage. Include also a justification for the risk findings. **CAR15:** Please clarify if the project includes USPs. Include a justification for the USP approach if needed. https://www.adaptation-fund.org/document/guidance-document-for-project-programme-with-unidentified-sub-projects/	**CAR15** : Revised, see page 30 paragraphs 120
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	**Not cleared** *AF Project Review Coordination team will let the reviewer know if there is anything to be noted in the review concerning the resource availability question.* **CAR16:** Total Project Cost does not add up to the amount stated in the Components and Financing Table. Amount Calculated = 1,004,026. Please clarify and revise	**CAR16 :** Revised. See page 13-14, programme component financing table
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	**Not cleared.** **CAR17:** IE fee is 9% and has exceeded the cap of 8.5%. Please revise	**CAR17** : Revised, see page 14, IE 8.5%
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	**Not cleared.** **CAR18:** EC is at 13.05%. Please revise the costs downward to 9.5%.	**CAR18**: Revised, EC to 9.5%.

Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	**Yes.**	
Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	2. Are there measures for financial and project/programme risk management?	n/a at concept stage	
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?	n/a at concept stage	
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage	
	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage	
	6. Is a detailed budget including budget notes included?	n/a at concept stage	
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will	n/a at concept stage	

	be utilized in the supervision of the M&E function?		
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a at concept stage	
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage	

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category	:	**Small-sized Project/Programme**
Country	:	**Indonesia/Asia-Pacific**
Title of Project/Programme	:	**Building Climate Changes Resiliency for Small and Remote Islands in Pangkajene Island (Pangkep) District**
Type of Implementing Entity	:	**National Implementing Entity (NIE)**
Implementing Entity	:	**Partnership for Governance Reform (Kemitraan) of Indonesia**
Executing Entity/ies	:	**Resilient-Climate Change Adaptation Consortium (Konsorsium Tangguh Adaptasi Perubahan Iklim/(Kontan API - DFW Indonesia, Lembaga Maritim Nusantara, Yayasan Nypah Indonesia)**
Amount of Financing Requested	:	**USD 979.548 (in U.S Dollars Equivalent)**
Letter of Endorsement (LOE) signed	:	**Yes**

Project / Programme Background and Context:

1. Global warming refers to the rise in Earth's average surface temperature by about 0.74°C over the past century. Many experts estimate that the average temperature could increase by 1.4°C to 5.8°C by 2100. The Intergovernmental Panel on Climate Change (IPCC) predicts that global temperatures will likely rise by 1.1°C to 6.4°C in the next 90 years. This warming trend also affects sea surface temperatures, which have been rising as well. According to Climate Reanalyzer, sea surface temperatures ranged from 19.8°C to 20.2°C in 1981 but have increased to between 20.5°C and 21.1°C. This rise in temperature is expected to increase the frequency and duration of heatwaves, alter rainfall patterns during wet and dry seasons, and affect climate variability, including

phenomena like El Niño-Southern Oscillation (ENSO), the Indian Ocean Dipole (IOD), and monsoons which lead to increase of bad weather and storm intensity in several part of the world including Indonesia.

2. In the context of Indonesia, climate change has led to an increase in extreme wave heights above 1.5 meters, a sea level rise of 0.8-1.2 cm per year, a temperature rise of 0.45-0.75°C, and an increase in rainfall of about ±2.5 mm per day, impacting all sectors of life. Specifically, in the marine and coastal sectors, this results in the steepening of coastal slopes due to flooding and coastal erosion, endangering navigation safety, damaging coastal and marine ecosystems, and reducing the operational range of small fishing boats under 10GT[1]. Additionally, increased atmospheric emissions will raise CO2 levels in seawater, affecting its acidity and threatening the life of coral reefs through coral bleaching. Between 1983 and 2020, Indonesia experienced 2,932 cases of coral bleaching[2].

CLIMATE CHANGES SITUATION

3. The planned program implementation for Liukang Tangaya and Liukang Kalmas involves clusters of small islands located within the administrative region of Pangkep District, South Sulawesi Province. Liukang Tangaya is situated in the Flores Sea, while Liukang Kalmas is in the Makassar Strait.

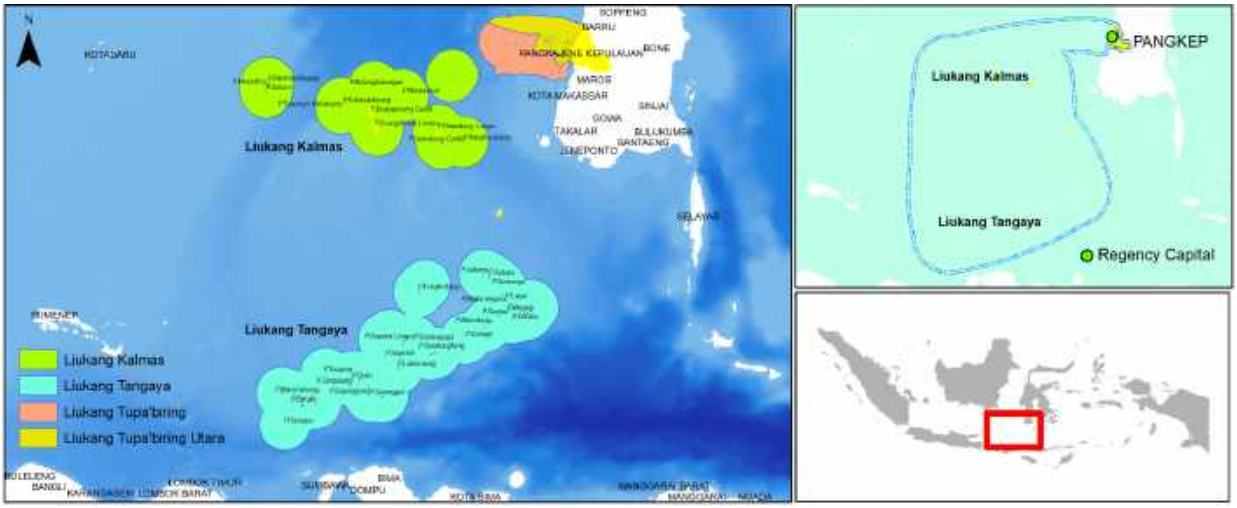

Figure 1. Regional Map of Pangkajene Islands Regency (Pangkep)

4. Although there is no adequate detailed data on climatology for Liukang Kalmas and Liukang Tangaya available from the government sources, our team used global climate data from various sources and combined with in situ observation from past project/research/publication available for the locus area.

5. **Temperature and sea surface temperature changes.** Based on temperature data recorded from 1981-2021, temperatures in Liukang Kalmas and Liukang Tangaya have increased steadily over time. The lowest temperature occurred in 1982 at 26.75°C and the highest temperature

[1] Ringkasan Eksekutif: Kebijakan Pembangunan Berketahanan Iklim 2020-2045. Kementerian Perencanaan Pembangunan Nasional, Bappenas. 2021

[2] https://www.bco-dmo.org/dataset/773466

occurred in 2016 at 28.04°C (Figure 3).[3] It is well known that the increase in temperature is the main symptom of climate change, and people living in coastal, small and remote island areas are the most vulnerable to climate change, and one example is the communities in *Liukang Kalmas* and *Liukang Tangaya* where their lives are highly dependent on sea conditions. The increasing temperature trend is generally in line with the projected temperature increase in South Sulawesi land by BMKG, which states that there will be an increase of 0.9-0.95ºC throughout 2032-2040.[4]

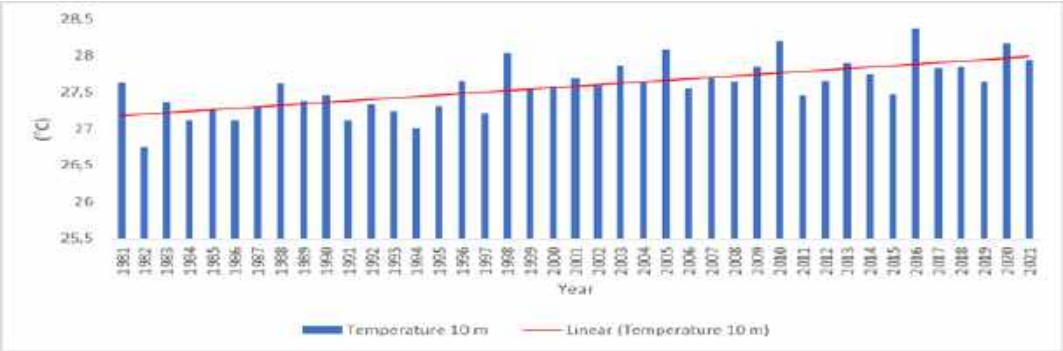

Figure 2. Temperature Trends Period 1981-2021

6. The increase in temperature is directly proportional to the rise in sea surface temperature. Analysis of annual climatology data from oceancolor.gsfc.nasa.gov for 2002 and 2020 around the waters of Tangaya and Kalmas shows an increase. In 2002, the temperature range was between 26.4-33.8°C, which increased to 27.9-34.4°C in 2020.

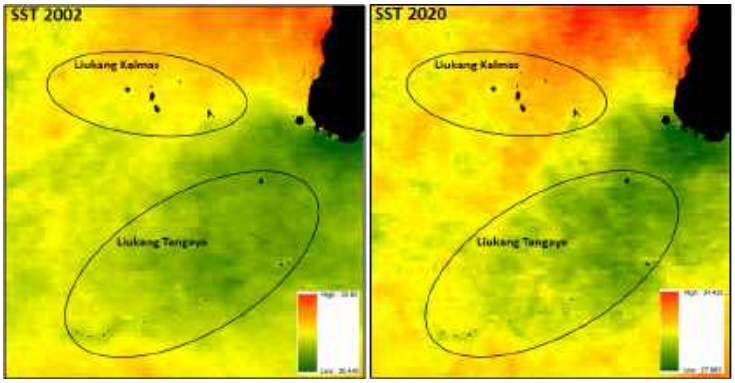

Figure 2. Perbandingan SPL 2002 - 2020 (source:annual climatology oceancolor.gsfc.nasa.gov)

7. Seasonal changes followed by sea temperature fluctuations make seaweed vulnerable to a disease known as ice-ice. Red spots appear on the surface of the plant, which gradually turn pale. Subsequently, the growth of the seaweed slows, it becomes brittle, and its thallus breaks. The cause is the ice-ice bacteria, which proliferate when the water temperature ranges between 31-32°C, at a depth of 28-93 cm, and a current speed of 7.1-11 meters per second. At that time, the bacterial count can reach 18,060 grams/colony [Supatno et al., 2010]. According to research by Santoso and Tri [2008], ice-ice occurs due to extreme environmental conditions, such as changes in salinity,

[3] https://power.larc.nasa.gov/data-access-viewer/

[4] Climate Change Projection | BMKG. https://www.bmkg.go.id/iklim/?p=proyeksi-perubahan-iklim There is no data available for the mainland area of NTB Province as a comparison for the Liukang Tangaya area

water temperature, and light intensity.[5]

8. **Rainfall changes.** Based on data obtained from CHIRPS Daily, rainfall in Liukang Kalmas and Liukang Tangaya areas in the last 30 years (1981-2000 and 2010-2020) has been relatively similar over time. Spikes in rainfall occurred in only 4 years: 1981, 1984, 1999 and 2010. The annual rainfall averaged 7,364 mm or considerably above the Indonesian average annual rainfall of 2000-3000 mm.[6] The high rainfall in both sub-districts has helped communities as their water sources. However, the soil condition in Liukang Kalmas and Liukang Tangaya islands can be expected to have poor water retention, which resulting in murky and brackish wells.

9. The dynamics of high rainfall over extended periods pose a significant challenge for seaweed cultivation. A Senior Researcher in Physical Oceanography at the Deep Sea Research Center, BRIN Ambon, explains that the rapidly changing weather within a single day—alternating between hot and rainy—is caused by the La Nina phenomenon that has affected Indonesia from 2020 to 2022. Another impact is the shift of the dry season into the rainy season. This phenomenon also influences monsoon winds, making rainy conditions more dominant and shortening the dry season, thus disrupting seaweed cultivation.[7]

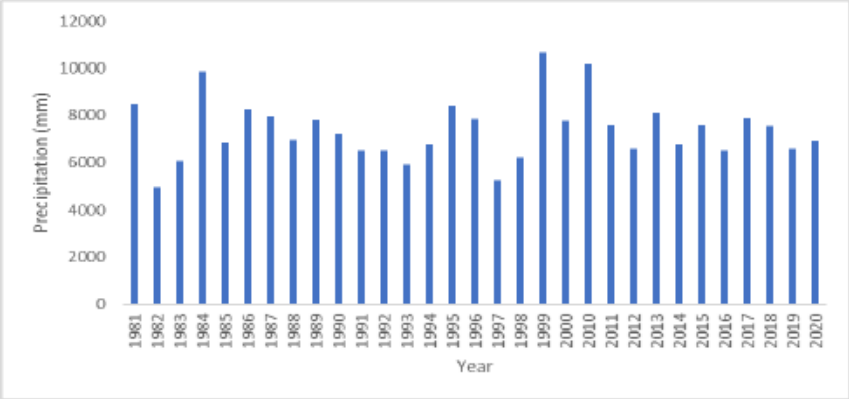

Figure 3. Graph of Rainfall in the Districts of Liukang Kalmas and Liukang Tangaya 1981-2020

10. Heavy rainfall accompanied by extreme waves will hinder seaweed farming operations, including planting, maintenance, cleaning, and harvesting, as such conditions endanger the safety of farmers. Prolonged rainfall will also disrupt the drying process of harvested seaweed, resulting in losses. At the provincial level in South Sulawesi, Pangkep Regency, including Liukang Tangaya and Liukang Kalmas, ranks fourth in seaweed production. However, the Strategic Plan for 2024-2026 highlights the challenges in seaweed development due to the impacts of climate change, as previously explained.

