



ADAPTATION FUND

AFB/PPRC.21/9
26 September 2017

Adaptation Fund Board
Project and Programme Review Committee
Twenty-First Meeting
Bonn, Germany, 10-11 October 2017

Agenda Item 6 e)

PROPOSAL FOR INDONESIA (5)

Background

1. The Operational Policies and Guidelines (OPG) for Parties to Access Resources from the Adaptation Fund (the Fund), adopted by the Adaptation Fund Board (the Board), state in paragraph 45 that regular adaptation project and programme proposals, i.e. those that request funding exceeding US\$ 1 million, would undergo either a one-step, or a two-step approval process. In case of the one-step process, the proponent would directly submit a fully-developed project proposal. In the two-step process, the proponent would first submit a brief project concept, which would be reviewed by the Project and Programme Review Committee (PPRC) and would have to receive the endorsement of the Board. In the second step, the fully-developed project/programme document would be reviewed by the PPRC, and would ultimately require the Board's approval.

2. The Templates approved by the Board (Annex 5 of the OPG, as amended in March 2016) do not include a separate template for project and programme concepts but provide that these are to be submitted using the project and programme proposal template. The section on Adaptation Fund Project Review Criteria states:

For regular projects using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project concept. In addition, the information provided in the 1st step approval process with respect to the review criteria for the regular project concept could be less detailed than the information in the request for approval template submitted at the 2nd step approval process. Furthermore, a final project document is required for regular projects for the 2nd step approval, in addition to the approval template.

3. The first four criteria mentioned above are:

- (i) Country Eligibility,
- (ii) Project Eligibility,
- (iii) Resource Availability, and
- (iv) Eligibility of NIE/MIE.

4. The fifth criterion, applied when reviewing a fully-developed project document, is:
(v) Implementation Arrangements.

5. It is worth noting that since the twenty-second Board meeting, the Environmental and Social (E&S) Policy of the Fund was approved and since the twenty-seventh Board meeting, the Gender Policy (GP) of the Fund was also approved. Consequently, compliance with both the ESP and the GP has been included in the review criteria both for concept documents and fully-developed project documents. The proposals template was revised as well, to include sections requesting demonstration of compliance of the project/programme with the ESP and the GP.

6. In its seventeenth meeting, the Board decided (Decision B.17/7) to approve "Instructions for preparing a request for project or programme funding from the Adaptation Fund", contained in the Annex to document AFB/PPRC.8/4, which further outlines applicable review criteria for both concepts and fully-developed proposals. The latest version of this document was launched in conjunction with the revision of the Operational Policies and Guidelines in November 2013.

7. Based on the Board Decision B.9/2, the first call for project and programme proposals was issued and an invitation letter to eligible Parties to submit project and programme proposals to the Fund was sent out on April 8, 2010.
8. According to the Board Decision B.12/10, a project or programme proposal needs to be received by the secretariat no less than nine weeks before a Board meeting, in order to be considered by the Board in that meeting.
9. The following project concept document titled “The adaptation measures to support sustainable livelihoods for local communities in mangrove ecosystem in the Mahakam Delta, East Kalimantan” was submitted by Kemitraan (The Partnership for Governance Reform), which is a National Implementing Entity of the Adaptation Fund.
10. This is the first submission of the proposal using the two-step submission process. It was received by the secretariat in time to be considered in the thirtieth Board meeting. The secretariat carried out a technical review of the project proposal, assigned it the diary number IDN/NIE/Food/2017/2, and completed a review sheet.
11. In accordance with a request to the secretariat made by the Board in its 10th meeting, the secretariat shared this review sheet with Kemitraan, and offered it the opportunity of providing responses before the review sheet was sent to the PPRC.
12. The secretariat is submitting to the PPRC the summary and, pursuant to decision B.17/15, the final technical review of the project, both prepared by the secretariat, along with the final submission of the proposal in the following section. In accordance with decision B.25.15, the proposal is submitted with changes between the initial submission and the revised version highlighted.
13. Lastly, Kemitraan has submitted a Project Formulation Grant Request, which is also available as an addendum to this document.

Project Summary

Indonesia – The adaptation measures to support sustainable livelihoods for local communities in mangrove ecosystem in the Mahakam Delta, East Kalimantan

Implementing Entity: *Kemitraan*

Project/Programme Execution Cost: USD 39,511.00

Total Project/Programme Cost: USD 546,274.00

Implementing Fee: USD 43,701.00

Financing Requested: USD 589,975.00

Project Background and Context:

The proposal intends to provide technical assistance as well as building the capacity of local communities to adapt to climate change impacts by considering ecological, social and economic aspects in the Mahakam Delta. It has identified sea level rise as a climate change threat to the mangroves that are an essential basis of social and economic well-being of the fishing communities in the Mahakam Delta.

Component 1: Restoration of mangrove ecosystems from the impacts of climate change as a source to support economic development (USD 261,332.40).

This component will seek to restore the mangrove forest, which in turn will benefit the mangrove ecosystem as ecological service provider and protection of economic activity of the community from sea waves, the storm and the impact of sea level rise and abrasion. This component also aims to strengthen awareness and ownership of local communities and youth groups (students) related to the conservation of mangrove ecosystems..

Mangrove reforestation will be undertaken by local communities who have previously been trained in 3 villages located in the mahakam delta. Growth monitoring and carbon analysis will also be undertaken as part of restoration efforts. To maintain the sustainability of the restoration result, it is important to raise awareness of local communities, and local government includes involving youth groups (school children) in raising awareness. In addition, to oversee the sustainability of the program results will also provide guidebooks, documentaries and reporting that will also be used as a media campaign and publication. In this component will also facilitated the compile of policy briefs that are expected to provide input in formulating regional policies related to the preservation of mangrove ecosystems.

Component 2: Strengthening the institutionalization of policy and sustainability of mangrove ecosystem conservation (USD 62,147.10).

This component aims to support the institutionalization of local policies related to the sustainability of mangrove ecosystems. It is expected that through the process of presentation and assistance there will be a draft of local policy in the form of village regulations as a legal protection, where in formulating the policy all relevant stakeholders will be involved so that the policy is expected to be implemented by all parties. The institutionalization of this local policy will be facilitated in 3 villages in the Mahakam Delta region. The existence of this local policy is expected to maintain the preservation of mangrove ecosystems in the Mahakam Delta region.

Component 3: Promote and develop an alternative economics development for local community. (USD 183,283.50).

This component will aim to develop a demonstration plot of silvofishery pond model. This is part of the effort to recover land carrying capacity and decrease water quality improvement by planting mangrove in ponds and proper aquaculture practices with the use of organic production facilities, thus providing sustainable economic value. This model will also be an example for local communities in the application of their aquaculture system in the future.

In addition, through this program is expected to help local communities increase their income by adding value to non-timber mangrove products and promote alternative economic resources, by building a synergicity between economic activities of the community and the ecology of the region in achieving sustainable mangrove ecosystem management in the future based on the principle of adaptation and resilience of climate change. In all activities in this component will regard the involvement of vulnerable groups including women's groups



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: SMALL-SIZE PROGRAMME

Country/Region: **Indonesia**

Project Title: **The adaptation measures to support sustainable livelihoods for local communities in mangrove ecosystem in the Mahakam Delta, East Kalimantan**

AF Project ID: **IDN/NIE/Food/2017/2**

IE Project ID:

Requested Financing from Adaptation Fund (US Dollars): **589,975.00**

Reviewer and contact person: **Andrew Chilombo**

Co-reviewer(s): **Paul Hartman**

IE Contact Person: **Monica Tanuhand**

Review Criteria	Questions	Comments on 16 August 2017	Comments on 12 September 2017
Country Eligibility	1. Is the country party to the Kyoto Protocol?	Yes	
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	Yes. The Indonesian Mahakam Delta is one of largest mangrove ecosystems in the country that is being affected by sea level rise leading to turbidity, sedimentation and erosion. This is impacting fishing communities in ways that compromise their livelihoods. Consequently, the mangroves being degraded in search of more fishing grounds.	
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	Yes, dated April 7, 2017	

	<p>2. 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?</p>	<p>The project proposes 'providing technical assistance as well as building the capacity of local communities to adapt with climate change.' The overall observation is that the information provided is not adequate to assess compliance with this particular review criterion.</p> <p>The proposed focus of the project is more akin to a livelihood project than an adaptation project. Clarify how the listed objectives will lead to producing visible and tangible results on the ground that will be measurable, monitorable and verifiable. CR1</p> <p>The proposed objectives as well as components are too many, and do not sufficiently reflect adaptation reasoning. Clarify. CR2</p> <p>The coherence and logical connection between objectives, components and the broader context of the climate change and non-climate change challenges in Mahakam delta could be improved. CR3</p> <p>Provide additional information regarding the climate change as well as non-climate change barriers. CR4</p>	<p>CR1: Partially addressed. Without necessarily altering the focus, the components could be articulated differently to make them more easily understandable.</p> <p>CR2: Addressed.</p> <p>CR3: See comment CR1 above.</p> <p>CR4: At full project development stage, more substantiated information on the climate change and non-climate change adaptation challenges will be required.</p>
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	<p>3. 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?</p>	<p>The information provided is not adequate to assess compliance with this particular review criterion. Systematically, provide additional information on the economic, social and environmental benefits of this proposed project.</p> <p>Clarify how 'fish or shrimp production would increase by 42 kg /ha/harvest cycle.' CR5</p> <p>Clarify who will be paying for the seedling services, or source of funding for the seedling services. CR6</p> <p>Clarify if the non-mangrove products will interest women so as to ensure that there is no 'dis-adoption' of the initiative. CR7</p> <p>Include context information on the vulnerable community members. CR8</p>	<p>CR5: At full project development stage, more substantiated information on the increase of fish and shrimp production, and how that they will contribute to livelihoods will be required.</p> <p>CR6: Update the project document with this additional information on the mechanism for seedling services.</p> <p>CR7: Update the project document with this additional information demonstrating women involvement in non-mangrove products to ensure there is no 'dis-adoption' of envisaged initiatives. In addition, clarify women's own perspectives, voices and contributions when it comes to non-mangrove products.</p> <p>CR8: At full project development stage, more information will be required to demonstrate the full vulnerability context of community members.</p>
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	4. Is the project / programme cost effective?	<p>The information provided is not adequate to assess compliance with this particular review criterion. Provide additional information and explanation of the selected components and the approach ensuring they reflect adaptation. CR9</p> <p>Clarify sustainability of proposed components to underscore their scalability and replicability. CR10</p>	<p>CR9: Not addressed. In very clear terms, demonstrate how this approach of implementing the proposed three components is more cost-effective than any other way.</p> <p>CR10: Clarify how the mentoring program will be sustained, and the mechanism for disseminating lessons learned to relevant stakeholders.</p>
	5. 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?	<p>The information provided is not adequate to assess compliance with this particular review criterion.</p> <p>More information required to clearly and systematically indicate which and how the component is in line with which relevant national or subnational development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments. CR11</p>	<p>CR11: At full project development stage, more information will be required to strengthen the embeddedness and consistency of the proposed project with identified institutional and policy frameworks at national level.</p>

	6. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund??	No. Logically, include a table indicating relevant technical standards and compliance. CAR1	CAR1: Partially addressed. For each national standard, include a clearing authority.
	7. Is there duplication of project / programme with other funding sources?	If there is no duplication, identify programs, projects and other development interventions that demonstrate complementarity with the proposed project. CR12	CR12: Provide information and lessons from the Mangrove rehabilitation program that have informed the design of this proposed project.
	8. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	It needs further development to reflect how proposed Knowledge Management activities will support the project to systematically keep track of experiences and lessons from the interventions. Include the engagement mechanism in knowledge sharing and communications with immediate beneficiaries and broader audiences beyond the catchment area. CR13	CR13: At full project development stage, more information will be required to reflect how proposed Knowledge Management activities will support the project to systematically keep track of experiences and lessons from the interventions. More information will be required regarding the engagement mechanism in knowledge sharing and communications with immediate beneficiaries and broader audiences beyond the catchment area.

	<p>9. 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?</p>	<p>Clarify if these stakeholders that have been met are from Mahakam Delta, and if they have been identified as key stakeholders in this project. CR14</p> <p>Note that at a later stage this section will need to be further developed to include the role of each of the stakeholders that has been met.</p>	<p>CR14: At full project development stage, a full-fledged consultative process will need to be carried out and demonstrated, taking into account gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund.</p>
	<p>10. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p>No. See review comments CR1 – CR4 above. CR15</p> <p>Provide additional information to demonstrate how the interventions will increase the <i>resilience</i> of both the communities themselves and the Mahakam Delta as an ecological system. CR16</p>	<p>CR15: See CR1 and CR4 above.</p> <p>CR16: Partially addressed. As noted under CR4 above, a more elaborate articulation of interventions will be required at full project development to demonstrate resilience of both the communities themselves and the Mahakam Delta as an ecological system to justify full cost of adaptation reasoning.</p>
	<p>11. Is the project / program aligned with AF's results framework?</p>	<p>No. See comments See review comments CR1 – CR4 and CR 16 above. CR17</p>	<p>Partially addressed. See comment CR4 and CR16 above. CR17</p>
	<p>12. Has the sustainability of the project/program</p>	<p>While training and initial cost coverage will be provided, it is unclear if the additional economic benefits gained through implementing the silvo-fishery pond system will outweigh the cost of inputs in the time after the project finishes. In</p>	<p>CR18: Partially addressed. Include the cost justification in the project document, and clarify sustainability by explaining the replicability and scalability of the</p>

	me outcomes been taken into account when designing the project?	addition, clarify sustainability by explaining the replicability and scalability of the envisaged adaptation activities and benefits of this project. CR18	envisaged adaptation activities and benefits of this project.
	13. 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?	<p>Not demonstrated. The project will be implemented in a high-value natural environment of the Mahakam river delta. The environmental and social risks associated with the proposed activities have not been adequately identified, and there is no substantiation of the risk findings in the concept note. There are clear ESP risks associated with mangrove rehabilitation (economic resettlement, marginalised and vulnerable groups, natural habitats, biodiversity, ...) and with the provision of and training in the use of fish aggregation devices (FAD). There are risks associated with their construction (said to be environmentally friendly because of their main frame being out of PVC) which may encourage mangrove cutting, as well as with their use; FADs may have significant environmental impacts (overfishing, by-catch, risks to marine mammals etc), and therefore should only be used within an effective fisheries management environment. The proposal should demonstrate that the fisheries in which the FADs would be used are subject to a performant, credible and effective fisheries management regime. CR19</p> <p>A better articulation and clarification of concrete adaptation activities will enable a better overview of environmental and social impacts / risks identified. In addition, mitigation of risks related to possible pollution from fish and shrimp ponds and the protection of natural habitats from NTFP collection should be explained. Consequently, a categorization (A, B or C) of the project as per the Environmental and Social Policy of the Fund should be provided. CR20</p>	<p>CR19: Even with the removal of FADs, the request has not been addressed.</p> <p>CR20: It is not clear where in the document this table is. Please, clarify.</p>
Resource Availability	1. Is the requested project / programme funding within	Yes	

	the cap of the country?		
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	Revise appropriately and indicate amounts accordingly in the order below: -Project/Programme Execution Cost; -Total Project/Programme Cost; and -Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable). CAR2	CAR2: Addressed.
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	See review comment CAR above. CAR3	CAR3: Include the Execution Costs in the detailed budget table.
Eligibility of IE	4. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	Yes, it has been submitted through Kemitraan, a national Implementing Entity	

Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a (Not required at the concept stage)	
	2. Are there measures for financial and project/programme risk management?	n/a (Not required at the 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 (Not required at the concept stage)	
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a (Not required at the concept stage)	

	5. Is an explanation and a breakdown of the execution costs included?	n/a (Not required at the concept stage)	
	6. Is a detailed budget including budget notes included?	n/a (Not required at the 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 (Not required at the concept stage)	
	8. Does the M&E Framework include a breakdown of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a (Not required at the concept stage)	

	<p>9. Does the project/program'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?</p>	<p>n/a (Not required at the concept stage)</p>	
	<p>10. Is a disbursement schedule with time-bound milestones included?</p>	<p>Yes. However, it will need to be adjusted to reflect the current status of the project processing.</p>	

<p>Technical Summary</p>	<p>The proposal intends to provide technical assistance as well as building the capacity of local communities to adapt to climate change impacts by considering ecological, social and economic aspects in the Mahakam Delta. It has identified sea level rise as a climate change threat to the mangroves that are an essential basis of social and economic well-being of the fishing communities in the Mahakam Delta.</p> <p>The initial technical review found that the proposal did not meet the requirements of the Adaptation Fund. The review observed that the proposal felt short of the coherence and logic between the climate change and non-climate change challenges in the Mahakam Delta. The proposed interventions in form of activities and the adaptation potential of the interventions to strengthen the resilience of communities as well as that of the ecological benefits of the mangroves needed better articulation.</p> <p>The current technical review has observed that the concept has addressed some of the concerns raised in the first review. The components have been revised and so have project activities to improve the adaptation reasoning of the project. Some of the concerns have not been fully addressed, while others could be addressed at the full project development stage. Moving forward, the Proponent is invited to consider addressing the following observations:</p> <p>(A) Observations and recommendations that need to be addressed while developing the full proposal:</p>
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- Without necessarily altering the focus, the components could be articulated differently to make them more easily understandable;
- Include more substantiated information on the climate change and non-climate change adaptation challenges in the Mahakam Delta;
- Provide more substantiated information on the increase of fish and shrimp production, and how that will contribute to livelihoods;
- Provide more information to demonstrate the full vulnerability context of community members;
- Provide more information to strengthen the embeddedness and consistency of the proposed project with identified institutional and policy frameworks at national level as well as local level;
- Provide a more elaborate articulation of interventions will be required at full project development to demonstrate resilience of both the communities themselves and the Mahakam Delta as an ecological system to justify full cost of adaptation reasoning;
- Clarify how the mentoring program will be sustained, and the mechanism for disseminating lessons learned to relevant stakeholders;
- Provide more information to reflect how proposed Knowledge Management activities will support the project to systematically keep track of experiences and lessons from the interventions;
- Provide more information regarding the engagement mechanism in knowledge sharing and communications with immediate beneficiaries and broader audiences beyond the catchment area;
- Information about a full-fledged consultative process will need to be carried out and demonstrated, taking into account gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund; and
- Include the Execution Costs in the detailed budget table.

(B) Observations and recommendations that need to be addressed before the concept can be endorsed:

- All updated information in response to the previous technical review need to be included in the project document, such as the mechanism for seedling services; women involvement in non-mangrove products to ensure there is no 'dis-adoption' of envisaged initiatives; and clarify women's own perspectives, voices and contributions when it comes to non-mangrove products;
- Clarify in very clear terms, how this approach of implementing the proposed three components is more cost-effective than any other way;
- For each national standards and codes identified, include the relevant clearing authority;
- Provide information and lessons from the Mangrove rehabilitation program that have informed the design of this proposed

	<p>project;</p> <ul style="list-style-type: none">• Include the cost justification in the project document, and clarify sustainability by explaining the replicability and scalability of the envisaged adaptation activities and benefits of this project; and• The environmental and social risks associated with the proposed activities have not been adequately identified, and there is no substantiation of the risk findings in the concept note.
Date:	September 12, 2017



ADAPTATION FUND

**REQUEST FOR PROJECT/PROGRAMME
FUNDING FROM THE ADAPTATION FUND**

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat
1818 H Street NW
MSN P4-400
Washington, D.C., 20433
U.S.A
Fax: +1 (202) 522-3240/5
Email: afbsec@adaptation-fund.org



ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	Small-sized programme
Country/ies:	Indonesia
Title of Project/Programme:	The adaptation measures to support sustainable livelihoods for local communities in mangrove ecosystem in the Mahakam Delta, East Kalimantan
Type of Implementing Entity:	National implementing entity
Implementing Entity:	Kemitraan
Executing Entity/ies:	Dipterocarps Research Center, Yayasan Mangrove Lestari (YML) Delta Mahakam
Amount of Financing Requested:	US \$ 589,975.00 (in U.S Dollars Equivalent)

Project / Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

Mahakam Delta is one of largest mangrove ecosystems in Indonesia. Located in east coastline of East Kalimantan, Kutai Kartanegara District (117°15'–117° 40' east longitude and 0° 19'–0° 55' south latitude), this area comprises of 46 small delta islands formed by siltation from Mahakam River. In this area there are 3 sub-districts and 29 villages with total population of 2015 as many as 138,546 people, and 54.7% or 75,806 residents (13 villages) located in the Mahakam Delta.