11. Extreme wave events as a result of climate change have also been experienced by residents in these two locations. In 2020, a typhoon hit Liukang Kalmas, damaging 106

[5] https://www.mongabay.co.id/2023/07/04/saat-dampak-pergeseran-musim-mencemaskan-pembudidaya-rumput-laut-pulau-seram/
[6] CHIRPS: Rainfall Estimates from Rain Gauge and Satellite Observations | Climate Hazards Center - UC Santa Barbara (ucsb.edu)
[7] https://www.mongabay.co.id/2023/07/04/saat-dampak-pergeseran-musim-mencemaskan-pembudidaya-rumput-laut-pulau-seram/

houses and disrupting the government's food aid program. Fishermen were unable to go to sea for a week. Additionally, in 2020, high waves caused a ship carrying goods from Makassar to Marasende Island, Liukang Kalmas District, to sink in the Taka Bakkang Waters, Liukang Kalmas District. Climate disasters, such as shipwrecks, are exacerbated by the lack of weather knowledge and information, and the dwindling availability of primary necessities on the islands during extreme weather, which are only available on the mainland (Makassar), forcing residents to undertake risky voyages. Weather conditions between these two locations and Makassar vary; sometimes the sea conditions around Makassar are calm, while Liukang Tangaya and Kalmas waters experience storms. This information is crucial for the traditional seafaring of small-scale fishermen. Liukang Tangaya and Liukang Kalmas are predominantly inhabited by small-scale fishermen with boats averaging under 5 GT. This limits their ability to fish during extreme waves and storms, resulting in decreased income for these small-scale fishermen.

12. **Sea level rise**. Based on the CSIRO sea level rise analysis, there has been an increasing trend of global sea level rise of 79.5 mm in the last 100 years, from 1880 to 2015. In the coastal waters of Pangkep, based on data between 1990 and 2021, there has been an increase of 88-92 mm.[8]

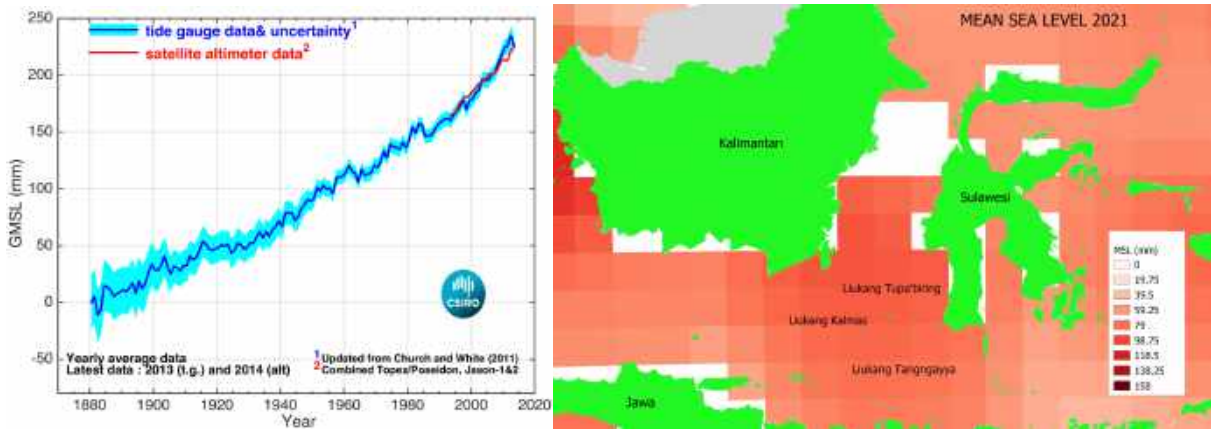

Figure 4. Grafik Tren mean Sea Level Global dan Peta MSL Wilayah Perairan Liukang

13. Sea level rise will reduce the land area of small islands, further shrinking the space available for the communities living there. This also shifts the coastline closer to settlements, increasing the threat of climate disasters such as tidal flooding, coastal erosion, and storm surges.

14. In 2014, tidal floods and abrasion occurred on almost the entire island in Liukang Kalmas. The flood inundated residential areas to a height of 40-50 cm, causing a number of residents to flee. In 2021, tidal floods inundated residents' houses on Sapuka Island and Sailus Island, Liukang Tangayya. In 2022, high waves damaged the residents' pier on Saliriang Island, Liukang Kalmas.

15. There have been 19 typhoons in the last 3 years and have even resulted in ship accidents resulting in fatalities. The effects of this event significantly impact the socio-

[8] www.cmar.csiro.au

economic well-being of the community. Fishermen are unable to go fishing, which lowers household incomes, while damage to homes and public facilities causes material losses. The reduction in food supplies leads to increased prices for basic necessities and may also pose risks to human safety.

16. **Ocean Acidification**: Ocean acidification is the decrease in ocean pH over several decades caused by the absorption of carbon dioxide (CO2) from the atmosphere, which has increased dramatically since the Industrial Revolution, from about 280 parts per million (ppm) in the pre-industrial era to 419.05 ppm as of April 2021.[9] This change in the chemical structure of seawater poses a threat to coral reef ecosystems. Research by Nurhidayat (2019) found that one form of coral damage in Liukang Tangaya is coral bleaching. Data from www.data.jma.go.jp show that the pH of seawater has decreased from 8.1 in 1990 to 8.04 in 2022.

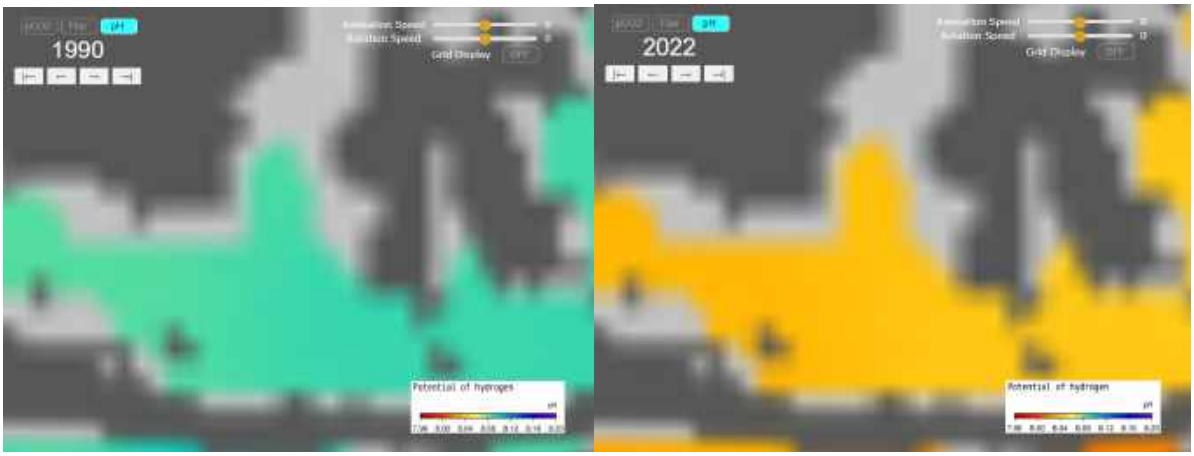

Figure. Comparison of Project site Sea Water pH in 1990 & 2022

17. Changes in the chemical properties of seawater that are unsuitable for coral reef habitats have broad consequences for the marine biodiversity of Tangaya and Kalmas, as well as the socio-economic well-being of island communities that depend heavily on marine resources for food and livelihoods. Ocean acidification affects commercial and recreational fisheries by reducing the abundance of attractive marine life. With its impact on the health and structure of coral reefs, ocean acidification also threatens millions of dollars in tourism revenue, coastal protection from erosion and flooding, and the foundation of coral reef and marine biodiversity.

ENVIRONMENTAL CONTEXT

18. **Coral reefs ecosystem.** Based on the 2013 RZWP3K document of Pangkep Regency, the coral reefs in Liukang Kalmas have a total area of 704,43 ha and of 28,709 ha in Liukang Tangaya. Both are in poor condition.[10] Damage to coral reefs in this area is caused by the practice of destructive fishing (DF) in the form of bombing and use of anesthetic materials. In a study conducted by DFW Indonesia in 2003, there were at least 427 bombings and 191 drugging fishing activities in 11 small islands in Liukang Tupabiring and Liukang Tupabiring Utara. In 2016, according to the same source, 13

[9] https://reefresilience.org/id/stressors/ocean-acidification/

[10] Final Document RZWP3K Pangkep 2013 & Ministry of Environment Decree No. 4 of 2001 concerning Standard Criteria for Coral Reef Damage

bombers and anasthetic were found in the Kapoposang Marine Tourism Park area. With coral reefs in Kalmas and Tangaya in worse condition than the other two sub-districts, it is suspected that DF practices in these two sub-districts were equally intense as those in the other two sub-districts.

19. **Mangrove ecosystem**. In 2013, the total area of mangrove vegetation in Liukang Kalmas and Liukang Tangaya was 4,465.63 ha.[11] In 2016, there had been a decrease of 1,684.57 ha in Liukang Tangaya and 802.25 ha in Liukang Kalmas. This decrease occurred due to natural causes such as coastal abrasion and exploitation for various purposes: building materials, energy sources (firewood), or being sold off the island. The destruction of the mangrove ecosystem itself means the release of carbon stocks into the air, the loss of carbon sinks, natural wave barriers, and the loss of one of the nutrient suppliers in the sea.

20. **Seagrass ecosystem**. Seagrass data of Pangkep Regency can be found in various documents but there is no data available regarding the seagrass distribution in Liukang Kalmas and Liukang Tangaya. Seagrass beds themselves are ecosystems that provide provisioning services for fish and their biota, which play an important role in food security and the welfare of small-scale fishers. Seagrass ecosystems are very important in climate change issues with their ability to store up to two times that of tropical forests.[12]

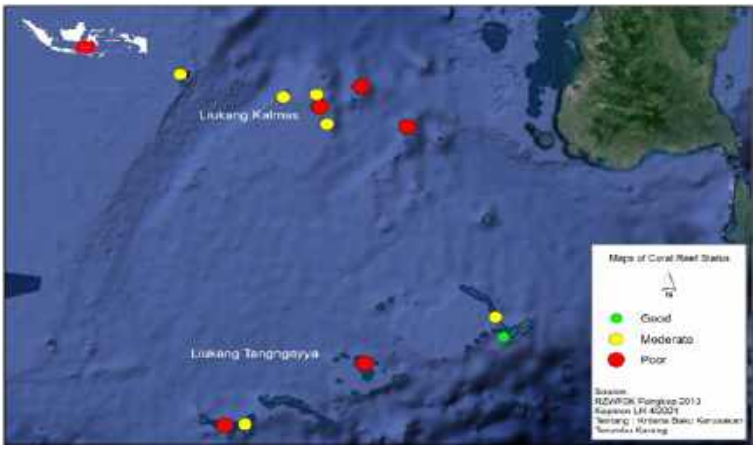

Figure 6. Coral Reef Condition in Liukang Kalmas and Liukang Tangaya

21. **Environmental issues.** As presented in the data above, Liukang Kalmas and Liukang Tangaya sub-districts are facing climate change threats with the increase in temperature and mean sea level. Both sub-districts also faced issues concerning waste management, coral and mangrove ecosystem degradation, coastal abrasion, and tidal flooding. There is no waste management system in both sub-districts and the coral and mangrove destruction is continuously occurring. Based on Data Integrated Poor Handling Program (PPFM) in 2015, 79% of households in Liukang Tangaya and 56% in Liukang Kalmas use charcoal/wood as their cooking fuel,[13] which is suspected to be one of the causes of the continued decline in mangrove land area in both sub-districts. The previous discussion on the Spermonde waters, including Pangkep's Liukang Tupa'biring

[11] RZWP3K Pangkep 2015
[12] https://www.thebluecarboninitiative.org/about-blue-carbon#
[13] PPFM Integrated Data for Pangkajene and Islands Regency/City 2015

and Makassar areas, reflects conditions similar to those at the project's intended implementation site. The ecosystem, especially the coral reefs, is similarly in a state of moderate to significant damage.

DEVELOPMENT CHALLENGES IN REMOTE AND SMALL ISLANDS

22. The Pangkajene Islands Regency (Pangkep), an archipelagic region, encompasses 133 islands scattered across 11,464.44 km² of water, exceeding its land area. Pangkep includes four island districts, among which are Liukang Tangaya District and Liukang Kalmas District. These two sub-districts are isolated and face challenging, high-risk living conditions due to their remote location, far from the mainland of Pangkep. Liukang Tangaya District comprises 54 small islands with a population of 18,413, while Liukang Kalmas District consists of 18 islands with 14,753 residents. Both sub-districts are reliant on other provinces for their livelihoods and depend on local ships for transportation, yet they lack access to weather information and essential infrastructure for development, including public amenities, social services, and administrative support. Residents of these sub-districts have a low capacity to adapt to disasters and climate change.

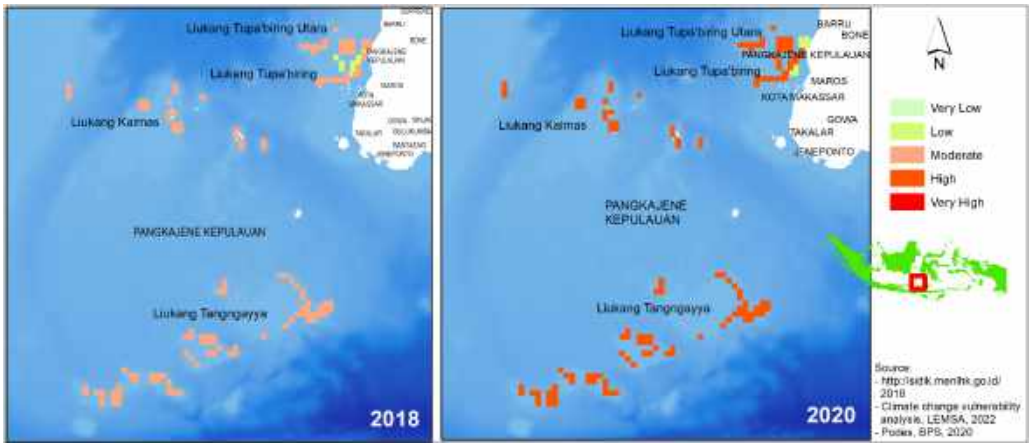

Figure 2. Climate Change Vulnerability Map of Small and Remote Islands of Pangkep Regency

23. According to the Ministry of Environment and Forestry's (MoEF) Vulnerability Index Data Information System (SIDIK) from 2018, nine villages in Tangaya and seven in Kalmas were classified as having moderate vulnerability. However, an update by the Nusantara Maritime Institute (Lemsa) and Nypah Indonesia in 2022, based on the 2020 Village Potential (Potensi Desa) adapted for small islands, revealed that vulnerability levels have risen to high. Only the islands near the mainland of Pangkep Regency, specifically those in Liukang Tupa'biring District, are categorized as having low vulnerability.

24. The current national systems for assessing risk and vulnerability in Indonesia, whether developed by the MoEF or the National Disaster Management Agency (NDMA), have proven inadequate in accurately representing the conditions of small and remote island areas. For instance, the MoEF's 2018 SIDIK indicated that nine villages in Liukang Tangaya and seven in Liukang Kalmas within Pangkep Regency had moderate vulnerability. This assessment was limited by its focus on flood risk, based on the number of households near riverbanks, which is not applicable to small islands that lack rivers. To address this, Lembaga Maritim Nusantara and Nypah Indonesia adjusted the parameters to better reflect the context of small islands, while still utilizing the same

dataset (PODES), but with the updated 2020 version. This adjustment revealed that vulnerability levels had risen from moderate to high, although Liukang Tupa'biring remained categorized as low vulnerability due to its proximity to the mainland of Pangkep Regency.

25. It is well-recognized that residing on a small and remote island presents unique challenges, including the impacts of changing weather and climate conditions as well as the consequences of development. These factors can increase local vulnerabilities and potentially undermine existing progress. To contextualize this proposed project, the following subtopics will address these issues in detail:

DEVELOPMENT IMPARTIALITY

26. Isolated location and not development priority. Being located far from the mainland of Pangkep Regency, 30-40 hours away by motorboat, residents in Liukang Tangayya Sub-district mostly carry out their economy and fulfil their daily needs by going to East Lombok Regency, West Nusa Tenggara (NTB)14 Province. Meanwhile, the residents of Liukang Kalmas Sub-district, located an average of 25 hours away by motorboat to the mainland of Pangkep Regency, depend on Balikpapan, East Kalimantan Province; East Lombok, West Nusa Tenggara; and the cities of Pangkep and Makassar in South Sulawesi. The two sub-districts are also not a priority for development as they are not highly populated areas. The population in the Pangkep Regency represents only 18% of the total population of Pangkep Regency.

27. Sufficient data is not available. Development in both sub-districts faces significant problems, especially related to the development of adaptation strategies against climate change due to the limited data and information. Data and information about the weather in both sub-districts, for example, are not available, while all aspects of life in both sub-districts rely on or involve sailing activities. In addition, the Pangkep Regency government still does not have data and plannings related to disaster management and climate change. According to the Sustainable Development Goals (SDGs) of the RPJMD 2021-2026 of Pangkep Regency, it is known that holistic handling of disaster risk has not been developed and implemented at all levels. Efforts in this direction are still in the category of unavailability of data and have not been actualized.

INADEQUATE BASIC INFRASTRUCTURES

28. **Basic needs provision.** Located in remote areas and only accessible by sea, the communities of Liukang Tangaya and Liukang Kalmas face serious challenges in meeting their basic needs due to limited facilities and infrastructure. These problems include: (1) access to clean water, (2) food supply, (3) energy / fuel, and (4) sanitation. To obtain clean water needs, the communities in both districts rely on collecting rainwater and digging wells, which often produce muddy and brackish water during the dry season. In recent years, the community has resorted to bottled water to meet their needs, leading to an increase in plastic waste.

29. **Basic food needs and supply hurdles**. To secure their basic food supplies, residents of the Liukang Kalmas must embark on 20-30 hour sea voyages, navigating through hazardous waves. They purchase essential items like rice, vegetables, and cooking oil in Makassar, Balikpapan, and East Lombok, which also serve as trading hubs for their local products such as sea cucumbers, salted fish, and live fish. The situation worsens

[14] Lemsa spatial data processing results, 2022

during the west season (extreme weather period), resulting in potential shortages of daily necessities for the community.

30. **Fuel supply and shortage**. Fuel shortages have intermittently arisen when purchasing from trading hubs, such as in January 2021, when fishermen from Sapuka Island in Liukang Tangaya were unable to fish for 10 days due to insufficient fuel. Moreover, fuel serves as the primary source of electricity and lighting for island communities. It is also common for these communities to acquire fuel from other provinces without proper authorization.

31. **Sanitation and health infrastructure.** Communities on the Pangkep Regency face inadequate sanitation conditions. Besides water shortages, most households lack toilets. In 2019, the percentage of households without toilets was 87% in Liukang Tangaya, 91% in Liukang Kalmas, 67% in Tupabbiring, and 57% in Tupabiring Utara. Additionally, healthcare infrastructure in both sub-districts is extremely limited (see COVID-19 section).

32. **Health facilities accessibility.** Health infrastructure in the Liukang Kalmas and Liukang Tangaya sub-districts is extremely limited. In 2020, of the 9 inhabited islands in Liukang Tangaya District, 8 were classified as having "very difficult" access to health facilities. Similarly, in Liukang Kalmas District, 7 inhabited islands were rated as having "very difficult" access to health facilities, with only 2 islands having health center facilities.[15]

ACCESSIBILITY

33. Development of the small and remote islands in Pangkep Regency is hindered by their isolated location and their reliance entirely on maritime transportation. High dependence on fuel availability, pioneer ships that are only available once a month, extreme weather, and limited livelihood options make them susceptible to climate change. This is exacerbated by the absence of adequate data and information on weather conditions, making sailing/fishing activities in Liukang Tangaya and Liukang Kalmas at high risk. Liukang Kalmas and Liukang Tangaya also have poor communication networks. In 2019, only one of the seven populated islands in Liukang Kalmas with good cellular signal connection while all the remaining islands had either weak or no cellular signal. Meanwhile in Tangaya, 5 out of 9 populated islands have no cellular signal and the remainder has a weak signal.[16]

COVID-19 and WASTE

34. **Impact of COVID-19.** No specific data on the impact of the COVID-19 outbreak on the islands of Pangkep Regency is available, but it is reasonable to assume that the remote sub-districts of Liukang Kalmas and Liukang Tangaya have also been affected, given the national economic downturn caused by the pandemic. The COVID-19 pandemic directly impacted the residents of Liukang Tangaya, where fishermen could not sell live fish due to restrictions on accessing the mainland and outside buyers being unable to enter the island, resulting in several months of disruption under the government's "community activity restrictions." The provinces vital to the livelihoods of these communities—East Kalimantan and West Nusa Tenggara—suffered significantly, with

[15] BPS Pangkep, op.cit

[16] Central Statistics Bureau Pangkep, 2020.

East Kalimantan experiencing a 6.10% increase in poverty, affecting 230,260 individuals, and West Nusa Tenggara seeing a 4.5% rise, impacting 32,150 individuals. Additionally, healthcare infrastructure in both sub-districts remains severely limited, with eight of nine inhabited islands in Liukang Tangaya having rough access to health facilities, and all seven inhabited islands in Liukang Kalmas facing similar challenges, with only two islands having a Puskemas (community health center).[17]

35. **Marine debris and waste management issues.** Marine debris, particularly plastic waste, poses a significant threat to coastal ecosystems. Plastics contribute to climate change, primarily through their role in carbon emissions. The Pangkep Islands lack an organized waste management system, and public awareness regarding waste disposal is notably insufficient. Residents typically manage waste by burying it, burning it, or discarding it into the sea. Effective marine debris management is a global commitment, including for the Indonesian government. Addressing waste on small islands is crucial for enhancing environmental resilience against climate change.

Project / Programme Objectives:

36. The climate change risks exacerbating development inequities faced by communities on small and remote islands, as detailed in the preceding contexts, pose substantial challenges. Our concept notes seek to address these issues through four strategic approaches, which encompass:

37. **Regional Strengthening** focuses on enhancing the adaptive capacity of local communities, village and district governments to respond to climate-related hazards and risks, anticipate future changes, and improve their surrounding environments/ecosystems, which serve as their primary support system. This involves establishing a climate disaster response group or community, and providing training to enhance the group's and the local community's awareness of disaster management The increase in surface temperature and heavy rainfall creates vulnerabilities for seaweed farming; strong winds damage homes, public facilities, and fishing boats, posing risks to transportation to the mainland; sea level rise causes tidal flooding and coastal erosion; and ocean acidification threatens coral reefs, leading to a decline in fishermen's livelihoods productivity. (Rising surface temperatures and heavy rainfall increase the vulnerability of seaweed farming. Strong winds damage settlements, public facilities, and fishing boats, posing risks to transportation to the mainland. Rising sea levels lead to tidal flooding and erosion. Ocean acidification causes coral reef die-off, which in turn reduces the productivity of fishermen's livelihoods) and climate change risks. Furthermore, creating community-based climate risk assessment documents at the village level serves as a systematic approach to bolster village resilience within a development planning framework. Furthermore, improving the village's surrounding environment to support island village resilience to climate changes by conducting ecosystem assessment to get the bigger picture on how climate change and livelihood activities affect the condition of the surrounding ecosystem, and then promote the ecosystem rehabilitation measures for coral reefs and mangrove. Since the area is also surrounded by marine conservation areas, then the project will also target the improvement of the conservation area governance. Improving local community livelihood with sustainable livelihood approaches and diversity of food and income sources as well as harvest and income management at the household level on one hand will increase

[17] Central Statistics Bureau Pangkep, op.cit

their capacity to respond to climate hazards and on the other hand also help in reducing environmental stress from destructive livelihood activities.

38. **Implementation of applicable technology** for the establishment of a streamlined weather monitoring station in five activity spots and to create simple digital weather information boards across six island clusters, integrating these into an early warning system for local island communities. This early warning system and weather station will be linked with the weather system of Meteorological, Climatological, and Geophysical Agency or BMKG. This integration will address the gap in weather stations between Sulawesi and Java, enhancing the accuracy of weather and climate data, specifically for current and wave forecasts impacting shipping routes in the region. The establishment of this early warning system aims to mitigate the risk of shipwrecks caused by intensified sea storms by delivering more precise warnings to both passing vessels and local fishermen. The use of this technology functions as an early warning system for fishermen, advising them to avoid sailing during unfavorable weather conditions and thereby reducing the incidence of maritime accidents that often affect fishermen in both proposed program locations. The utilization of weather information systems by fishermen also contributes to the development of the fishing industry, particularly when sudden changes in natural conditions can be anticipated early. Information technology provides fishermen with the knowledge to implement adaptation measures, such as adjusting the position of seaweed lines during extreme temperatures to prevent exposure to harmful conditions. This can positively impact the growth of cultivated seaweed and prevent economic losses.

39. **Alleviating the environmental impact** on the island's ecosystem caused by unsustainable natural resource use through community education, environmental monitoring by community groups in conjunction with disaster risk teams, development of community reporting systems, and environmental research. Destructive fishing practices and inadequate waste management, which contribute to marine pollution, are intensifying the strain on coastal ecosystems that are already vulnerable to climate change and vital to the livelihoods of coastal communities on small islands. Building ecosystem resilience involves the active participation of the community in rehabilitation efforts and reducing ecosystem exposure to destructive activities and the load of waste entering marine waters. This approach will significantly enhance the ecosystem's carrying capacity, contributing to climate disaster reduction and prevention.

40. **Fostering inter-regional learning and collaboration through policies and cross-sectoral cooperation**. This includes providing disaster risk assessment documents at the district level, particularly for the two targeted sub-districts, and developing Climate Change Adaptation and Disaster Risk Reduction (RAD) plans specifically tailored for island communities. Additionally, this approach promotes coordination among local governments in the program area, both at the district and provincial levels. Such collaboration can enhance adaptation efforts for island communities by ensuring the availability of essential resources like logistics and fuel, especially during storm seasons.

41. Overall project objective: Building Climate Changes Resilience for Small and Remote Islands Pangkajene Islands District. The main objectives of the program will be achieved by focusing on four main program components.

    1. Strengthening the resilience capacity of remote small island areas of Pangkajene

Islands Regency to climate change through environmental, social community and economic approaches.
2. Application of appropriate technology for climate change monitoring and early warning systems in remote small island areas.
3. Strengthening ecosystem resilience in response to variability induced stress to climate risk .
4. Strengthening policies, cooperation and learning in support of increasing resilience to climate change and disaster risk reduction.