No	Sub District	Village in Mahakam Delta	Village Area		Total Population
			Ha	%	
1.	Anggana	1. Tani Baru	14.481.42	12.76	4,457
		2. Muara Pantuan	12.810.06	11.29	5,478
		3. Sepatin	33.170.24	29.22	4,718
		4. Kutai Lama	15.476.73	13.63	4,183
		5. Handil Terusan	8.665.45	7.63	6,543
		6. Anggana	205.04	0.18	3,621
Total 1			84.808.94	74.72	29,000
2.	Muara Badak	1. Saliki	11.550.67	10.18	5,331
		2. Muara Badak Ulu	1.296.08	1.14	5,006
		3. Salo Palai	1.516.87	1.33	2,077
Total 2			14.363.62	12.65	12,414
3.	Muara Jawa	1. Muara Kembang	12.861.56	11.33	3,877
		2. Muara Jawa Tengah	603.30	0.53	5,324
		3. Muara Jawa Ulu	336.41	0.29	14,371
		4. Muara Jawa Pesisir	529.92	0.47	10,820
Total 3			14.331.19	12.63	34,392
TOTAL 1 + 2 + 3			113.530.77	100.00	75,806

Table 1 : Number of villages and populations in Mahakam Delta (KPHP Delta Mahakam. 2015)

Mahakam Delta has important ecological roles and high biodiversity potential. In addition, Mahakam Delta also supports the livelihoods of local communities, which mainly work as fishermen. However, mangrove area in Mahakam Delta has been degraded due to land conversion from mangrove forests to fishponds. Local Planning Agency of Kutai Kartanegara (2010) reported that the area of mangrove forest in Mahakam Delta has been decreasing by 20.52% annually in the period of 1996-2009. Several studies also pointed out that Mahakam Delta has suffered from climate change. Sea level rise, sea water intrusion, sedimentation, erosion and the decrease in fish productivity are the impacts of climate change that have been identified in Mahakam Delta. Data from Indonesian Geospatial Agency showed that the highest tide level in Mahakam Delta was 2.8m in 2000. After that period of time, the highest tide level has increased to 2.9m-3m. Another study conducted by Dewayani et al. (2005) also revealed that sea level rise that occurs in Mahakam Delta up to 2014 was 0.475 cm/year. According this study, sediment accumulation rate in Mahakam Delta has also increased by 0.196 cm/year. The rise in sea level led to coastline reduction by 1.23–4.84 m. These bring negative consequences to local communities, such as the increase in natural disaster events. Although a thorough study regarding the change in floods frequency in Mahakam Delta has not been conducted yet, local communities have experienced the increase in flood frequency and intensity in the past 10 years. Climate change also leads to uneven local rain intensity at some points of the Mahakam Delta region so that local people have difficulties in planning their business activities that can result in the decline of people's livelihoods.

Fluctuations of precipitation in 3 sub-districts within the Mahakam Delta

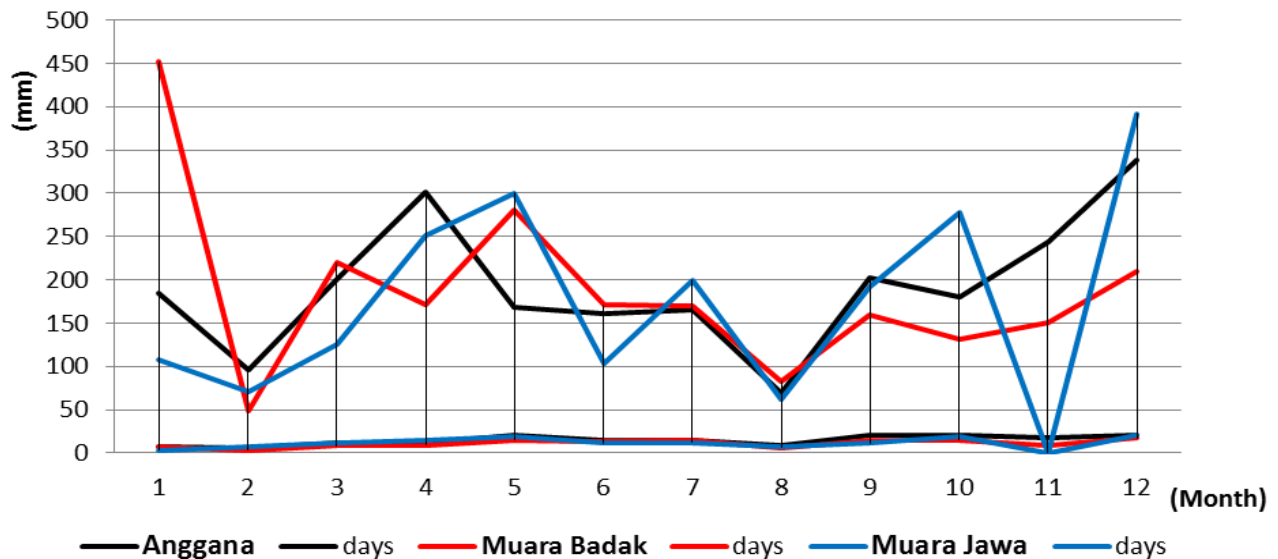


Fig. 1. Precipitation chart at the Mahakam Delta in 2016 (Kutai Kartanegara statistic, 2017)

Sea level rise has caused the reduction of fish ponds area owned by local communities by 0.71 – 5.07 ha/year since seawater rise might destroy the dykes. Meanwhile, the increase in sedimentation rate results in siltation so that fishermen should travel further to find fishing ground. Sedimentation also affects water quality in Mahakam Delta as the turbidity level would increase as well. This data shows that local communities in Mahakam Delta are vulnerable to the impacts of climate change. Therefore, intervention on climate adaptation measures in Mahakam Delta is urgently required in order to address these issues. This programme aims at providing technical

assistance as well as building the capacity of local communities to adapt with climate change impacts by considering ecological, social and economic aspects in Mahakam Delta..

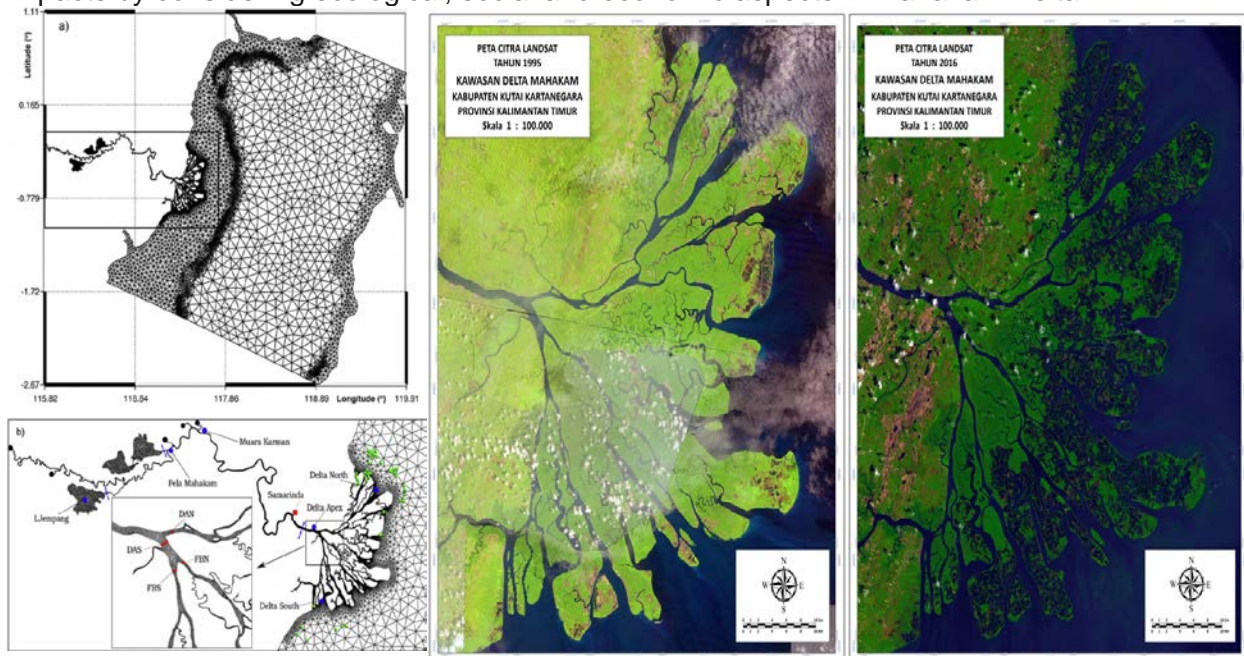


Fig.2. The Mahakam river distribution and the Mahakam Delta landcover map from 1995 to 2016

The Mahakam Delta has a very close relationship with the watershed and the ocean so it has a strong ecological linkage between watershed, delta and coastal, since most of the waste and suspended particles entering the coastal areas are derived from the watershed caused by coal mining activities, urban waste, etc. has been a logical consequence of the degradation of water quality in the delta region, while the degradation of mangrove ecosystems in the delta has degraded ecological mangrove capacity in reducing pollutants or water contaminants (Fig. 2 and Fig. 3).



Fig. 3. Coastal conditions in the Mahakam Delta

The social transformation of the Mahakam Delta community begins with some complex social problems. Such as population growth, conflicts of interest and communication processes between communities that have different background perspectives on the Mahakam Delta. On the other

hand, the potential of fishery resources that have been experiencing a significant decrease in productivity caused by climate and non-climate factors that are not well managed. The number of fishing communities involved in putting fisheries business as the main economic of the community.

These conditions are very threatening to preservation and therefore a mentoring process is required that provides solutions to local communities in the develop an alternative economic that considers the sustainability of the ecosystem.

The administrative of Mahakam Delta consists of 3 sub-districts with 29 villages with a total population of 2105 as many as 138,546 people, while the residents of the Mahakam Delta region are 13 villages with a population of 75,806 people consisting of 39,012 men (52%) and 36,794 women 48%).

Project / Programme Objectives:

List the main objectives of the project/programme.

The main objectives of the project is providing technical assistance as well as building the capacity of local communities to adapt with climate change impacts in mangrove ecosystem in Mahakam Delta and this focus on:

1. Restoration of mangrove ecosystems from the impacts of climate change as a sources to support economics development;
2. Strengthening the institutionalization of policy and sustainability of mangrove ecosystem conservation;
3. Promoting and to develop an alternative economics development for local community.

Project / Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well defined interventions / projects.

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Restoration of mangrove ecosystems from the impacts of climate change as a sources to support economics development;	1.1.1. Raised awareness of communities and local government in the mangrove ecosystems rehabilitation; 1.1.2. Mangrove reforestation activities about 628.800 plants in 3 villages; 1.1.3. Increased knowledge among students about the importance of mangrove ecosystem as an effort to preserve natural resources (elementary and junior high school students); 1.1.4. Disseminating learning and awareness about the development of mangrove ecosystem that support alternative sustainable livelihoods.	1.1. Formed communities and local governments awareness in the preservation natural resources; 1.2. Strengthened awareness and ownership of local communities and groups of students related to preservation of mangrove ecosystem as an effort to overcome the impact of climate change	261,332.40
2. Strengthening the institutionalization of policy and sustainability of mangrove ecosystem conservation;	2.1.1. Protected and preserved 100 hectares of mangrove ecosystems in 3 villages.	2.1. Encouraging the institutional of policy in the preservation mangrove ecosystems	62,147.10
3. Promoting and to develop an alternative economics development for local community.	3.1.1. Increased knowledge and skills of local communities in the application and development of silvofishery fishponds, 3.1.2. Increased knowledge and skills of local communities in the management of non-timber mangrove products as alternative income. 3.1.3. Development of silvofishery ponds in 3 villages; 3.1.4. Business development of non-timber mangrove product for 6 CBOs of women in 3 villages.	3.1. Enhance the the capacity of local communities to adapt with climate change impact in mangrove ecosystem; 3.2. Increased local community income by means the promotion of sustainable alternative economics development.	183,283.50
4. Project/Programme Execution cost			39,511.00
5. Total Project/Programme Cost			546,274.00
6. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			43,701.00

Amount of Financing Requested	589,975.00
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Projected Calendar:

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

Milestones	Expected Dates
Start of Project/Programme Implementation	December 1, 2017
Quarterly Monitoring	March 31, 2018 June 30, 2018 September 30, 2018 December 31, 2018 March 31, 2019 June 30, 2019 September 30, 2019
Mid-term Review (if planned)	December 31, 2018
Project/Programme Closing	November 30, 2019
Terminal Evaluation	December 31, 2019

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.

Components 1: Restoration of mangrove ecosystems from the impacts of climate change as a sources to support economics development;

The existence of the mangrove ecosystem in the mahakam delta is now increasingly apprehensive, so it is necessary to improve the mangrove forest which is expected to improve and restore mangrove ecosystem as ecological service provider and protection of economic activity of the community from sea waves, the storm and the impact of sea level rise and abrasion. This component also aims to strengthen awareness and ownership of local communities and youth groups (students) related to the conservation of mangrove ecosystems.

Mangrove reforestation will be undertaken by local komunitas who have previously been trained in 3 villages located in the mahakam delta. Growth monitoring and carbon analysis will also be undertaken as part of restoration efforts. To maintain the sustainability of the restoration result, it is important to raise awareness of local communities, and local government includes involving youth groups (school children) in raising awareness. In addition, to oversee the sustainability of the program results will also provide guidebooks, documentaries and reporting that will also be used as a media campaign and publication. In this component will also facilitated the compile of policy briefs that are expected to provide input in formulating regional policies related to the preservation of mangrove ecosystems.

Components 2: Strengthening the institutionalization of policy and sustainability of mangrove ecosystem conservation;

Encourage the institutionalization of local policies related to the sustainability of mangrove ecosystems is essential to maintain success. It is expected that through the process of presentation and assistance there will be a draft of local policy in the form of village regulations as a legal protection, where in formulating the policy all relevant stakeholders will be involved so that the policy is expected to be implemented by all parties. The institutionalization of this local policy will be facilitated in 3 villages in the Mahakam Delta region. The existence of this local policy is expected to maintain the preservation of mangrove ecosystems in the Mahakam Delta region.

Components 3: Promoting and to develop an alternative economics development for local community.

This program will develop a demonstration plot of silvofishery pond model, which is part of the effort to recover land carrying capacity and decrease water quality improvement by planting mangrove in ponds and proper aquaculture practices with the use of organic production facilities, thus providing sustainable economic value and this model will also be an example for local communities in the application of their aquaculture system in the future.

This program also facilitates developing alternative economic for local communities by increasing community involvement in conservation measures in the Mahakam Delta. In addition, through this program is expected to help local communities increase their income by adding value to non-timber mangrove products and promote alternative economic resources, by building a synergicity between economic activities of the community and the ecology of the region in achieving sustainable mangrove ecosystem management in the future based on the principle of adaptation and resilience of climate change. In all activities in this component will regard the involvement of vulnerable groups including women's groups.

- 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 of the Adaptation Fund.

Mangrove rehabilitation activities will cover 100,000 hectares of degraded mangrove forest will be conducted by involving local community by implementing appropriate restoration strategy to generate optimum outputs for providing ecological functions in mangrove ecosystem.

This program will also provide opportunity for local community to increase their income, which has been declining in the past several years. This indicates by the decrease in purchasing power of local community (Table 2.)

expenditure per capita (Rp) (equivalent Rp. 12,500/\$1)	Percent Population		Equitable Income Population Kutai Kartanegara District According to World Bank Criteria, 2015-2016		
	2015 (2)	2016 (3)	Description	Percent of Population	
(1)	(2)	(3)	(1)	(2)	(3)
< 150.000	0,00	0,00			
150.000–199.999	0,00	0,00			
200.000–299.999	0,72	0,25	40 % low	22,11	22,93
300.000–499.999	14,49	9,90	40 % middle	38,98	40,15
500.000–749.999	28,29	23,19	20% High	38,92	36,92
750.000–999.999	19,89	23,13	Gini Ratio	0,29	0,27
1.000.000–1.499.999	24,52	29,47	Inequality Category	Low	Low
≥ 1.500.000	12,08	14,08			

Table 2. Expenditure per capita and equitable income population in Kutai Kartanegara District (Statistic of Kutai Kartanegara District, 2016)

Not only involves in mangrove planting in mangrove rehabilitation activities, local community will also be trained on rehabilitation strategy that will be implemented so they could understand that mangrove rehabilitation is actually based on priority area. The priority area includes protected areas that are able to reduce damage due to sea level rise, extreme sea waves and storm. Mangrove planting will also be conducted in silvofishery ponds.

The rehabilitation program consists of several components as follows:

- Propagules collection

- 600,000 seedlings will be collected in 3 sites to be planted in critical land and coastal areas for 2 years: US \$ 0.044 x 600,000 = US \$ 26,400
- 28,800 propagules will be collected to be planted in 36 ha fish ponds area: US \$ 0.044 x 28,800 = US \$ 1,267.2

- Nursery (nursery location is planned to be located close to planting area)

- Nursery construction development by community, including construction materials, manpower and lease of nursery land of 6 nurseries in 3 sites: US \$ 2,515.2 x 6 = US \$ 15,091.2
- Land filling into polybags: US \$ 0.028 x 628,800 = US \$ 17,606.4
- Propagule nursery: US \$ 0.004 x 628,000 = US \$ 2,515.2
- Nursery treatments, duration 3 to 4 months: US \$ 0.04 x 628,800 = US \$ 25,152

- Planting

- Transportation to the planting area: US \$ 0.012 x 628,800 = US \$ 7,545.6
- Ajir (stake): US \$ 0.032 x 628,800 = US \$ 20,121.6
- Planting based on SOP of planting: US \$ 0.056 x 628,800 = US \$ 35,212.8
- Making planting certificate of each plot signed by local authority

- Monitoring

- Monitoring 3 months after planting
- Monitoring 6 months after planting
- Annual monitoring

Climate and non-climate changes are one of major factors that cause mangrove ecosystem degradation which directly influence to livelihood sustainability of local community. Aquaculture production (fish and shrimp) in Mahakam Delta has also been declining in the past 15 years, for example shrimp production from 135 kg/ha in 2003 to only 24 kg/ha at the moment. So the estimation of local community's income is US \$ 372/ha/4 months (US \$ 15,5/kg).

Data on Decreasing Fish Pond Production at Delta Mahakam					
Years	Large of fish pond (ha)	Production (ton)			Remarks
		Shrimp**)	Milk fish**	Others*)	
2003	22,111	2,976.5	1,365	3,095.5	*) Natural **) in stocking
Average / ha / year		0.135	0,062	0.140	
2009	75,311	1,851.9	2,618.7	4,261.5	
Average / ha / year		0.026	0.035	0.056	
Decreased per years (%)		- 23.98	- 9.10	- 14.16	

Table 3. Fish Pond Productivity in the Mahakam Delta (DKP, 2009 *in* Yunianto, 2014)

Fish pond silvofishery implementation is expected to recover land carrying capacity and improve water quality by incorporating mangrove ecology with eco-friendly aquaculture techniques so it can be well recovered in 2-3 years from now. It will also increase fish pond productivity in Mahakam Delta by 50% or 36 kg/ha. With shrimp price assumption is US \$ 15.5/kg, it could generate US \$ 558/ha/cycle.

Non timber mangrove products development also would diversify the livelihoods of local communities as well as may contribute to increase their food security. This programme will also involve 30 women in each village to develop non timber mangrove products, so in total there will be 90 women participated in this programme. Women's involvement because of women's gender roles in the Mahakam Delta is quite productive as well as their housewives are also actively assisting family economic activities such as the activities of aquaculture products, selling food and handicrafts.

Non timber mangrove products development will be carried out by providing facilitation and assistance and also establishing community based organization in each village to help product processing and its marketing. Products that will be produced are dodol (traditional food made from mangrove flour), syrup, candies and other food products. Moreover, the development of this program would also benefit the mangrove ecosystem because fishermen usually use mangrove woods for fishing devices that leads to mangrove forest degradation. By promoting more ecofriendly fishing device materials, mangrove degradation in Mahakam Delta is expected to be reduced.

The level of vulnerability of people in the delta, small islands and coastal areas is quite high when compared with the people living on the mainland. There are many inhibiting factors that can lead to high levels of vulnerability in the community, such as the low level of public knowledge, access to education, health, economic and other very limited supporting facilities that are the main cause of the vulnerability of local communities in the delta, small islands and coastal .