Project / Programme Components and Financing:

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
1. Strengthening resilience capacity of remote small island areas of Pangkajene Islands Regency to climate change through environmental, social community and economic approaches.	1.1. Enhancing the social and economic adaptive capacity of vulnerable communities in 16 villages to the impacts of climate change. 1.2. Enhancing the environmental adaptation capacity of small island regions to the impacts of climate change.	1. Increased social, economic and environmental adaptation capacity of vulnerable communities on remote small islands to the impacts of climate change.	192.184
2. Appropriate technology on monitoring system and early warning system for small and remote island regions	2.1. Simple weather measurement stations on small and remote islands were installed. 2.2. Early warning systems for climate disaster and potential fishing ground information were installed.	2. Increased local community adaptive capacity through applied technology on weather monitoring and early warning systems.	166.971
3. Strengthening ecosystem resilience in response to variability induced stress to climate risk	3.1. Vulnerable coastal ecosystem strengthened in response to climate variability risk. 3.2. Small asset to support adaptive ecosystems in response to climate variability risks.	3. Increased ecosystem resilience in response to variability induced stress to climate risk	313.052
4. Cross-sectoral policies, cooperation and learning to enhance the small and remote island resilience to the climate changes	4.1. Increasing local government capacity through Adaptation Working Group institutions in regional adaptation strategic planning (RAD).	4. Increased the capacity of local governments in strategic planning and coordination to support climate change adaptation	144.829

		actions on small islands.	
	5.1. Lessons learned and knowledge management of the small island community to the climate changes were produced and disseminated to both the public and government. books, newsletters, and websites.	5. Knowledge and Lesson learn dissemination on the small and remote island resiliency to the climate changes	
5. Total Project/Programme Cost			817.036
6. Programme Execution cost (9,5%)			85.766
7. Implementing Entity Fee (8,5%)			76.745
Amount of Financing Requested			**979.548**

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	January 2023
Mid-term Review (if planned)	November 2023
Project/Programme Closing	December 2024
Terminal Evaluation	January 2025

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. *Describe the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.*

42. This project was aimed to enhance the small and remote islands community resilience to climate change through strengthening their adaptive capacity and reducing the ecosystem threat from destructive economic activities. Where in the implementation, will be focused on 4 program components, 8 outcomes and 23 major outputs as described below.

43. **Component 1: Strengthening the resilience capacity of remote small island areas of Pangkajene Islands Regency to climate change through environmental, social community and economic approaches.**

44. All activities in the first component aimed at enhancing the resilience of remote small island areas to climate change—by improving social, environmental, and economic adaptation capabilities—have aligned with the AF Strategic Result Framework, specifically outcome 1 for outputs 1.1, outcome 2 for outputs 2.1 and 2.2, outcome 3 for output 3.1 and outcome 6 for output 6. Despite the clear impacts of climate change—such as rising sea levels leading to coastal erosion, unpredictable large wave seasons, extreme weather affecting fishing activities, and disruptions in marine ecosystems and agriculture—the full implications are often not fully recognized by island residents.

45. To address these challenges, the project's first output focuses on bolstering the adaptive social and economic capacity of communities through the establishment and strengthening of local institutions in 16 pilot villages. This involves conducting community-based climate vulnerability assessments, developing adaptation action plans, and implementing these plans with the aid of small grants. The establishment of community institutions that are responsive to climate change and disasters will encourage village institutions to lead efforts in identifying various threats and risks associated with climate change, as well as the necessary adaptation and mitigation measures. Community-based adaptation action planning, supported by small grant incentives from the project, provides opportunities for village communities to plan and implement adaptation actions according to the specific risks and threats faced by each village. For example, this may include threats such as land erosion and sedimentation, development of alternative livelihoods for fishermen during extreme waves and weather, and development of climate-resilient agriculture, among others. Adaptation action planning carried out in a participatory manner at the initial stage will receive support from small grant incentives provided by the project. At a more advanced level, it will receive support from the local village government through integration into village development planning. Comprehensive capacity-building support will be provided through technical and management training, covering essential areas such as seaweed cultivation, capture fisheries, post-harvest processing, and climate-resilient agricultural practices. These efforts are aimed at enhancing the social and economic resilience of communities by enabling them to identify and respond to climate-related risks more effectively.

46. For instance, to mitigate the effects of extreme weather on fishing, the project plans to develop seaweed cultivation through a field school model in two sub-districts, offering fishermen practical training over a complete cultivation cycle. Additionally, the project will introduce advanced technologies and innovations in capture fisheries, including new types of fishing gear and training for 16 groups of fishermen across the pilot villages. Support will also be provided for post-production fish processing to help overcome marketing challenges caused by adverse weather conditions.

47. In the second output, the project aims to enhance the ability of coastal and small island areas to adapt to environmental changes by improving the governance of marine and coastal conservation zones. By protecting these critical areas, the project seeks to strengthen ecosystem resilience, which in turn supports local communities that depend on these ecosystems. Key activities will include developing Standard Operating Procedures (SOPs) for managing conservation areas and providing technical training to local governments to improve the management and monitoring of these zones.

48. **Component 2: Appropriate technology on monitoring system and early warning system for small and remote island regions**

49. The second component has one outcome and two outputs related to appropriate technology for monitoring systems and early warning systems for small and remote islands. The outcome is to increase local community adaptive capacity through the application of technology in weather monitoring and early warning systems. This will be achieved through the development of an early warning system, which will include several activities such as the construction of 5 weather observation stations (for monitoring wind, tides, waves, and temperature), and the installation of a simple early warning system (a digital information board on weather and hazards) at 6 central community points across the archipelago to improve accessibility for the community and village government. Data and information from the weather observation stations will be incorporated into the early warning system design and displayed on the digital information board. Additionally, the project will develop a user-friendly interface application as an option for displaying weather information and notifications related to potential hazards. Dissemination of early warning system information will utilize existing communication networks, including telephone and radio, which cover approximately 19,625 people living in both sub-districts (Tangaya and Kalmas). This component will address **the Outcome 1 of AF strategic framework** especially on the **Output 1.1 for indicator 1.2**

50. To ensure the sustainability of the installed system, the design will promote the involvement of the local community, village, and district/sub-district governments in managing the weather stations and integrating them with the government's weather agency, BMKG (Meteorology, Climatology, and Geophysics Agency). Encouraging participation from the local community and village government will be facilitated through a social preparation process, which includes conducting a series of village consultations to gather input on the needs for developing an Early Warning System (EWS). This process will integrate tools and technologies for gathering and analyzing climate data with local community knowledge of natural indicators related to climate threats and risks. The EWS will be overseen by a climate and disaster response group established for this purpose, ensuring ongoing operation and data collection. The local government will provide operational support to maintain the system's sustainability.

51. The use of information and early warning system technology can enhance the adaptive capacity of remote small island communities by providing crucial weather information and reducing the risks associated with conducting sea activities during adverse weather conditions.

52. **Component 3: Strengthening ecosystem resilience in response to variability induced stress to climate risk.**

53. Component 3 is designed to enhance ecosystem resilience against stresses caused by climate variability and risks. This component has two main outcomes: first, strengthening coastal ecosystems to mitigate the risks posed by climate change; and second, providing small assets to support adaptive ecosystems in dealing with climate variability.

54. The project plans to undertake ecosystem rehabilitation activities with a focus on boosting the adaptive capacity of the environment to address the impacts of climate change. Rising temperatures in coastal areas significantly affect ecosystems that are crucial to the livelihoods of small island communities. These impacts include declines in marine biodiversity, disruptions in marine food chains due to coral reef damage, loss of sensitive species, and threats to mangrove forests, which serve as essential nurseries for marine species and protect against coastal erosion. Additionally, changes in water acidity caused by rising temperatures lead to coral bleaching, which decreases fish populations. This, in turn, results in reduced fish catches, increasingly distant fishing areas, higher operational costs, and increased risk of extreme weather events.

55. To address these challenges, the project will focus on strengthening coastal ecosystems through coral reef and mangrove rehabilitation activities, involving active participation from village communities led by local climate and disaster response institutions. These efforts will include continuous monitoring, maintenance, and repair to ensure the restoration of ecosystem functions, as well as raising public awareness and enforcing laws against activities that damage ecosystems. This will be achieved by strengthening community monitoring groups and village-level organizations. The project will also construct a fishermen's information hut to enhance public understanding of the impacts of ecosystem destruction.

56. Moreover, the project aims to facilitate small assets that support adaptive ecosystems in responding to climate variability risks. This includes improving waste management on small islands to alleviate pressure on coastal ecosystems. A rapid assessment will be conducted to evaluate the current status of waste management, including infrastructure, human resources, and policies. The project will facilitate improvements in waste management infrastructure by providing public waste bins and encouraging the development of local village policies in line with Presidential Regulations No. 97 of 2017 and No. 83 of 2018. Initial activities will focus on preparing village communities, promoting better waste management practices, and transitioning towards a circular economy model with support from local governments and other stakeholders. Additionally, the project will promote a healthy and clean lifestyle among island communities through the development of temporary plastic waste collection and processing facilities, promoting village policies, educational campaigns, and facilitating the development of communal wastewater disposal systems (communal MCK).

57. **Component 4: Cross-sectoral policies, cooperation and learning to enhance the small and remote island resilience to the climate changes**

58. The fourth component focuses on two outcomes and two main outputs aimed at enhancing policies and cross-sectoral cooperation to support the resilience of remote small island areas to climate change, and at expanding stakeholder engagement through project implementation insights.

59. Outcome 1 involves increasing local government capacity for strategic planning and coordination to support climate change adaptation in small islands. This will be achieved by strengthening the Adaptation Working Group institutions in regional adaptation strategic planning (RAD) and forming the Pangkep Regency Adaptation Working Group. Key activities include facilitating the preparation of the Regional Action Plan for Climate Change Adaptation (RAN-API) for Pangkep Regency, following Permen LHK Number P.33 / Menlhk / Setjen / kum.1 / 3/2016: Guidelines for Climate Change Adaptation Actions. The aim is to formalize this document as an official policy of the Pangkep Regency government. This effort aligns with Outcome 7 of the AF Results Framework, which focuses on developing policies and regulations to enhance climate resilience. Additionally, the outcome will include increasing community access to local government social networking programs and insurance for fishermen.

60. Outcome 2 focuses on disseminating lessons learned from project implementation to reach a broader audience. This will involve organizing workshops, sharing experiences, and utilizing various media to inform stakeholders. The dissemination will include national and local media releases, implementing agency and local government websites, as well as publications such as books and newsletters. This aligns with Output 8 of the AF Results Framework, which emphasizes generating and sharing innovative adaptation practices that can be replicated, scaled up, and promoted. Engaging diverse stakeholders, including local communities, government officials, practitioners, and the public, will help spread these innovations and serve as a reference for future climate change resilience initiatives.

B. *Describe how the project / programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project / programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.*

Social, Economic and Environmental Benefits

61. **Potential Impact.** The proposed project will directly impact 35,495 people living in two sub-districts, Liukang Kalmas and Liukang Tangaya, which are distributed across 16 villages/islands. The estimated direct beneficiaries of the EbA (Ecosystem-based Adaptation) activities are 21 islands out of 140 target islands, assuming 15% of the total population, comprising 2,623 men and 2,701 women, including those involved in fisheries and seaweed cultivation. The direct beneficiaries of the EWS (Early Warning System) activities will include 16 villages across 2 sub-districts. Broader beneficiaries will be reached through the website, workshops, and government policy documents implemented

62. **Social and Economic Benefit.** The proposed project will have a direct impact on the 35.495 people who lived in two sub-districts, Liukang Kalmas and Liukang Tangaya which are distributed across 16 villages/islands. The main impact will be focus on the climate changes adaptation effort related to food security due to improvement of the weather information and early warning system that will be used to support fisheries activities (fishing and sea farming) and shipping lanes, that also support the stability supply of the basic goods due to better village planning that incorporate risk and hazard assessment.

No	District	Men	Women	Total
1	Liukang Tangaya	7,527	7,594	15,121
2	Liukang Kalmas	9,962	10,412	20,374
Total		**17,489**	**18,006**	**35,495**

* Source: BPS – Sub-district in number 2023

63. The local communities living in these 16 villages/islands (see table above) are among the most marginalized and vulnerable groups, including traditional fishermen with boats smaller than 5 GT, laborers in the fishing industry, seaweed farmers, and female heads of households. They reside in extremely challenging environments with very limited resources, including livelihood assets, clean water, food, healthcare, and electricity. Despite these harsh conditions, these communities have managed to survive. However, high poverty rates and insufficient public infrastructure are exacerbated by the impacts of climate change. Prolonged storm seasons and unpredictable weather have severely affected their assets, livelihoods, and lives. Furthermore, the project's approach, which targets marginalized and vulnerable communities, will include various training programs aimed at improving livelihood skills and knowledge in areas such as capture fisheries, seaweed farming, post-harvest processing, and agriculture. These trainings are designed to deliver significant economic benefits to the target communities.

64. **Environmental Benefit.** The project will have a direct impact on the 84,134.69 hectares of marine ecosystem which consist of 80,983.15 ha of coral reefs, and 3,151.54 ha of mangrove that distributed in both sub-districts as seen in the table below.

Sub-District	Coral Reefs (Ha)	Mangrove (Ha)
Tangaya	80,278.72	1,298.64
Kalmas	704.43	1,852.90
Total	80,983.15	3,151.54

* Source: Keputusan Menteri Kelautan Dan Perikanan Republik Indonesia Nomor 72 Tahun 2022 Tentang Kawasan Konservasi Di Perairan Di Wilayah Liukang Tangaya Provinsi Sulawesi Selatan & RZWP3K Kab. Pangkep 2013

65. This impact is caused by project design that one of its main focuses is on the ecosystem rehabilitation which some of them are in critical condition due destructive fishing activities such as bombs and cyanide. Public awareness on conservation, various technical training on sustainable fishing techniques, fish / seaweed farming, including post-harvest management, and household financial management are brought up to improve community skills, knowledge as well as potential diversity options to the local community. Furthermore, the project also proposes measures on improvement of

existing marine protected areas which are located within Kalmas sub-district that are run by the provincial government through supporting in conducting ecosystem condition assessment, support in developing a community based, and inclusive operational procedure (SOP) on marine protected areas management, and activation of the community environment monitoring system. These proposed measures are supposed to have an impact on the improvement of the surrounding ecosystem/environment that support island communities to face the climate changes. Beside that, the project also proposed measures on improvement of waste management for islands such as communal waste facilities, and public awareness on waste management especially on how to reduce, reuse, and recycle plastic waste.