Level of Education	Total	Percentage	
Not yet school	6,776	15.00%	age < 6 years
Illiterate	1,176	3.00%	
Elementary school	26,313	59.00%	
High school	7,347	16.00%	
Bachelor	3,336	7.00%	
TOTAL	44,948	100.00%	

Table 4. The level of community education in Anggana Sub-District (Monograph Anggana Sub-District, 2015)

Gender and vulnerable groups will become mainstream in the implementation of the programme where the involvement of vulnerable groups will be prioritized 50% including the involvement of women groups at least 30%. Women's participation in Component 1 is primarily in polybag filling activities for reforestation and nursery as well as on raising awareness activities both at the youth groups (students) and at the community level. Women's participation will also be maximized in discussions and development of non-timber alternative economies where through developing non-timber mangrove business activities are expected to provide increased income for their households.

The participation of women and vulnerable groups both in capacity building and in business development is also intended to enable them to become empowered and become the main beneficiaries of the program.

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

Components 1: Restoration of mangrove ecosystems from the impacts of climate change as a sources to support economics development: US \$ 261,332.40;

By calculating the cost effectiveness of the mangrove rehabilitation program, 100 hectares of degraded land will be recovered covering critical land and coastal buffer zone and 36 hectares in productive fish ponds with 628,800 mangrove planting during the 2 year period. Cost of rehabilitation activities as a whole reaches US \$ 150,912 or US \$ 0.24 per plant, for supporting activities such as raised awareness, increased knowledge among students and disseminating learning and awareness of US \$ 110,420.40;

This activity can have an impact directly or indirectly. The immediate impact is the increased knowledge of the community and the younger generation on the ecological benefits of life, capable of effective rehabilitation based on medium-term priority scale. While the indirect benefit is the occurrence of the recovery process of mangrove ecological area as the primary ecosystem in the Mahakam Delta region which plays an important role in the ecological system of the area that can protect the sustainability of local livelihoods within the region.

Components 2: Strengthening the institutionalization of policy and sustainability of mangrove ecosystem conservation: US \$ 62,147.10;

To justify the sustainability of environmental management activities and the livelihoods of local communities from the impacts of climate change, government regulatory and policy elements are urgently needed so that socio-cultural, economic and ecological synergies can be developed that can improve local adaptation to climate change.

To encourage the institutionalization of policies in the preservation of mangrove ecosystems, FGD activities are conducted in the villages, districts and provinces, as well as two workshops conducted after internal and external monitoring and evaluation from mid-program and at the end of program implementation. FGD results in villages, workshops and monitoring of the ecosystem condition of mangroves will be the material to formulate a draft pertes related to mangrove preservation. The contribution of US \$ 261,332.40 will contribute to the preservation of 74,825 ha of mangrove exploitation or approximately 65.90% of the total mangrove expanse existing in the Mahakam Delta.

Components 3: Promoting and to develop an alternative economics development for local community: US \$ 183,283.50.

Activities in this component are local community capacity building activities to adapt from the impacts of climate change within the mangrove ecosystem, increasing the knowledge and skills of 201 people in applying and developing fish ponds with silvofishery model in their aquaculture, and 93 women gender will increase their knowledge and skills in the management of non-timber mangrove products as an alternative family income.

In the implementation of this program, the expected output is the increase of people's income through sustainable alternative economic development, with the construction of 9 demonstration plots of silvofishery ponds in 3 locations of activities involving 18 communities directly implementing in the silvofishery pond demonstration plots, With the recoverability of land and water quality improvement efforts are expected within the next 2 to 3 years fish productivity level can increase to 50% so that this model through socio-cultural and economic relations can be transmitted to other communities within the Mahakam Delta area as a sustainable aquaculture model. Similarly for women, improving skills in managing non-timber mangroves sustainably into mangrove products as alternative food and food by 6 groups of women in 3 locations is expected to be a promotional material for developing alternative livelihoods for other women in the region.

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

I. This proposed programme is consistent with the following institutional and policy framework and commitment at National Level:

1. First Nationally Determined Contribution (NDC) Republic of Indonesia

In 2010 the Government of Indonesia pledged to reduce emissions by 26% (41% with international support) against the business as usual scenario by 2020, has determined priority actions within the national *Nawa Cita* (Nine Priority Agendas) framework, which includes protecting Indonesia's citizens, encouraging rural and regional development, improving the quality of life, and improving productivity and global competitiveness. These core missions are consistent with the national commitment towards a low carbon and climate change-resilient development path, in which climate change adaptation and mitigation constitute an integrated

and cross-cutting priority of the National Medium-Term Development Plan. The following priorities for enhanced actions in 2015-2019 will be fully integrated into Indonesia's National Medium-Term Development Plan in 2020.

Nevertheless, Indonesia is vulnerable to natural disaster that will likely be exacerbated by climate change, especially in low-lying areas throughout the archipelago. Therefore Indonesia views comprehensive land and ocean-based climate change adaptation and mitigation efforts as a critical strategic consideration in achieving climate resilience in food, water and energy.

Indonesia's Nationally Determined Contribution (NDC) outlines the country's transition to a low carbon and climate resilience future. For 2020 and beyond, Indonesia envisions achieving archipelagic climate resilience as a result of comprehensive adaptation and mitigation programmes and disaster risk reduction strategies. Indonesia has set ambitious goals for sustainability related to production and consumption of food, water, and energy. These goals will be achieved by supporting empowerment and capacity building, improved provision of basic services in health and education, technological innovation, and sustainable natural resource management, in compliance with principles of good governance.

The GOI will implement enhanced actions to study and map regional vulnerabilities as the basis of adaptation information system, and to strengthen institutional capacity and promulgation of climate change sensitive policies and regulations by 2020. The medium-term goal of Indonesia's climate change adaptation strategy is to reduce risks on all development sectors (agriculture, water, energy security, forestry, maritime and fisheries, health, public service, infrastructure, and urban system) by 2030 through local capacity strengthening, improved knowledge management, convergent policy on climate change adaptation and disaster risks reduction, and application of adaptive technology.

The proposed approach of this program is in line with the NDC document by focusing on mapping area vulnerability and risk, fostering public and institutional capacity building and also advocating relevant policy.

2. National Action Plan For Climate Change Adaptation (RAN-API)

For anticipating the negative impacts of climate change, the Government of Indonesia has implemented various endeavors to adapt to climate change, including the formulation of the national policy document for overcoming the impact of climate change, such as the Indonesia Adaptation Strategy (Bappenas, 2011), the National Action Plan for Adaptation to Climate Change of Indonesia (DNPI, 2011), the Indonesia Climate Change Sectoral Road Map (Bappenas, 2010), the National Action Plan for Climate Change Mitigation and Adaptation (Ministry of the Environment, 2007), and the sectoral adaptation plans compiled by Line Ministries/Government Agencies. For harmonization and operationalization of policy documents, it is necessary to have a National Action Plan for Climate Change Adaptation (RAN-API).

The RAN-API is a national action plan document on adaptation to the impacts of climate change, which involves integrated coordination among all the stakeholders, from the government, civil society organizations, international cooperation agencies and other stakeholders. Briefly, RAN-API contains the action plan for adaptation of priority sectors and cross-sectors in the shortterm (2013-2014), mainstreaming of the adaptation action plan into the National Medium-Term Development Plan (RPJMN) of 2015-2019 that will be formulated, and the long-term adaptation policy direction. The RAN-API strengthens endeavors on

mitigation that have been formulated in the RAN-GRK (National Action Plan for Green House Gas Emission Reduction).

By considering the definition of adaptation as an effort to improve system resilience to the impacts of climate change, adaptation to climate change in Indonesia is directed as the following: 1). Efforts to adjust the strategy, policy, management, technology and attitude aimed at reducing the negative impacts of climate change and, if possible, to maximize its positive benefits; 2). Efforts to reduce the nature (direct, indirect, continuous, discontinuous, and permanent) and rate of climate change impacts.

By paying attention to sectors and aspects of development, despite being affected by the effects of climate change, national development goals can still be achieved as long as there are resilience in the economic, social and environment. In addition, resilience is also needed in special regions such as small islands, coastal and urban areas.

Therefore, the strategic objectives of *RAN-API* are directed to (a) build economic resilience, (b) establish the livelihood (social) resilience to climate change impacts (livelihood resilience), (c) maintaining the sustainability of environmental services (ecosystem resilience) and (d) strengthen the resilience in special regions such as urban areas, as well as coastal and small islands. In addition, to reinforce the above objectives, it requires support system which are reflected in the management of knowledge, planning and budgeting, capacity building, as well as monitoring and evaluation.

This proposed programme have tried to execute a strategy consistent with the above, with a project components to promoting and developing alternative income sources for local communities with expected outputs increased knowledge and skills of local communities to adapt with climate change in mangrove ecosystems and increased local community income by means the promotion of sustainable alternative livelihood.

3. Law No. 32 Year 2009 on Environmental Protection and Management

Climate change issue was taken into account in 2 articles in Chapter 3 on The Development of Environmental Protection and Management Plan (RPPLH), which are: (a). Article 10 clause (2); which stating that climate change is one of the factors that need to be considered during the development of RPPLH; (b). Article 10 clause (4); which stating that climate change adaptation and mitigation plan is among the contents of RPPLH.

Considering that city and provincial level is obligated to be developed by city and provincial government, hence the proposed program will assist the development process by providing and advocating climate risk assessment results and the corresponding adaptation plan.

4. Law No. 16 Year 2016 on Ratification of Paris Agreement to The United Nations Framework Convention on Climate Change

The ratification shows Gol commitment to its people as well as international community to address climate change issue as a vulnerable archipelago to climate change impact. This proposed program support the ratification by aiming to address climate change issue at local level while at the same time aiming to foster a better institutional framework for climate change realm.

5. Government Regulation No. 2 Year 2015 on The National Midterm Development Plan (RPJMN) 2015 – 2019

In section 1.2.2-Climate Change and sub-section 1.2.2.1-Problems and strategic issues of the RPJMN, the decrease of Greenhouse Gas (GHG) emission (climate change mitigation) and improvement of communities' resilience (climate change adaptation) were stated. The development of resilience coastal villages that are aiming to be done by this program is in line with the RPJMN content.

6. Presidential Decree No. 60 Year 2015 on Government Work Plan Year 2016

The general objective for the 2016 Work Plan is to "Accelerate Infrastructure Development to Strengthen the Qualitative Development" by focusing on 6 leading sectors, which are: food sovereignty, energy and electrical sovereignty, maritime, industry, tourism, and also innovation and technology. Hard and soft structures will be amongst the contents of adaptation plan that will be developed during this program. This plan thus will surely contribute in the acceleration of infrastructure development in the area that is aiming to increase the quality of life of the population.