66. **Gender consideration**. Project staff will receive training to improve understanding on gender equality, disability and social inclusion (GEDSI) to be applied in managing the dynamics of programs and activities with the community. All the proposed activities will target minimum quotas for women 50% and marginalized groups for 30 %. The project will always use disaggregated data to ensure documentation that includes women and marginalized groups. All planned meetings/activities will be determined by adjusting the time availability of women and marginalized groups, including distributed invitations in both writing and verbally to women and marginalized groups. The project also taking into account literacy and gender-sensitive skills, the use of visual materials and local languages will be designed and used to support women and marginalized groups to actively contribute to each activity. Conduct special sessions for women and marginalized groups to discuss and obtain input on specific issues.

67. Initial observations revealed that gender roles are distinctly divided, with men predominantly associated with productive tasks like earning a living and fishing, while women are mainly responsible for routine, non-productive activities such as child care, house cleaning, and fetching water. Men typically control the resources related to fishing, including gear, equipment, and the sale of fish, whereas women, despite having a greater share of the benefits from the sale of fish, often have less control over decision-making and benefits within households and social communities. This gender disparity suggests that the project will encounter a male-dominated context both within households and social organizations. To address this, the project design will ensure equal treatment across gender, ethnicity, and religion, and will focus on increasing women's participation and contribution. This includes not only involving women in all proposed activities but also enhancing their access to decision-making and idea contributions. The project will also collect and provide gender-disaggregated data from its activities and programs. The goal is to implement the project in a manner that allows both women and men to participate fully and equally, receive comparable social and economic benefits, and avoid disproportionate negative impacts throughout the development process.

68. Moreover, most of the project outcome and outputs will be based on community and environmental approaches, meaning project implementation will have a close coordination and communication with not only the local community but also with the local government to minimize any potential negative impacts on both communities and the environment by considering any regulation or law.

C. *Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.*

69. **Cost Effectiveness:** As a comparison for climate disaster adaptation between extreme wave events and coastal erosion, the construction of physical infrastructure (seawalls) and Ecosystem-based Adaptation (EbA) can be analyzed. Assuming that in the two target locations there are approximately 4.8 km of coastline at high risk, impacting around 35,495 people.

Items	Construction of Seawall	Adaptation with EbA
Cost Requirement	Rp. 309.000.000.000,-	Rp. 120.000.000,-
Coastal Protection	Faster construction	Slower rehabilitation depending on growth rate
Durability	Has a lifespan as the structure will erode slowly	Has a long lifespan
Benefits for the Community	Residential areas will be safe	Residential areas will be safe, serves as a source of food, windbreak
Benefits for the Environment	Reduces the rate of erosion	Reduces the rate of erosion, serves as a sediment trap, contributes to carbon absorption and stock, provides nursery grounds for various biota

70. Funding allocation in this program will be focusing on activities to address remote small islands issues in facing climate change. Increasing community capacity and environmental resilience, economic improvement of remote small islands, application of appropriate technology, governance and improvement of coastal ecosystems, encouraging cross-sectoral and regional policies and cooperation are the program funding priorities to strengthen the resilience of remote small islands and to reduce their vulnerability to climate change.

71. Ecosystem-based approach and community-based approach are program approaches that will be implemented, the funding will benefit the sustainability of ecosystems and small remote island communities that are affected by climate change. In the program component of the resilience capacity of the remote small island area of Pangkajene Islands Regency to climate change through environmental, social, community and economic approaches through funding vulnerability studies, climate and disaster risk response groups, RAD API-DRR at village level, education for making adaptation action proposals supported by grant projects , management of conservation areas, field schools on cultivation methods, innovation of fishing gear and the application of capture fisheries information technology will provide significant benefits for vulnerable communities on small remote islands. This funding intervention will benefit:

- The existence of a detailed database through studies will assist in development planning for all parties

- Institutional and community capacity is a guarantee to minimize the impact of climate change and disaster risk
- Coastal ecosystem resources that are maintained and sustainable through good governance have implications for the sustainability of fish resources which are the foundation of life for small remote island fishing communities.
- The community's economic income will be better with fish cultivation literacy, innovation in fishing gear and access to fishery information for fishermen.
- By utilizing fishery information (potential actual fishing area) fishermen will be more effective and efficient in catching fish that go directly to the target location without having to travel to find potential fish areas. Fishermen will also be formed through more efficient fuel consumption and support the reduction of emissions from fishing activities

72. Furthermore, the appropriate technology component of the climate change monitoring and early warning system in remote small island areas with the allocation of funding for EWS development, socialization and campaigns for destructive fishing, marine debris management and cross-sectoral and regional collaboration will add benefits to the community.

- Minimizing loss of life and material loss for small remote island communities by utilizing the local EWS information system.
- Reduced environmentally unfriendly activities which will indirectly increase fishermen's catch
- Marine debris that is handled will reduce the threat to ecosystem and environmental sustainability of remote small islands. In addition, good and correct waste management supports the life of the community and a healthy generation which leads to the sustainability of the productivity and welfare of fishermen
- Multi-stakeholder involvement with collaboration is very helpful for achieving common goals in building resilience and adaptation of remote small island communities in facing climate change and disaster risk.

73. Funding management is also based on the assumption of location conditions (remoteness) which requires special efforts. With the consortium's experience with the same situational program locations, the funding allocation for each stage has been calculated appropriately. Proposed programs implementation is in line with development policies at the national, regional, provincial and district levels and had taken into account the benefit principle and effectivity and efficiency principle as well as knowledge on the actual cost that applied in the region becomes the basis for preparing a budget so that it is more transparent, simple, and objective, so it can be measured its cost-effectiveness. Another strategy is program finance transparency and applying clear and robust operational procedures (SOP) for program financing while taking into account privacy and confidentiality sensitive information to minimize conflict potential within the project team.

D. *Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.*

74. Project Alignment with National, subnational sustainable development strategies:

75. **National Determined Contributions (NDCs)**; Indonesian government has stated to commit to reducing greenhouse gas emissions, addressing the impacts of climate change and funding both that includes contributions to economic resilience, social and livelihood resilience, and ecosystem and landscape resilience. This project will support and contribute to the fulfillment of this commitment through increasing the capacity of prisoners in the small islands of Liukang Kalmas and Liukang tangaya sub-districts of Pangkep Regency. NDC also states implementation strategy as the implementation of the Paris Agreement and the law No. 16 of 2016 on Paris Agreement to the United nation framework convention on climate change, clearly stated the need of sectoral and regional adaptation especially on the small islands and coastal area.

76. **Indonesia's National Climate Change Adaptation Plan (RAN-API)** : The Project will support the RAN-API policies. The project was proposing development of the sub-national development plan for climate change adaptation (RAD) especially for small and remote islands of Pangkep Regency as a derivative and implementation of the national adaptation plan (NAP).

77. **Book List of Priority Locations and Climate Resilience Action by Bappenas in 2021** in the marine and coastal sector: Pangkep Regency is said to be in the top priority category. The Coastal Subsector activities are related to coastal area protection from potential inundation by tidal waves and coastal flooding. Its impact will be amplified by sea-level rise in the high-vulnerable coastal areas. While the Marine Sub Sector activities are related to marine safety improvement, especially small fishing boats (<10GT) are facing high waves as the potential threat, which reduces the safety zone.

78. **Vulnerability Index Data Information System (SIDIK, 2018):** According to the Ministry of Environment and Forestry's (MoEF), in 2018, nine villages in Tangaya and seven in Kalmas were classified as having moderate vulnerability. However, an update by the Nusantara Maritime Institute (Lemsa) and Nypah Indonesia in 2022, based on the 2020 Village Potential (Potensi Desa) adapted for small islands, revealed that vulnerability levels have risen to high. Only the islands near the mainland of Pangkep Regency, specifically those in Liukang Tupa'biring District, are categorized as having low vulnerability.

79. **Strategic Plan 2020-2024 Directorate General of Climate Change Control**: the project will contribute to Climate response and disaster risk groups formed as driving actors in rural communities will become part of the national movement for community-based climate change control that is integrated with the local government's climate village program (Proklim).

80. **South Sulawesi Province Mid-term Development Plan (2018-2023)** : The project supports and is in line with the South Sulawesi Province medium term development planning (RPJMD) especially on the 5th mission which is increasing productivity and competitiveness of sustainable natural resources products, which one of its goals to maintain the quality of the environment and the ability to adapt and mitigate the climate changes impact.The project will support by implement ecosystem rehabilitation actions that involve both the restoration and management of ecosystems, along with monitoring by community groups. It will also enhance the capacity of local governments in marine

conservation area management by developing Standard Operating Procedures (SOPs) and providing thematic training on skills and management.

81. Zoning Plan for Coastal Areas and Small Islands of South Sulawesi Province for 2019-2039: Through the Governor of South Sulawesi Regulation Number 2 of 2019 concerning the Zoning Plan for Coastal Areas and Small Islands of South Sulawesi Province for 2019-2039, the government aims to increase community participation in resource management as well as disaster mitigation and climate change adaptation. This project will support community involvement in ecosystem rehabilitation activities and building community capacity for climate change adaptation.

82. **Mid-term Development Plan of Pangkep District 2021-2026**: At the district level, this program supports and aligns with Pangkep District's Medium-Term Development Planning (RPJMD) 2021-2026, particularly Mission No. 5, which aims to improve natural resource management based on environmentally sustainable spatial planning. This mission includes a regional development strategy to enhance disaster risk reduction efforts through both physical and social disaster prevention and management. This project will support these planning documents by facilitating the capacity building of local government and the preparation of the Regional Action Plan (RAD) for climate change adaptation. Additionally, the project will contribute through the rehabilitation of mangrove ecosystems as a disaster risk reduction effort in coastal areas.

83. **Regional Marine Conservation Area of Pangkep District**: Liukang Tangaya Sub District is part of the regional marine conservation area established by the Governor of South Sulawesi. The proposed program will also support the provincial government's effort in strengthening its capacity in preparing and establishing the marine conservation (KKLD) area in Liukang Tangaya. This area has already been reserved through a governor's regulation and is currently under review by the Ministry of Marine Affairs and Fisheries (MMAF).

E. *Describe how the project / programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.*

84. **Law No. 5/1990 on Conservation of Living Natural Resources and their Ecosystems**: This regulation governs the protection of natural resources and their ecosystems. The project will conduct activities within conservation areas and will comply with the provisions of this law.

85. **Law No. 1, 2014 on Amendments to Law No. 27, 2007 on Coastal Areas and Small Islands**: This law serves as a reference for local governments in managing small islands. The project will carry out activities on small islands and facilitate the preparation of the Regional Action Plan (RAD) for climate change adaptation. The project will adhere to the regulations outlined in this law.

86. **Government Regulation No. 26 of 2020 on Forest Rehabilitation and Reclamation**: This regulation provides guidelines for the implementation of forest rehabilitation activities. The project will undertake mangrove forest rehabilitation and will use this regulation as a reference for implementing its activities.

87. **MoEF regulation No P.7 of 2018** on guidelines for assessing the risk and impact of climate change: Project will conducted study and assessment on climate vulnerability and disaster risk activities. on the implementation, project will follow the guidelines.

88. **National Disaster Management Agency (NDMA)** regulation No. 12 of 2012 on general guidelines for assessing disaster risk: the regulations will use on study and assessment on climate vulnerability and disaster risk activities on the project.

89. **MoEF Decree No. 4 of 2001 on National Standard Criteria for Coral Reefs Damage Assessment, MoEF Decree No. 201 of 2004 on National Standard Criteria for Mangrove Damage Assessment, and MoEF Decree No. 200 of 2004 on National Standard Criteria and Guidelines for Seagrass Status Determination**: These regulations provide technical references for determining the condition of damaged ecosystems. The project will use them as references for ecosystem studies and assessments.

90. **MoEF Regulation No. P.33/Menlhk/Setjen/Kum.1/3/2016 on the Guidelines for Climate Change Adaptation Actions**: This regulation contains guidelines for the preparation of RAD documents. The project will facilitate the preparation of RAD documents at the district level and will use this guideline as a reference.

91. **Presidential Decree 83 of 2018 Concerning Marine Debris Handling**: This regulation is outlined in the form of the National Action Plan for Marine Debris Handling for 2018-2025. The Action Plan serves as a planning document that provides guidance for the community and business actors to accelerate marine debris handling over an eight-year period, from 2018 to 2025. The project will implement waste management activities with the community and will use this regulation as a reference.

F. *Describe if there is duplication of project / programme with other funding sources, if any.*

92. No, there is no duplication of the project so far.

G. *If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.*

93. The process of gathering learning information from project activities will involve interviews and focused discussions, strategically designed to identify changes and impacts related to climate change adaptation. Assessments of disaster vulnerability and risk will enhance the documentation of vulnerability and risk information tailored to village-specific contexts in coastal areas. Community-based adaptation planning will broaden the understanding of adaptation strategies used in small island coastal areas, facilitating the exchange of experiences with other coastal regions, whether similar or different. The integration of EWS and innovations in fishing technology responsive to climate change will offer insights into relevant adaptation practices for fishermen in coastal regions. Additionally, adaptation efforts through coastal ecosystem rehabilitation, sustainable fishing practices, and improved waste management will highlight the role of community involvement in enhancing ecosystem conditions to support local livelihoods.

94. Lessons learned from project implementation will be documented in the form of writing, pictures and videos and discussed through knowledge sharing workshop sessions involving various relevant parties. Knowledge management improvement will be carried

out by sharing knowledge and learning success stories involving other climate change project implementers, both supported by the Adaptation Fund or other similar institutions at the local and national levels so that the information exchange process occurs. Project implementation will be disseminated in the early, mid and final stages of the project through workshops at both local and national levels to describe the project plans, processes and outcomes while receiving productive feedback.

95. To reach a wider audience, project information publication materials are made in the form of fact sheets, lesson learned books, press releases on project activities in local and national media, build a special website thematic on climate change that informs project progress and achievements, and distributes project newsletter series to the public. relevant parties. The results of relevant studies involving research institutions will be published in the form of research papers, scientific journals or policy briefs.

H. *Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.*

96. Sites determination and beneficiaries' selection process was based on secondary data analysis that collected from various credible sources such as the central statistics bureau (BPS), MoEF for SIDIK data, Province, and District development plans. While the consultation process was done with various level of government officials including Directorate of coastal and small island utilization of Ministry Marine Affairs and Fisheries (MMAF), Provincial and district environmental agency, and Marine and Fisheries agency. Direct consultations were also carried out with networks and key figures in the proposed project locations to verify information resulting from the previous data analysis and to identify potential beneficiaries by ensuring the involvement of women's and other vulnerable groups as well as proposed measures related to climate change adaptation.

97. Regional stakeholder coordination is also undertaken to foster collaboration in program implementation. This involves working with various entities including the South Sulawesi Provincial Marine Affairs and Fisheries Service, the South Sulawesi Provincial Environmental and Forestry Service, the Pangkep Regency Government, the Hasanuddin University Climate Change Study Center, local NGOs focused on island community empowerment, and key individuals such as village heads from various islands within the project area.

98. The outcomes of multi-party coordination regarding the project plan showed that the program's focus on climate change aligns well with the issues identified by relevant stakeholders. Coordination with the South Sulawesi Provincial Marine Affairs and Fisheries Service confirmed that the program supports their strategic objectives outlined in their 2024-2026 Renstra document. Engagement with the South Sulawesi Provincial Environmental and Forestry Service also aligns with the 2024 DLHK RKPD goals, which include reducing poverty, preserving environmental quality, and enhancing climate change adaptation and mitigation. Meetings with the Pangkep Regent, Muhammad Yusran Lologau, emphasized the importance of active collaboration with the Pangkep Regency Government to effectively implement fishermen empowerment programs on remote islands. Discussions with the Hasanuddin University Center for Climate Change Research, represented by Dr. Ir. Muh. Rijal Idrus, M.Sc, highlighted the need for

continued coordination to support climate change research and community services. The stakeholder coordination process concluded with a letter of recommendation from the DKP of South Sulawesi Province, which is included as an attachment to this document.

99. The stakeholders and key point discussion are listed in table below:

No	Stakeholder	Consultation Key Point
1	Directorate of Coastal and Small Island Utilization, Ministry Marine Affairs and Fisheries (MMAF)	Small and remote island location, major challenges and issues, national programs related to climate changes in general and the one that focused on the small island.
2	Marine Affairs and Fisheries Office South Sulawesi Province	Development challenges in small island of South Sulawesi, Provincial development plan and programs, Climate changes issues, and secondary data related to the locations
3	Environment Office South Sulawesi Province	Existing regional development plan and program related to the climate changes adaptation for small island, regulation, data on NDC achievement, synergy on local government needs.
4	Regent of Pangkajene Island	District development plan and program especially related to the small and remote islands, accessibility information and demography data, synergy of development and government needs.
5	Head of Village in Liukang Kalmas Sub-district	verifying data and information resulted from previous analysis, updating data and information on demography and accessibility
6	Community in Small Island Villages of Liukang Tangaya Sub-District	Data and information verification, updating, gathering issues on climate changes and its impact, demography, and accessibility.

I. *Provide justification for funding requested, focusing on the full cost of adaptation reasoning.*

100. The main challenge in carrying out planned and structured adaptation actions for small and remote islands such as in the Liukang Tangaya and Liukang Kalmas areas is access to financing, both at the district and national scale. However, climate change adaptation and mitigation efforts for small islands have been integrated into the national strategy and policy for the management of small islands and coasts. However, obstacles such as the availability of comprehensive and detailed data, as well as access to locations that are quite difficult, the representation of the population is less and exacerbated by the limited availability of basic infrastructure in these small islands, making program planning for this area less priority.

101. The project is planned to intervene not only in increasing community resilience socially, economically and institutionally but also in targeting the resilience of ecosystems such as coral reefs, mangroves, and seagrass beds and trying to reduce ecosystem burdens from unfriendly behaviour and domestic island waste, which is not handled properly. The

proposed funding for this program will focus on these adaptation actions, which are divided into four main components below.

102. **Component 1: Resilience capacity of the remote small island area of Pangkajene Islands Regency against climate change through environmental, social, community and economic approaches.**

103. Support for enhancing community adaptation in 16 villages in Liukang Tangaya and Liukang Kalmas from regional and central government budgets remains very limited. This project will provide support to increase community capacity to strengthen economic, social, and environmental resilience through vulnerability assessments, developing adaptation action plans, and implementing these plans with the aid of small grants. Additionally, the project will support local communities by developing Standard Operating Procedures (SOPs) for managing conservation areas and providing technical training to local governments to improve the management and monitoring of these zones. Without the support of the AF Fund project, economic, social, and environmental vulnerabilities due to climate change impacts will increase in these 16 villages.

104. **Component 2: Appropriate technology for climate change monitoring and early warning systems in remote small island areas.**

105. From the Makassar Strait area to the Banda strait confluence, there are still no measurement stations, either weather and climate stations or a simple, early warning system. The local government and the BMKG itself have not been able to prioritize the budget for the installation of these basic installations. Funding from AF will be allocated to install several simple early warning system stations with displays that relay weather data and wave predictions by the BMKG, which are integrated with maps of KKP fishing ground locations to help efficiency and reduce risks for the people of the surrounding islands. In addition, the financing will also target the installation of simple and automatic weather stations for several basic parameters that can enrich and improve the accuracy of BMKG wave calculations/estimates

106. **Component 3: Ecosystem burden from non-environmentally friendly natural resource utilization activities on remote small islands.**

107. The coral reef and mangrove ecosystems are experiencing degradation due to rising temperatures and anthropogenic factors. Restoration efforts, along with community awareness programs, have not yet been implemented by local authorities. The limited budget allocation for environmental improvement in small islands in Pangkep Regency has prevented the local government from undertaking ecosystem restoration programs in Liukang Tangaya and Liukang Kalmas. This project aims to enhance ecosystem resilience to respond to climate change risks through the rehabilitation of coral reef and mangrove ecosystems, and to strengthen community participation through public awareness and law enforcement support. Without the support of the AF Fund project, the condition of coral reef and mangrove ecosystems will continue to deteriorate..

108. **Component 4: Cross-sectoral policies, cooperation and learning to enhance the small and remote island resilience to the climate changes**

109. Adaptation measures to reduce climate risk and vulnerability in coastal areas also require cross-sectoral policies and cooperation, especially on how to meet basic needs such as energy, fuel, and education. Until now, local government action and funding have not accommodated the implementation of cross-sectoral cooperation and policies related to adaptation efforts to the targeted small and remote islands.

110. With funding support from the Adaptation Fund (AF), the facilitation of cross-sectoral collaboration will be more flexible because it will be able to bridge the limitations and sectoral priorities in allocating of resources from each development sector. AF funding will also contribute to efforts to disseminate learning products to ensure the community's improvement, environmental and economic resilience to the impacts of climate change and to reach and involve more stakeholders.

J. *Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project / programme.*

111. The sustainability strategy for this program primarily involves incorporating village-based adaptation initiatives into the village planning system, utilizing the village's financial and human resources. This goal is reached through the early engagement of all relevant stakeholders, consultations, and social approaches that involve preparing and working with the village government, district authorities, and community leaders. The sustainability of the environmental and social approach is also carried out through the involvement of village and regional governments, especially through village regulations such as the formation of disaster & climate resilience groups initiated by the village, waste regulations, and environmental management regulations. The sustainability of weather stations and EWS is also emphasized on social preparation involving villages (government and their communities) especially related to access to village funds for climate change, and the Regency government through facilitation of the preparation of RAD documents and the existence of funding support from BMKG related to weather station management.

112. Village-based adaptation actions will be integrated into village development planning through village development meetings every year. Village-based adaptation actions that have been identified based on the results of vulnerability and climate disaster risk studies will be arranged based on priorities in obtaining village fund allocations.

113. Climate response and disaster risk groups formed as driving actors in rural communities will become part of the national movement for community-based climate change control that is integrated with the local government's climate village program (Proklim). The group formed will also play a role in supporting community groups for monitoring coastal and marine resources as part of the local government program in the fisheries sector. The formed group acts as an agent to take action and provide education on the need to increase ecosystem resilience in the face of climate change through sustainable management of coastal marine resources.

114. Product of the vulnerability assessment and disaster risk reduction will be a reference in government development planning at the village, district and provincial levels through RAD API-PRB specific to remote small islands. Capacity building for local governments in terms of technical and managerial aspects of marine conservation areas will encourage optimization of conservation area management with the support of human

resources and better budget allocation from the provincial and national governments. Marine conservation areas will strengthen the resilience of coastal ecosystems in the face of the impacts of climate change.

115. Ecosystem rehabilitation/restoration activities supported by actions to reduce the ecosystem burden from destructive community activities will ensure the improvement of ecosystems in small island coastal areas to support environmental resilience against the impacts of climate change and increase the economic potential of future use of environmental resources.

116. Weather monitoring stations and early warning systems will be integrated into management by the government's BMKG so that they can fill gaps or data shortages in remote small island areas related to weather and climate. The sustainability of all installed infrastructure will depend heavily on the social preparation side of this project. Where we will facilitate the arrangement and agreement will be targeted to be achieved with the village government, and the district and the meteorological agency (BMKG). To ensure sustainability, especially on the funding side of the Regency, it will be encouraged through the mechanism of preparing a regional action plan related to climate change. sustainability will be built through increasing the capacity of the government (village and district) in aspects of group organizational management, operational and maintenance techniques (operational and maintenance modules), advocacy of program policies and funding through several targets such as preparing RAD documents, lobbying the district budget (RKPD), coordination with related Regional Apparatus Organizations (Bappeda, BPBD, Village Community Development Service, and other related OPDs. Government involvement will use a formal approach through official assignments, MoU and so on so that they can be financed by the government budget.

K. *Provide an overview of the environmental and social impacts and risks identified as being relevant to the project / programme.*

117. Communities that use conventional and unlimited mangrove and coral reef ecosystems can potentially lose their use rights or become limited in their access rights to resources. Then there is a decrease in quality of life when the program encourages joint commitments related to natural resource management so that it has the potential to create conflicts of interest and potentially cause damage to the environment. other areas that are far from the scope of supervision

118. The development of alternative livelihoods in this program is based on needs. Such as strengthening new skills, increasing income, strengthening supply chains, and social security. With the input of this program, it is hoped that there will be an increase in income, health, and community capacity.

119. Improved governance of natural resource use will reduce deforestation, coral reef damage, and environmental pollution. Efforts to improve governance prioritize safeguarding key habitat areas and species.

120. The project is included in the Mix of USP types category where almost all activity frameworks and locations have been identified and only a small part has not been identified, namely activities planned by beneficiaries of small grants for community-based adaptation action stimulants. Community-based adaptation action activities will

be adjusted to the results of the vulnerability and disaster risk assessment in each village area by ensuring compliance with Adaptation Fund policies related to ESP and GP.

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		

PART III: IMPLEMENTATION ARRANGEMENTS

Project Objective(s)	Project Objective Indicator	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Objective 1: Strengthening the resilience capacity of remote small island areas of Pangkajene Islands Regency to climate change through environmental, social community and economic approaches.	No. of marginalized and vulnerable people who lived in remote and small island areas have been improving their capacity to adapt to the climate changes.	AF Outcome 1: Reduced exposure to climate-related hazards and threats AF Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses AF outcome 3. Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level. AF Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis 2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased. 3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses. 3.2. Percentage of targeted population applying appropriate adaptation responses 6.1 Percentage of households and communities having more secure access to livelihood assets 6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods	192.184
Objective 2: Application of appropriate technology for climate change monitoring and early warning systems in remote small island areas.	No. of technology that has been applied/installed for early warning system No. of vulnerable people that covered by the early warning system	Outcome 1: Reduced exposure to climate-related hazards and threats	1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	166.971