7. Ministry of Environment and Forestry Regulation No. 33 Year 2016 on Guidance for the Development of Climate Change Adaptation Action

This regulation is the reference for national and local government to develop their climate change adaptation action plan and subsequently mainstreaming the plan into the corresponding development plan. The regulation states that identification of area/sector that will be the subject should be followed by climate vulnerability and risk assessment, prior to developing climate change adaptation actions and its implementation priorities. The actions then should be mainstreamed to the corresponding development plan, program and policy. General approach taken by this particular proposed program is referring to the abovementioned steps.

8. Ministry of Marine and Fisheries Regulation No. 23 Year 2016 on Management Plan of Coastal Area and Small Islands

This particular regulation was developed as a means to foster cross-level and cross-sector synergy in managing coastal area and small islands. The regulation states that the relevant strategic plan should consist of cross-sector policy directive for the dedicated development plan area through the development of objectives, targets, and broader strategy, as well as implementation targets that equipped with appropriate indicators to monitor the plan. It further states that the management plan should contain policy framework, procedure and responsibilities in the event of decision-making process among stakeholders regarding agreement on resource use or development activity in the designated zone. The proposed program supports the regulation by also fostering cross-level and cross-sector coordination in its approach; involving not only government actors but also non-government institutions including lay public, driving multi-stakeholder involvement and coordination at any steps possible.

9. Vulnerability Index Data Information System (2015) developed by Adaptation Directorate, Directorate General of Climate Change Control, Ministry of Environment and Forestry

Preliminary assessment by utilizing standardized data in SIDIK shows that Kutai Kartanegara District have the value of vulnerability, flood risk and dry risk is 3, with most of the region is in the Mahakam Delta area. The vulnerability index data information in Kutai Kartanegara District, East Kalimantan Province could be seen in Table 5.

Village Code	Sub-District	Village	Adaptive Capacity Index	Exposure and Sensitivity Index	Vulnerability	Flood Risk	Dry Risk
6403120001	ANGGANA	SEPATIN	0,474025	0,4665	3	3	3
6403120002	ANGGANA	MUARA PANTUAN	0,44315	0,4355	3	3	3
6403120003	ANGGANA	TANI BARU	0,329485	0,451	3	3	3
6403120004	ANGGANA	KUTAI LAMA	0,491265	0,4195	3	3	3
6403120005	ANGGANA	ANGGANA	0,519265	0,5455	3	3	3
6403120006	ANGGANA	SUNGAI MERIAM	0,4639	0,4755	3	3	3
6403120007	ANGGANA	SIDOMULYO	0,496885	0,3795	3	3	3
6403120008	ANGGANA	HANDIL TERUSAN	0,44059	0,5215	3	3	3
6403130001	MUARA BADAK	SELIKI	0,483055	0,377	3	3	3
6403130002	MUARA BADAK	SALO PALAI	0,52765	0,4425	3	3	3
6403130003	MUARA BADAK	MUARA BADAK ULU	0,57353	0,656	3	3	3
6403130004	MUARA BADAK	MUARA BADAK ILIR	0,52449	0,642	3	3	3
6403130005	MUARA BADAK	TANJUNG LIMAU	0,587525	0,636	3	3	3
6403130006	MUARA BADAK	TANAH DATAR	0,542735	0,439	3	3	3
6403130007	MUARA BADAK	BADAK BARU	0,593585	0,3835	3	3	3
6403130008	MUARA BADAK	SUKA DAMAI	0,601385	0,611	3	3	3
6403130009	MUARA BADAK	GAS ALAM BADAK SATU	0,584835	0,368	3	3	3
6403130010	MUARA BADAK	BATU-BATU	0,557	0,399	3	3	3
6403130011	MUARA BADAK	BADAK MEKAR	0,542785	0,549	3	3	3
6403130012	MUARA BADAK	SALO CELLA	0,45433	0,684	3	3	3
6403130013	MUARA BADAK	SUNGAI BAWANG	0,528235	0,549	3	3	3

Table 5. Vulnerability Index Data Information System in Kutai Kartanegara District, East Kalimantan Province (DG of Climate Change Control - MoEF, 2015)

II. This proposed programme is also consistent with following institutional and policy framework and commitment at Provincial and City Level:

- 1. East Kalimantan Governor Regulation No. 22 Year 2011 on Guidelines For The Implementation of Green Kaltim**
- 2. East Kalimantan Province Local Regulation No. 7 Year 2014 on 2013–2018 Medium Term Development Plan (RPJMD) of East Kalimantan Province**
- 3. East Kalimantan Green Growth Compact Declaration, May, 2016**

In an effort to address the various environmental issues, the Provincial Government together with stakeholders in East Kalimantan have initiated various initiatives, beginning with the Green Kaltim Declaration, the preparation of strategic documents of Low Emission Development (LCGS, RAD GRK, SRAP REDD+), policy development supporters of the development of Green Kaltim (Pergub and Perda), institutional strengthening (Regional Council on Climate Change and development partners), and jurisdiction and landscape based testing (PKHB, HoB, FCPF, Wehea-Kelai landscape).

In order to expand the initiative that has been built and as an effort to accelerate the realization of Kaltim Green development throughout East Kalimantan, we agree to unite Green Growth Compact's commitment, initiative, passion and work.

- 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.

1. Presidential Regulation No. 38 Year 2015 on Public Private Partnership (PPP)

Issued on 20 March 2015, the regulation revokes and replaces the Presidential Regulation No. 67 Year 2005. This regulation strengthens the role of Gol in providing Infrastructure Guarantee, and thus increasing the creditworthiness/bankability of PPP infrastructure; developing sound procedures for granting security over project finance; reducing financial risk for both investor and project proponent. Gol is continually driving the PPP scheme as the backbone for infrastructure financing.

Among infrastructure that can use PPP scheme are water resource and irrigation infrastructure and also waste management infrastructure. For the proposed program, construction of water resource and waste management infrastructure are potentially among the adaptation options. Private sector involvement is urged in this proposed program, which will be initiated by exploring the potential contribution of private sector to climate change adaptation actions. This will be followed by a series of multi-stakeholder discussion to assess and reach an agreement on innovative adaptation measures for coastal area. Financing scheme for these measures will take account of the content of the abovementioned Presidential Regulation.

2. Ministry of Environment and Forestry Regulation No. 33 Year 2016 on Guidance for the Development of Climate Change Adaptation Action

Approach for the proposed program is designed by following steps elaborated in the particular regulation; from area and sector identification, developing climate risk assessment up to developing the corresponding adaptation plan and mainstreaming process to the relevant development and spatial plan, program and policy. Adjustment will be done during the development process, by considering local characteristics that has not been included in the regulation.

3. Ministry of Marine and Fisheries Regulation No. 16 Year 2008 on Management Plan of Coastal Area and Small Islands

According to Chapter 2 Article 2 of the regulation, this particular regulation is the norm, standard, and guidance for local governments (provincial and district levels) to develop their areas management plan of coastal area and small islands. Steps taken in this proposed program have considered and been in line with the planning principle elaborated in the regulation, including:

- (a) In accordance with and/or complementing the local development plan system;
- (b) Integrate different activities of diverse stakeholders, including private sector and community; as well as activities relevant to both land and sea ecosystem;
- (c) Undertaken in accordance with the area's characteristics and potential; and
- (d) Involvement of local community and other stakeholders

The approach and methodology for this proposed program are also designed by taking into consideration the abovementioned principles. Activities and planning process will be undertaken in line with the applied development planning system at local, provincial and national level; with multi-stakeholders involvement at the core by involving lay public in the planning process and private sector in the future stage to create public-private partnership in implementing adaptation actions.

4. Strategic Environmental Assessment as Compulsory Assessment in Spatial Plan and Development Plan

Climate vulnerability and risk assessment is one of 6 analysis options needed for the development of Strategic Environmental Assessment (SEA); in which the SEA itself is a compulsory assessment in the development and/or evaluation process of Spatial Plan and Development Plan. To date, there is no standardized step in specific manner (only general approach available) to develop the SEA; the proponent could use only the CRA result to develop SEA and subsequently benchmark the contents of the proposed plan with the CRA. In advocating the CRA result to be taken into consideration in SEA, the proposed program will follow the nationally standardized steps of SEA, from issue identification to adjustment recommendation for the benchmarked plan.

Meanwhile for Environmental Impact Assessment (EIA), the particular assessment will be done if the selected adaptation option (in form of hard structure) falls under the category of project that needs EIA; otherwise EIA is not compulsory to be undertaken. Each of the selected adaptation options will be screened utilizing EIA project list. Environmental Rehabilitation will be required if the activities contaminate the area. The development of climate risk assessment, SEA and EIA within the program will ensure that environmental and social impacts and risks are being considered, assessed and addressed throughout the project. As an initial assessment, this proposal document also contains initial findings on environmental and social risks from the program, which elaborated on Part II - Section K.

5. Ministry of Public Works and Housing Construction and Development Standard, and Indonesia Building Codes

Hard structure that will be constructed as part of the proposed program in future time will be ensure to conform with building codes, especially since conformity to the codes is the primary requirements for granting the building license. For hard structure that serve as public facility, the construction and development will be ensured to follow infrastructure construction and development standard from Ministry of Public Works and Housing.

6. Water Supply Regulatory Framework

Water supply regulatory framework is also the compliance standard to be fulfilled. Urban water supply is a highly regulated business in Indonesia; a multitude of regulations on urban water supply are issued by different governmental institutions at different levels. Any intervention project under the proposed program will be ensured to meet the regulatory framework, both applied at national and local level.

This proposed programme aligns with the national standard for mangrove ecosystem rehabilitation as well as in accordance with the Environmental and Social Policy of the Adaptation Fund, which promotes equitable access to benefits, gender equality and women empowerment, protection of natural habitats, biodiversity conservation and addressing climate change issues. This programme also include marginalized and vulnerable community surrounding Mahakam Delta as target group.

Environmental assessment standard which was developed by Yayasan Mangrove Lestari complies with Environment's minister decree No 19 Year 2012 on climate change adaptation by improving resilience and minimizing the risks of climate change impacts by preparing appropriate infrastructures that could support adaptation action, improving economic capacity of communities which is in line with local characteristics. These can be implemented by, among other things, establishing natural protection with coastal vegetation planting and developing alternative livelihoods by considering economic and ecology factors.

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

When propose this project, no others funding sources accessed in implementing programme.