Objective 3: Strengthening coastal ecosystem resilience in response to variability induced stress to climate risk	Total area (Ha) of coastal ecosystem with improved management Number of communities that aware and have adaptation ownership perspective to climate risk reduction	AF Outcomes 5 Increased ecosystem resilience in response to climate change and variability induced stress	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability induced stress.	313.052
Objective 4: Strengthening policies, cooperation and learning in support of increasing resilience to climate change and disaster risk reduction.	Number of institutions strengthened through risk reduce climate change cooperation and coverage of the learning product disseminated	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level AF Outcome 7 Improved policies and regulations that promote and enforce resilience measures Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses 7. Climate change priorities are integrated into national development strategy. 8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level.	144.829
Project Outcomes	**Project Outcomes Indicator**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
1. Increased social, economic and environmental adaptation capacity of vulnerable communities on remote small islands to the impacts of climate change.	No. of community /population that has increased their capacity to respond to climate changes No. of village/institution at village level that has improved their capacity in planning to adapt and mitigate climate changes impact	Output 1.1. Risk and Vulnerability assessment conducted and updated. Output 2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased. Output 3.1. Targeted population groups participating in adaptation and risk	1.1. No. of projects/programmes that conduct and update risk and vulnerability assessments (by sector and scale) 2.1.1 No. of staff trained to respond to, and mitigate impacts of, climate-related events. 2.1.2. No. of targeted institution with increased capacity to minimize exposure to climate variability risks (by type,	192.184

		reduction awareness activities Output 6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	sector and scale) 3.1.1. No. of news outlets in the local press and media that covered the topic 6.1.1.No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies 6.1.2. Type of income sources for households generated under climate change scenarios.	
2. Increased local community adaptive capacity through applied technology on weather monitoring and early warning systems	% of vulnerable populations that benefit from EWS technology No. of villages covered by EWS technology	Output 1.1. Risk and Vulnerability assessment conducted and updated. Output 1.2. Targeted population groups covered by adequate risk reduction systems	1.2 No. of early warning systems (by scale) and no. of beneficiaries covered 1.2.1. Percentage of target population covered by adequate risk-reduction systems	166.971
3. Increased ecosystem resilience in response to variability induced stress to climate risk	Number of coastal ecosystems maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	5.1. No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	313.052
4. Availability of cross-sectoral cooperation agreement or policies to support the climate change resilience for the community of the small and remote island.	Number of policies that support the resilience strategies of vulnerable communities on small islands to climate change.	Output 7. Improved integration of climate-resilience strategies into country development plans	7.1. No. of policies introduced or adjusted to address climate change risk 7.2. No. of targeted development strategies with incorporated climate change priorities enforced	66.158
5. Knowledge and	Number of	Output 3.1 Targeted	3.1.1. No. of news	78.671

Lesson learn dissemination on the small and remote island resiliency to the climate changes	knowledge and lesson learned generated	population groups participating in adaptation and risk reduction awareness activities Output 3.2 Strengthened capacity of national and sub-national stakeholders and entities to capture and disseminate knowledge and learning Output 8. Viable innovations are rolled out, scaled up, encouraged and/or accelerated	outlets in the local press and media that covered the topic. 3.2.2. No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders 8.1. No. of innovative adaptation practice, tools and technologies accelerated, scale up and/or replicated 8.2. No of key finding of effective, efficient adaptation practices, products and technologies generated	

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

A. Record of endorsement on behalf of the government[2]

1. **H. Syahban Sammana, SH** Vice-Regent of Pangkajene Islands Regency	*Letter Date: 13 July 2022*
2. **Dr. M. Ilyas, ST,. M.Sc,.** Head of Marine Affairs and Fisheries Office South Sulawesi Province	*Letter Date: 12 July 2022*
3. Ir. Andi Hasbi, M.T. Head of Environment Office South Sulawesi Province	*Letter Date: 14 July 2022*
4. Prof. Dr. Nurjannah Nurdin, ST Head of Research and Development Center for Marine, Coastal and Small Islands, Hasanuddin University	*Letter Date: 14 July 2022*
5. Dr. Ir. M. Rijal Idrus, M.Sc Head of Research and Development Center for Climate Change, Hasanuddin University	*Letter Date: 14 July 2022*
6. Muhammad Yusuf, S.Hut Director of Coastal and Small Island Utilization, Ministry Marine Affairs and Fisheries	*Endorsement Letter: On Progress*

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

[6.] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Date:	Tel. and email:
Project Contact Person:	
Tel. And Email:	

Endorsement Letter from Marine Affairs and Fisheries South Sulawesi Province

PEMERINTAH PROPINSI SULAWESI SELATAN

DINAS KELAUTAN DAN PERIKANAN

Jl. Bajiminasa No. 12 Telp. 873680 – 854726 Fax. (0411) 858779 Kotak Pos 1062

MAKASSAR 90126

SURAT REKOMENDASI

NOMOR : 523/1000/VII/Dkp

Saya yang bertanda tangan di bawah ini :

Nama	: Dr. M. ILYAS, ST., M.Sc
NIP	: 19700606 199603 1 006
Pangkat	: Pembina Tk I / IV.b
Jabatan	: Kepala Dinas Kelautan dan Perikanan Provinsi Sulawesi Selatan
Unit Kerja	: Provinsi Sulawesi Selatan
Instansi	: Dinas Kelautan dan Perikanan Provinsi Sulawesi Selatan

Memberikan rekomendasi kepada "Konsorsium Tangguh Adaptasi Perubahan Iklim (Lembaga Maritim Nusantara - DFW Indonesia - Nypah Indonesia)" yang merupakan konsorsium dari *Non Goverment Organization* (NGO) yang aktif dalam pemberdayaan masyarakat pesisir dan pulau-pulau kecil di Sulawesi dan indonesia pada umumnya, dimana saat ini sedang mengusulkan di daerah Kabupaten Pangkajene & Kepulauan sebagai lokasi kegiatan pada usulan program adaptasi perubahan iklim yang diselenggarakan oleh KEMITRAAN dengan tema "Membangun Ketahanan Pulau Kecil dan Terpencil Kabupaten Pangkajene Kepulauan Terhadap Perubahan Iklim"

Demikian Surat Rekomendasi ini untuk dipergunakan sebagaimana mestinya.

Makassar, 12 Juli 2022

Kepala Dinas

Dr. M. ILYAS, ST., M.Sc.
Pangkat : Pembina Tk I / IV.b
NIP. 19700606 199603 1 006

MOM: Meeting With Marine Affairs and Fisheries South Sulawesi Province

Minutes of Meeting

Tanggal: 10 Juli 2022
Waktu: 19.00 Wita
Tempat: Kediaman Dinas Kepala Dinas Kelautan Perikanan
Peserta Rapat:

1. Dr. M Ilyas, ST., M.Sc. [Kepala Dinas Kelautan dan Perikanan Prov. Sulawesi Selatan]
2. Ramlan Jamal, S.Kel. M.Si. [Advisor Nypah Indonesia]
3. Ivan Firdaus. ST. [Advisor Lemsa]
4. M Rizki Latjindung [Program Manager Lemsa]
5. Muh Takbir. Dg Sijaya, S.Kel. M.Si [Program Manager Nypah Indonesia]

Agenda:

- Diskusi terkait surat dukungan untuk pengajuan konsep note program adaptasi perubahan iklim.
- Pembahasan strategi kolaborasi dengan Dinas Kelautan dan Perikanan Provinsi dalam pelaksanaan program.

Notulen:

Advisor Nypah Indonesia membuka pertemuan dengan mengucapkan terima kasih kepada Kepala Dinas Kelautan dan Perikanan atas waktunya. Selanjutnya, menjelaskan tujuan pertemuan untuk membahas surat dukungan yang akan digunakan dalam pengajuan konsep note program adaptasi perubahan iklim. Kemudian memberikan pemaparan tentang gambaran project.

1. **Gambaran Program Adaptasi Perubahan Iklim**
    - Menjelaskan secara singkat mengenai fenomena perubahan iklim dan rencana program adaptasi perubahan iklim yang akan disusun berfokus pada penguatan ketahanan pulau-pulau kecil di Kabupaten Pangkep.
    - Program ini dirancang untuk mengatasi dampak perubahan iklim melalui pendekatan lingkungan, sosial, dan ekonomi, serta penerapan teknologi tepat guna.
    - Adapun beberapa isu tentang sosial masyarakat juga disampaikan bahwa selam aini masyarakat di kedua lokasi (Kec Liukang kalmas dan Kec Liukang Tanggaya) mengalami kesulitan dalam pemasaran produk hasil tangakapan serta akses terhadap bahan bakar minyak sebagai bahan transportasi laut unutk menangkap ikan
    - Advisor lemsa, menambahkan tentang aktivitas dan program pendampingan masyarakat yang dilakukan ketiga lembaga (lemsa, dfw, nypah) dalam waktu beberapa tahun terkahir di beberapa provinsi termasuk di sulawesi selatan.
2. **Tanggapan Kepala Dinas Kelautan dan Perikanan**

- Kepala Dinas mengakui pentingnya program adaptasi perubahan iklim dan relevansinya dengan visi provinsi dalam menjaga keberlanjutan ekosistem laut dan pesisir.
- Menyatakan dukungannya untuk program ini dan kesediaannya untuk memfasilitasi penyusunan surat dukungan.
- Menekankan pentingnya sinergi antara pemerintah provinsi, kabupaten dan pihak lain termasuk organisasi non pemerintah dalam mengimplementasikan program ini.

3. **Permintaan Dukungan**
   - Ivan Firdaus, menyampaikan bentuk dukungan meminta dukungan dari Dinas Kelautan dan Perikanan Provinsi berupa surat dukungan resmi.
   - Dukungan ini akan menjadi bagian penting dalam pengajuan proposal ke Adaptation Fund dan menegaskan komitmen pemerintah daerah dan provinsi terhadap program ini.
4. **Diskusi**
   - Diskusi lebih lanjut mengenai rencana pelaksanaan program dan peran Dinas Kelautan dan Perikanan dalam mendukung kegiatan di lapangan.
   - Diskusi tentang bagaimana program ini dapat mendukung upaya konservasi laut dan perikanan yang sedang dilakukan oleh provinsi.
   - Identifikasi tantangan potensial dan cara-cara untuk mengatasinya melalui kolaborasi yang lebih erat antara berbagai pemangku kepentingan.
5. **Tindak Lanjut**
   - Dinas Kelautan dan Perikanan akan menyusun dan memberikan surat dukungan resmi dalam waktu dua hari kedepan.
   - Pertemuan lanjutan akan diadakan untuk membahas detail implementasi program dan kolaborasi lebih lanjut. Pertemuan ini akan dilakukan pasca adanya hasil dan informasi yang baik dari donor (adaptation fund)
6. **Penutupan**
   - Tim mengucapkan terima kasih kepada Kepala Dinas Kelautan dan Perikanan atas dukungan dan komitmennya.
   - Kepala Dinas menyatakan harapannya untuk keberhasilan program dan menegaskan kembali pentingnya kolaborasi dalam menghadapi tantangan perubahan iklim.

Langkah Selanjutnya:

- Penyusunan surat dukungan oleh Dinas Kelautan dan Perikanan.
- Mengawal pembuatan surat dukungan
- Pertemuan lanjutan tim untuk untuk menyelesaikan concept note.

Dicatat oleh: Muh Takbir dg Sijaya

Disetujui oleh: Ramlan Jamal.

Endorsement Letter from Environment Office South Sulawesi Province

PEMERINTAHAN PROVINSI SULAWESI SELATAN

DINAS PENGELOLAAN LINGKUNGAN HIDUP

Jl. Urip Sumohardjo No. 269 ☎ (0411) 450478-453208 Fax. (0411) 450478
Makassar 90231

SURAT REKOMENDASI
Nomor: 660 / 3104 / SET/DPLH

Saya yang bertanda tangan di bawaha ini:

Nama	: Ir. Andi Hasbi, M.T
NIP.	: 19650427 199203 1 009
Pangkat/Gol	: Pembina Utama Madya / IV.d
Jabatan	: Kepala Dinas Pengelolaan Lingkungan Hidup
Unit Kerja	: Provinsi Sulawesi Selatan
Instansi	: Dinas Pengelolaan Lingkungan Hidup

Memberikan rekomendasi kepada "Konsorsium Tangguh Adaptasi Perubahan Iklim Pesisir" yang merupakan konsorsium dari *Non Goverment Organization* (NGO) yang aktif dalam pemberdayaan masyarakat pesisir dan pulau-pulau kecil di Sulawesi dan indonesia pada umumnya, dimana saat ini sedang mengusulkan di daerah Kabupaten Pangkajene & Kepulauan sebagai lokasi kegiatan pada usulan program adaptasi perubahan iklim yang diselenggarakan oleh KEMITRAAN – Adaptation Fund dengan tema "Membangun Ketahanan Pulau Kecil dan Terpencil Kabupaten Pangkajene Kepulauan Terhadap Perubahan Iklim"

Demikian surat Rekomendasi ini untuk dipergunakan sebagaimana mestinya

Makassar, 14 Juli 2021

Kepala Dinas

Ir. Andi Hasbi, M.T
Pangkat : Pembina Utama Madya
NIP. 19650427 199203 1 009

Endorsement Letter from Vice-Regent of Pangkajene Islands Regency

BUPATI PANGKAJENE DAN KEPULAUAN

Pangkep, 13 Juli 2022

Number : 900 / 129 / KESBANGPOL
Appendix :
Subject : Endorsement for Building Climate Change *Resilience for Smal and Remote Islands Project* In Pangkajene dan Kepulauan District of South Sulawesi Province

To : The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email : Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

In my capacity as designated authority for local government in Pangkajene dan Kepulauan Regency, I confirm that the project proposal **Building Climate Change Resilience for Small and Remote Islands Project In Pangkajene dan Kepulauan District of South Sulawesi Province** is in accordance with the local government's priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Indonesia particularly in Pangkajene dan Kepulauan Regency of South Sulawesi Province.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by Partnership for Governance Reform (kemitraan) of Indonesia and executed by Small and Remote Islands Climate Change Adaptation Consortium (DFW Indonesia, Lemsa, Yayasan Nypah). Thank you for your attention.