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

Learning and knowledge management is conducted by raising awareness of local communities regarding the importance of mangrove ecosystem for climate change mitigation and adaptation, training and capacity building, focus group discussion and workshop.

These will be carried out at village, district and provincial levels. Knowledge dissemination also involves relevant stakeholders in monitoring and evaluation processes, which is planned to be conducted twice a year in each location during the implementation of this project. In addition, guidebook for environmental education as well as documentation for silvofishery guideline will also be developed to be used by other communities in other locations for community based sustainable mangrove ecosystem management.

Disseminating learning and awareness about the development of mangrove ecosystem that support alternative sustainable livelihoods, compiled the guidebooks of silvofishery, the guidebooks of establishment PSP carbon accounting, the guidebooks of mangrove products and the guidebooks of reforestation strategies.

- 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 of the Adaptation Fund.

Besides conducting literature review to develop this programme, Yayasan Mangrove Lestari (YML) also has held initial meeting with stakeholders, such as fishermen CBO, fishpond farmers, fish breeder, women CBO, local communities and local government. YML also has coordinated with related government organizations that have authority in Delta Mahakam, such as Local environmental agency (BLHD), Mahakam Delta Forest Management Unit, Provincial Forestry Service, Provincial and District Fisheries Service, as well as academics and researchers.

Gender and vulnerable groups will become mainstream in the implementation of the programme where the involvement of vulnerable groups will be prioritized 50% including the involvement of women groups at least 30%. Women's participation in Component 1 is primarily in polybag filling activities for reforestation and nursery as well as on raising awareness activities both at the youth groups (students) and at the community level. Women's participation will also be maximized in discussions and development of non-timber alternative economies where through developing non-timber mangrove business activities are expected to provide increased income for their households.

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

YML has sufficient experience in reforestation programme, sustainable aquaculture programme, local community empowerment also initiating environmental education in

elementary schools located in Delta Mahakam. If this programmed is approved and funded by the Adaptation Fund, there will be:

- 36 ha of fishponds implement silvofishery concept;
- 100 ha of degraded mangrove area rehabilitated;
- 90 women trained to produce non timber mangrove products; and
- 10 schools received environmental education.

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

By providing assistance and monitoring programme frequently, it is expected that local communities will be able to continue this programme by their own capacity in the future.

Sustainability of project / program outcomes has been designed by YML since designing the program. To continue the outcomes of the programmes, to provide support for enhancing capacity building and mentoring the communities and local governments. Facilitates and encouraging the institutional of policy in the mangrove ecosystems conservation and provides learning and awareness guidebooks about sustainable mangrove ecosystems.

After the project/programme ends it will still be mentoring every 3 months with project/programme cycle management fee and reported annually.

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

In terms of environmental impacts, this programme would clearly brings positive benefits for the recovery of ecological function of mangrove ecosystem in Mahakam Delta. Furthermore, it also supports biodiversity conservation by recovering natural habitat for wildlife and climate mitigation action by increasing carbon sequestration capacity in mangrove ecosystem. This programme also gives direct social impacts by providing alternative sustainable livelihoods for local communities and promotes gender equality by involving women in the programme. The risks that may occur is community resistance to the programme. This can be mitigated by seeking approval in the early phase of proposal development and programme preparation.

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

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

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

The programmes will be implemented starting December 2017 until November 2019 with details are as follows:

Schedule of Programme Implementation
ADAPTATION FUND PROJECT
The Adaptation Measures to Support Sustainable Livelihoods for Local Communities in Mangrove Ecosystem
in The Mahakam Delta, East Kalimantan
(24 Months in 3 Villages)

NO	Activities	Time of Implementation (month)																								Info
		2017	2018												2019											
		12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	
	Programme preparation	X	X																							
1.1.1.1	Socialization of coastal and mangrove ecosystem		X	X	X																					
1.1.1.2	Training of seeds collection, nursery and mangrove planting			X	X	X											X									
1.1.1.3	Training of reforestation strategic						X	X	X																	
1.1.2.1	Survey of seeds stockists by internal team				X	X											X									
1.1.2.2	Collection of propagule seeds							X	X	X									X	X						
1.1.2.3	Nursery activites				X	X											X									
1.1.2.4	Mangrove planting 628,000 plants								X	X	X	X	X	X						X	X	X				
1.1.2.5	Water wave barrier							X		X		X														
1.1.2.6	Growth monitoring							X	X		X	X					X	X	X	X				X		
1.1.2.7	Carbon stock establishment							X						X						X						
1.1.2.8	Assessing impacts and vulnerability in the Mahakam Delta			X					X					X					X							

1.1.3.1	Environment campagne in the schools			X	X			X	X			X	X			X	X				
1.1.4.1	Guidebook writing											X	X					X	X		
1.1.4.2	Duplication of guidebooks and Publication (4 guidebooks x 100 expl)											X	X					X	X		
1.1.4.3	Duplicated and published the guidebooks (4 guidebooks x 100 expl)											X	X					X	X		
1.1.4.4	2. Duplicated of reports per semester					X					X					X					X
1.1.4.5	Writing the policy brief documents																	X	X	X	
1.1.4.6	1. Writing of final report																		X	X	X
1.1.4.7	2. Duplicated of final report																				X
1.1.4.8	Pendokumentasian										X										X
2.1.1.1	FGDs in villages				X	X				X	X				X	X					
2.1.1.2	FGD in districh						X														
2.1.1.3	FGDs in province for police brief recommendation							X								X					
2.1.1.4	Monev internal			X				X			X			X			X				X
2.1.1.5	Monev eksternal with province stakeholde and ect			X					X	X							X	X			X
2.1.1.6	Workshop in province									X									X		
3.1.1.1	Socialization		X	X	X																

3.1.1.2	Training persiapan tambak silvofishery			X				X			X													
3.1.1.3	Training of silvofishery tehcnic			X	X	X		X	X	X		X	X	X										
3.1.2.1	Socialization			X				X				X												
3.1.2.2	Training of mangrove product non timber			X	X			X	X			X	X											
3.1.2.3	Training of provision tools processing					X				X				X										
3.2.1.1	Dike and sluice gate building			X	X			X	X			X	X											
3.2.1.2	Procurement of fishery production facilities			X	X	X		X	X	X		X	X	X										
3.2.1.3	Kit monitoring of water quality					X				X				X										
3.2.1.4	Mentoring				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
3.2.2.1	Mangrove products processing equipment					X		X		X														
3.2.2.2	Mentoring					X		X		X			X		X		X		X		X			

B. Describe the measures for financial and project / programme risk management.

Create cooperation agreement between the parties with adhere the anti-corruption laws, customize between the things that need to be achieved in a given time period with budget availability, and provide understanding to the community about budget disbursement process.

YML will focus on financial risk management by conducting audit and monitoring program simultaneously by using financial accounting tools in the form of institutional financial SOP. Prior to program implementation, YML would develop agreement on budget management internally as well as with communities based on Indonesian corruption law. Furthermore, YML would also deliver information to communities regarding funding, installments, and the use of programme supporting asset.

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.

Create cooperation agreement between the parties, socialize with the communities around the mangrove forest in Mahakam Delta, and customize research plan activities with the weather conditions.

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

Has always conducted monitoring and evaluation activities for each component of programme activities and provide a budgeted for monitoring and evaluation activities

Monitoring and evaluation activities will be conducted every six months by using “Monev tool”, which will be developed by YML. Monitoring will also be conducted for each programme component by involving internal team of programme implementation. The results of monitoring and evaluation will be used as learning process to improve programme management and ensure that programme implementation is on the right track. External monitoring and evaluation will also be conducted twice during programme implementation involving relevant stakeholders. These stakeholders are expected to be able to assess as well as advice programme implementation. Moreover, this process is also important for data collection to develop policy brief in relation to the conservation of mangrove ecosystem and sustainable livelihood. The cost needed for this activity is US \$ 11,011.20.

E. Include a results framework for the project proposal, including milestones, targets and indicators.

Expected Results	Indicators	Milestones
Goal: Providing technical assistance as well as building the capacity of Local communities to adapt with climate change		December 2017 – November 2019

impacts in mangrove ecosystem in Mahakam Delta		
Impact: Increased resiliency at the community level to cope with climate change impacts in mangrove ecosystems.		
Outcome 1: Formed communities and local governments awareness in the preservation natural resources	415 people consisting of 135 communities and local governments, as well as 400 students and teachers in 3 villages have increased their awareness of the importance sustainable natural resource preservation	January 2018 – March 2019
Output 1.1.: Raised awareness of communities and local government in the mangrove ecosystems rehabilitation;	1.1.1. 135 local people have understand the benefits of mangrove ecosystems for sustainable livelihoods	January 2018
	1.1.2. 60 local people understand about the reforestation stage starting from seed collection, nursery up to mangroves planting	February 2018
	1.1.3. 60 local people understand about the arrange and establish the reforestation strategies based on implementation time and planting area priority	May 2017
Output 1.2.: Mangrove reforestation activities about 650.000 plants in 3 villages;	1.2.1. Identified of natural stockists for local mangrove seeds that were carried out before planting	March – April 2018 & April 2019
	1.2.2. 60 local people directly involved in the collection of mangrove seeds, nursery and mangroves planting	March – September 2018, April – July 2019
	1.2.2. Monitored growth rate and percentage of mangrove life that has been planted in 3 villages	July – November 2018, April – November 2019
	1.2.3. Establishment of 12 carbon measurement plots in 3 villages	July 2018, January 2019 & July 2019
	1.2.4. Identified the biophysical, socio-economic and cultural attributes and forcing factors	February 2018, July 2018, December 2018 & May 2019