WAKIL BUPATI PANGKAJENE DAN KEPULAUAN

H. SYAHBAN SAMMANA, SH

MOM: Meeting with Vice-Regent of Pangkajene Islands Regency

Minutes Of Meeting

Tanggal: 13 Juli 2022
Waktu: 16.00 Wita
Tempat: Rumah Jabatan Bupati Pangkajene Kepulauan, Kabupaten Pangkep
Peserta Rapat:

1. Dr. H. Muhammad Yusran Lalogau, S.Pi., M.Si [Bupati Pangkep]
2. Baso Syafiuddin, ST.M.M [Advisor lemsa]
3. M Rizki Latjindung [Program Manager Lemsa]
4. Ahmad Mauliddin, ST., M.Sc [GIS Specialist Project)

Agenda:

- Rencana tindaklanjut permohonan surat dukungan hasil dari pertemuan dengan Kepala Bidang Perencanaan Dinas Kelautan dan Perikanan, terkait tindaklanjut surat dukungan dari Kepala daerah kabupaten pangkajene kepulauan.
- Diskusi mengenai rencana, target dan keluaran program adaptasi perubahan iklim di Pulau – Pulau terpencil Kabupaten Pangkep
- Permintaan dukungan untuk program Pembangunan Ketahanan Perubahan Iklim untuk pulau-pulau kecil dan terpencil di Kabupaten Pangkep.

Notulen:

1. **Pembukaan**
    - Advisor lemsa, mengawali dengan mengucapkan terima kasih kepada Bupati atas waktunya dan menjelaskan pentingnya pertemuan ini.
2. **Gambaran Proyek**
    - Tim Lemsa memberikan gambaran Program terkait Pembangunan Ketahanan Perubahan Iklim, menekankan pentingnya program ini untuk pulau-pulau kecil dan terpencil di Kabupaten Pangkep.
    - Program ini bertujuan untuk melakukan penguatan sumberdaya akibat dari perubahan iklim melalui empat komponen strategi adaptasi yakni 1) Membangun ketahanan Wilayah pulau pulau kecil dengan pendekatan lingkungan, sosial dan ekonomi; 2) Penerapan teknologi tepat guna untuk sistem pemantauan dan peringatan dini akibat dari perubahan iklim di pulau terpencil; 3) Pengurangan tekanan ekosistem pendukung untuk menghadapi perubahan iklim dari kegiatan yang tidak ramah lingkungan; 4) Memperkuat kebijakan, kerjasama dan pembelajaran dalam mendukung peningkatan ketahanan terhadap perubahan iklim dan resiko bencana.
3. **Diskusi**
    - Diskusi lebih lanjut tentang rencana pelaksanaan proyek, jadwal, dan hasil utama.

- Diskusi tentang bagaimana pemerintah daerah dapat membantu memfasilitasi program dan nanntinya memberikan dukungan kerjasama terkait kebijakan aksi adpatasi, termasuk keterlibatan masyarakat dan mobilisasi sumber daya lokal.

4. **Tanggapan Bupati**
   - Bupati mengakui proposal tersebut dan menegaskan kesesuaian program dengan prioritas pemerintah daerah terhadap adaptasi perubahan iklim.
   - Menyatakan dukungannya untuk program adaptasi perubahna iklim dan kesediaannya untuk memberikan dukungan yang diperlukan
   - Menyebutkan keterlibatan Kemitraan Indonesia dan Konsorsium Tangguh Adaptasi Perubahan Iklim yang terdiri dari 3 Lembaga yakni : Lembaga Maritim Nusantara, Nypah Indonesia, dan Destructive Fishing Watch sebagai Implementor utama dalam pelaksanaan program
5. **Tindak Lanjut**
   - Konsorsium Tangguh Adaptasi Perubahan Iklim akan mengirimkan proposal proyek yang lebih rinci dan dokumen yang diperlukan ke kantor Bupati Pasca adanya respon baik dari Kemitraan dan Adaptation Fund
   - Pertemuan koordinasi akan dijadwalkan dengan mitra konsorsium untuk perencanaan lebih lanjut.
   - Pemerintah Daerah Kabupaten Pangkep akan menyusun dan mengeluarkan surat dukungan resmi untuk mendukung partisipasi konsorsium Tangguh Adaptasi Perubahan Iklim dalam pengajuan pendanaan ke Adaptation Fund.
6. **Penutupan**
   - M Rizki Latjindung, mengucapkan terima kasih kepada Bupati atas dukungan dan kerjasamanya.
   - Bupati menyatakan harapannya untuk keberhasilan pelaksanaan program dan menegaskan komitmennya untuk mendukung inisiatif adaptasi perubahan iklim di Kabupaten Pangkep.

Langkah Selanjutnya:

- Pertemuan koordinasi lanjutan tim penyusun concept note
- Pengiriman Concept Note kepada Kemitraan Indonesia.

Dicatat oleh: M Rizki Latjindung

Disetujui oleh: Baso Syafiuddin

Endorsement Letter from Head of Research and Development Center for Marine, Coastal and Small Islands, Hasanuddin University

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
LEMBAGA PENELITIAN DAN PENGABDIAN KEPADA MASYARAKAT
PUSLITBANG LAUT, PESISIR DAN PULAU-PULAU KECIL
Jl. Perintis Kemerdekaan KM.10, Makassar 90245
Telp.(0411) 587032, 582500, 588888 Fax.(0411) 587032, 584024
Laman : http://lp2m.unhas.ac.id email : lp2m@unhas.ac.id

SURAT REKOMENDASI

NOMOR : 26/ UN4.22.11/RT.01.00/2022

Saya yang bertanda tangan di bawah ini :

Nama : Prof. Dr. Nurjannah Nurdin, ST
Jabatan : Kepala Puslitbang Laut Pesisir dan Pulau-Pulau Kecil, Unhas
Instansi : Universitas Hasanuddin

Memberikan rekomendasi kepada "Konsorsium Tangguh Adaptasi Perubahan Iklim Pesisir" yang merupakan konsorsium dari *Non Goverment Organization* (NGO) yang aktif dalam pemberdayaan masyarakat pesisir dan pulau-pulau kecil di Indonesia pada umumnya, dimana saat ini sedang mengusulkan di daerah Kabupaten Pangkajene & Kepulauan, Provinsi Sulawesi Selatan sebagai lokasi kegiatan pada usulan program adaptasi perubahan iklim yang diselenggarakan oleh KEMITRAAN – *Adaptation Fund* dengan tema "Membangun Ketahanan Pulau Kecil dan Terpencil Kabupaten Pangkajene Kepulauan Terhadap Perubahan Iklim"

Demikian Surat Rekomendasi ini untuk dipergunakan sebagaimana mestinya.

Makassar, 14 Juli, 2022

Kepala,

Prof. Dr. Nurjannah Nurdin, ST
NIP 19680918 199703 2 001

Endorsement Letter from Head of Research and Development Center for Climate Change, Hasanuddin University

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
LEMBAGA PENELITIAN DAN PENGABDIAN KEPADA MASYARAKAT
PUSLITBANG PERUBAHAN IKLIM
Kampus Unhas, Tamalanrea, Makassar 90245

Laman: http://lp2m.unhas.ac.id email: climate.change@unhas.ac.id

SURAT REKOMENDASI

NOMOR: 006/Rek/E/VII/2022

Yang bertanda tangan di bawah ini:

Nama : Dr. Ir. M. Rijal Idrus, M.Sc

Jabatan : Kepala Puslitbang Perubahan Iklim, Unhas

Instansi : Universitas Hasanuddin

Memberikan rekomendasi kepada "**Konsorsium Tangguh Adaptasi Perubahan Iklim Pesisir**" yang merupakan konsorsium dari Non Goverment Organization (NGO) yang aktif dalam pemberdayaan masyarakat pesisir dan pulau-pulau kecil di Indonesia pada umumnya, dimana saat ini sedang mengusulkan di daerah Kabupaten Pangkajene & Kepulauan, Provinsi Sulawesi Selatan sebagai lokasi kegiatan pada usulan program adaptasi perubahan iklim yang diselenggarakan oleh KEMITRAAN – Adaptation Fund dengan tema "*Membangun Ketahanan Pulau Kecil dan Terpencil Kabupaten Pangkajene Kepulauan Terhadap Perubahan Iklim*"

Demikian Surat Rekomendasi ini diberikan untuk dipergunakan sebagaimana mestinya.

Makassar, 14 Juli, 2022

Kepala,

Ir. Rijal M. Idrus, MSc, PhD.
NIP: 19651219199021001

MOM: Meeting with Head of Research and Development Center for Climate Change, Hasanuddin University

Minutes of Meeting

Tanggal : 14 Juli 2022
Waktu : 13.00 Wita
Tempat : Kantor Pusat Penelitian dan Pengembangan Perubahan Iklim, UNHAS
Peserta Rapat ;

1. Habil Noor, [Nypah Indonesia]
2. M Rizki L, [Lemsa]
3. Dr. Ir. M. Rijal Idrus, M.Sc, [Kepala Pusat Penelitian dan Pengembangan Perubahan Iklim, Universitas Hasanuddin]

Agenda:

- Diskusi mengenai surat dukungan untuk pengajuan proposal dan concept note program adaptasi perubahan iklim.
- Pembahasan tentang peran Pusat Penelitian dan Pengembangan Perubahan Iklim dalam mendukung pelaksanaan program di pulau-pulau kecil Kabupaten Pangkep.

Notulen:

Habil Noor membuka pertemuan dengan ucapan terima kasih kepada Dr. Ir. M. Rijal Idrus atas kesediaannya untuk bertemu. Kemudian, menyampaikan tujuan utama pertemuan yaitu untuk membahas dukungan Pusat Penelitian dan Pengembangan Perubahan Iklim dalam pengajuan proposal program adaptasi perubahan iklim.

1. **Gambaran Umum Program**
    - Habil Noor, memberikan gambaran singkat tentang program adaptasi perubahan iklim yang akan dilaksanakan di pulau-pulau kecil Kabupaten Pangkep. Selanjutnya memaparkan, program ini bertujuan untuk meningkatkan ketahanan lingkungan, sosial, dan ekonomi masyarakat terhadap dampak perubahan iklim melalui penerapan berbagai strategi adaptasi.
2. **Permintaan Dukungan**
    - M Rizki juga mengatakan pentingnya dukungan dari lembaga akamedik khususnya lembaga Pusat Penelitian dan Pengembangan Perubahan Iklim, dalam bentuk surat dukungan resmi.
    - Selanjutnya, menyampaikan bahwa dukungan ini akan memperkuat pengajuan proposal ke Adaptation Fund dan menunjukkan komitmen akademik dalam mendukung inisiatif adaptasi perubahan iklim.
3. **Tanggapan Dr. Ir. M. Rijal Idrus**
    - Dr. Ir. M. Rijal Idrus menyatakan bahwa Pusat Penelitian dan Pengembangan Perubahan Iklim, Universitas Hasanuddin, sangat mendukung inisiatif ini.
    - Menyampaikan bahwa surat dukungan resmi akan disusun dan selanjutnya diberikan untuk mendukung pengajuan proposal.

- Menekankan pentingnya kolaborasi antara lembaga penelitian, pemerintah, dan NGO dalam pelaksanaan program ini.

4. **Diskusi**
   - Diskusi mengenai potensi kontribusi Pusat Penelitian dan Pengembangan Perubahan Iklim dalam pelaksanaan program, termasuk dukungan ilmiah dan teknis.
   - Pembahasan tentang bagaimana penelitian yang dilakukan oleh Pusat Penelitian dan Pengembangan Perubahan Iklim dapat mendukung implementasi program secara lebih efektif.
   - Identifikasi tantangan potensial dan cara-cara untuk mengatasinya melalui kolaborasi yang lebih erat antara berbagai pemangku kepentingan.
5. **Tindak Lanjut**
   - Pusat Penelitian dan Pengembangan Perubahan Iklim kedepannya dapat memberikan dukungan teknis dan ilmiah yang diperlukan selama pelaksanaan program.
   - Pertemuan lanjutan akan diadakan untuk membahas detail implementasi program dan peran lembaga pendidikan dalam mendukung kegiatan di lapangan.
6. **Penutupan**
   - Habil Noor, mengucapkan terima kasih kepada Dr. Ir. M. Rijal Idrus atas dukungan dan komitmennya dalam mendukung program adaptasi perubahan iklim.
   - Dr. Ir. M. Rijal Idrus menyatakan harapannya agar program ini dapat berjalan dengan lancar dan memberikan manfaat yang signifikan bagi masyarakat di pulau-pulau kecil Kabupaten Pangkep.

Langkah Selanjutnya:

- Penyusunan dan pengiriman surat dukungan oleh Pusat Penelitian dan Pengembangan Perubahan Iklim.
- Koordinasi lanjutan untuk merinci peran dan kontribusi lembaga penelitian dalam pelaksanaan program kedepannya, pasca adanya respon baik terhadap concept note

Dicatat oleh: Habil Noor

Endorsement Letter KLHK for Resilient-Climate Change Adaptation Consortium

MINISTRY OF ENVIRONMENT AND FORESTRY
DIRECTORATE GENERAL OF CLIMATE CHANGE
Manggala Wanabakti Building Block VII 12th Floor, Jalan Gatot Subroto – Senayan, Jakarta 10270
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Our Ref. : S.444/PPI/API/KUM.0/10/2023

Jakarta, 24 Oktober 2023

Subject : Endorsement to the concept note Building Climate Changes Resiliency for Small and Remote Islands in Pangkajene Island (Pangkep) District

Attention to:
The Adaptation Fund Board Secretariat
c/o Global Environment Facility
Mail stop: N 7-700,1818 H Street NW
Washington DC 20433 USA
email: afbsec@adaptation-fund.org

Dear The Adaptation Fund Board,

I am writing to you in conjunction with the Concept Note "**Building Climate Changes Resiliency for Small and Remote Islands in Pangkajene Island (Pangkep) District**" in which I fully endorse.

With the consideration and in my capacity as The National Designated Authority of Adaptation Fund in Indonesia, I recommend the above concept note to be granted support from the Adaptation Fund Board.

Thank you for your attention and further cooperation.

Sincerely yours,

Laksmi Dewanthi
Director General for Climate Change
As National Designated Authority
for Adaptation Fund Indonesia

Copy to:
Kemitraan (Partnership Governance Reform in Indonesia) as NIE AF in Indonesia