Outcome 2 Strengthened awareness and ownership of local communities and groups of students related to preservation of mangrove ecosystem as an effort to overcome the impact of climate change	Increased capacity 400 student and teachers related to preservation of mangrove ecosystem and; Distribution the lesson learned program to stakeholder, like as the form of reports, guidebooks and documentary film programs, used as campaign and awareness materials.	February 2018 – July 2019
Output 2.1: Increased knowledge among students about the importance of mangrove ecosystem as an effort to preserve natural resources (elementary and junior high school students);	400 students and teachers understand the importance of preservation the environment and mangrove ecosystems	February 2018 – July 2019
Output 2.2: Disseminating learning and awareness about the development of mangrove ecosystem	Distribution media learning like as: 4 progress report, 1 final report, 4 guidebook, and 1 documenter film, used as awareness and compaign material	May 2018, November 2018, may 2019 & november 2019
Outcome 3 Encouraging the institutional of policy in the preservation mangrove ecosystems	There are 3 draft of the village regulation and 1 policy brief in the preservation of mangrove ecosystems	January 2018 – August 2019
Output 3.1: Protected and preservated 100 hectares of mangrove ecosystems in 3 villages	3.1.1. Implementated of 9 times FGDs at village level (3 x 3 villages) with final input of the village regulation draft concerning balance between social economic activity with environment	April 2018 – April 2019
	3.1.2. Implementated of 1 time FGD at district level for programmes and policy support	June 2018
	3.1.3. Implementated of 2 times FGDs at provincial level for policy alignment in Delta Mahakam and recommendation for compile policy brief	July 2018 & June 2019
	3.1.4. Implementated of 12 times internal monitoring and evaluation in 3 villages	March 2018 – November 2019
	3.1.5. Implementated of 6 times external monitoring, evaluation and learning (MEL) in 3 villages with relevant stakeholders at	March 2018 – November 2019

	provincial level during programmes duration	
	3.1.6. Implemented of 2 times provincial workshops, the commitment of inter actor for the programmes and the joint recommendation on the sustainability of mangrove ecosystems in Delta Mahakam	October 2018 & September 2019
Outcome 4 Enhance the capacity of local communities to adapt with climate change impact in mangrove ecosystem;	Increased capacity 201 local community to adapt with climate change impacts in mangrove ecosystem.	January – March 2018
Output 4.1: Increased knowledge and skills of local communities in the application and development of silvofishery fishponds	105 local people understand that environmentally friendly aquaculture will ensure the sustainability and development of their aquaculture.	February – December 2018
Output 4.2: Increased knowledge and skills of local communities in the management of non-timber mangrove products as alternative income	90 women understood about non timber mangrove products in the form of processed mangrove fruits products as their alternative business.	January 2018 – November 2018
Outcome 5 Increased local community income by means the promotion of sustainable alternative economics development	Existence of support the development of alternatives sustainable livelihood for local communities in 3 villages	January 2018 – September 2019
Output 5.1: Development of silvofishery ponds in 3 villages	5.1.1. 9 silvofishery demonstration plots belong to the community with total area 36 hectares in 3 locations have been done improvements	February – December 2018
	5.1.3. Procurement of non-chemical organic fishery production facilities such as organic fertilizers, non-pesticide poisons (saponins), dolomite lime, rice siftings permentation, seeds of tiger prawn and milkfish	February – December 2018
	5.1.4. Procurement of 9 packages of water quality monitoring kits and accessories for 9 demonstration plots.	April – November 2018

	5.1.5. Train 18 farmers who are directly involved in the implementation and development of silvofishery fishponds	February – December 2018
Output 5.2: Business development of non-timber mangrove product for 6 CBOs of women in 3 villages	5.2.1. Procurement of 6 packages of mangrove processing tools and procurement of 6 packages of packing tools (hand sealer and vacuum sealer) for 6 CBOs of women	April – August 2018
	5.2.2. Mentoring 6 groups of women in maintaining the production quality of mangrove fruit products; market opportunities and marketing strategy	April 2018 – August 2019

F. Demonstrate how the project / programme aligns with the Results Framework of the Adaptation Fund

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. Restoration of mangrove ecosystems from the impacts of climate change as a sources of support economics development;	<ul style="list-style-type: none"> 30,944 person (Male = 16,892 and Female = 14,052) or 22% from total communities in 3 sub district namely Muara Badak , Anggana and Muara Jawa have direct and non direct benefiseries and impact from mangrove ecosystems preservation 	Formed communities and local governments awareness in the preservation natural resources	415 people consisting of 135 communities and local governments, as well as 400 students and teachers in 3 villages have increased their awareness of the importance sustainable natural resource preservation	261,332.40
	<ul style="list-style-type: none"> Communities and local governments to getting lessons learned in restoring mangrove ecosystems as an effort to overcome the impacts of climate change 	Strengthened awareness and ownership of local communities and groups of students related to preservation of mangrove ecosystem as an effort to overcome the impact of	<ul style="list-style-type: none"> Increased capacity 400 student and teachers related to preservation of mangrove ecosystem and; Distribution the lesson learned program to stakeholder, like 	

		climate change	as the form of reports, guidebooks and documentary film programs, used as campaign and awareness materials	
2. Strengthening the institutionalization of policy and sustainability of mangrove ecosystem conservation;	3 villages government and local communities in three villages successfully drafted Perdes as an effort to preserve mangrove ecosystem sustainability	Encouraging the institutional of policy in the preservation mangrove ecosystems	There are 3 draft of the village regulation and 1 policy brief in the preservation of mangrove ecosystems	62,147.10
3. Promoting and to develop of alternative economics development for local community	<ul style="list-style-type: none"> 201 local community in 3 villages have increased their capacity of sustainable livelihood 	Enhance the the capacity of local communities to adapt with climate change impact in mangrove ecosystem;	Increased capacity 201 local community to adapt with climate change impacts in mangrove ecosystem.	183,283.50
	<ul style="list-style-type: none"> 270 local community (female and male) in 3 villages successfully to developed economic (Silvofishery, and mangrove product development non timber). 	Increased local community income by means the promotion of sustainable alternative economics development	Existence of support the development of alternatives sustainable livelihood for local communities in 3 villages	

Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Outcome 1: Formed communities and local governments awareness in the preservation natural resources	415 people consisting of 135 communities and local governments, as well as 400 students and teachers in 3 villages have increased their	Output 1.1: Raised awareness of communities and local government in the mangrove ecosystems rehabilitation	Target 415 local communities, students, and local government have received capacity building to preservation of mangrove ecosystem.	216,433.40
		Output 1.2: Mangrove reforestation activities	Reforestation activities, carbon accounting and	

	awareness of the importance sustainable natural resource preservation	about 650.000 plants in 3 villages;	vulnerability impact analysis in 3 assisted villages have been conducted	
Outcome 2: Strengthened awareness and ownership of local communities and groups of students related to preservation of mangrove ecosystem as an effort to overcome the impact of climate change	<ul style="list-style-type: none"> Increased capacity 400 student and teachers related to preservation of mangrove ecosystem and; 	Output 2.1: Increased knowledge among students about the importance of mangrove ecosystem as an effort to preserve natural resources (elementary and junior high school students);	400 students and teachers understand the importance of preservation the environment and mangrove ecosystems	44,899.00
	<ul style="list-style-type: none"> Distribution the lesson learned program to stakeholder, like as the form of reports, guidebooks and documentary film programs, used as campaign and awareness materials 	Output 2.2: Disseminating learning and awareness about the development of mangrove ecosystem	Distribution media learning like as: 4 progress report, 1 final report, 4 guidebook, and 1 documenter film, used as awareness and compaign material	
Outcome 3: Encouraging the institutional of policy in the preservation mangrove ecosystems	There are 3 draft of the village regulation and 1 policy brief in the preservation of mangrove ecosystems	Output 3.1: Protected and preservated 100 hectares of mangrove ecosystems in 3 villages	3.1.1. Implemented of 9 times FGDs at village level (3 x 3 villages) with final input of the village regulation draft concerning balance between social economic activity with environment	62,147.10
			3.1.2. Implemented of 1 time FGD at district level for programmes and policy support	
			3.1.3. Implemented of 2 times FGDs at provincial level for	

			policy alignment in Delta Mahakam and recommendation for compile policy brief	
			3.1.4. Implemented of 12 times internal monitoring and evaluation in 3 villages	
			3.1.5. Implemented of 6 times external monitoring, evaluation and learning (MEL) in 3 villages with relevant stakeholders at provincial level during programmes duration	
			3.1.6. Implemented of 2 times provincial workshops, the commitment of inter actor for the programmes and the joint recommendation on the sustainability of mangrove ecosystems in Delta Mahakam	
Outcome 4: Enhance the capacity of local communities to adapt with climate change impact in mangrove ecosystem	Increased capacity 201 local community to adapt with climate change impacts in mangrove ecosystem	Output 4.1: Increased knowledge and skills of local communities in the application and development of silvofishery fishponds	105 local people understand that environmentally friendly aquaculture will ensure the sustainability and development of their aquaculture.	37,655.10
		Output 4.2: Increased knowledge and skills of local communities in the management of non-timber mangrove	90 women understood about non timber mangrove products in the form of processed mangrove fruits	

		products as alternative income	products as their alternative business	
<p>Outcome 5: Increased local community income by means the promotion of sustainable alternative economics development.</p>	<p>Existence of support the development of alternatives sustainable livelihood for local communities in 3 villages.</p>	<p>Output 5.1: Development of silvofishery ponds in 3 villages</p>	<p>5.1.1. 9 silvofishery demonstration plots belong to the community with total area 36 hectares in 3 locations have been done improvements.</p> <p>5.1.2. There are mangrove plants in the fishpond about 800 plants/hectare;</p> <p>5.1.3. Procurement of non-chemical organic fishery production facilities such as organic fertilizers, non-pesticide poisons (saponins), dolomite lime, rice siftings permentation, seeds of tiger prawn and milkfish;</p> <p>5.1.4. Procurement of 9 packages of water quality monitoring kits and accessories for 9 demonstration plots;</p> <p>5.1.5. Train 18 farmers who are directly involved in the implementation and development of silvofishery fishponds .</p>	<p>145,628.40</p>
		<p>Output 5.2: Business development of non-timber mangrove product for 6 CBOs of women in 3 villages</p>	<p>5.2.1. Procurement of 6 packages of mangrove processing tools and procurement of 6 packages of</p>	

			packing tools (hand sealer and vacuum sealer) for 6 CBOs of women	
			5.2.2. Mentoring 6 groups of women in maintaining the production quality of mangrove fruit products; market opportunities and marketing strategy	

- G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.

DETAILED BUDGET					
ADAPTATION FUND PROJECT					
THE ADAPTATION CLIMATE CHANGE FOR SUSTAINABLE					
LIVELIHOODS WITH MANGROVE BASED IN MAHAKAM DELTA					
(24 MONTHS IN 3 VILLAGES)					
No	Item	Vol.	Unit	Cost per unit (US \$)	Total (US \$)
Component 1 : Restoration of mangrove ecosystems from the impacts of climate change as a sources of support economics development					261.332,40
Outcome 1.1: Formed communities and local governments awareness in the preservation natural resources					216.433,40
Output 1.1.1	Raised awareness of communities and local government in the mangrove ecosystems rehabilitation;				20.449,90
Input 1.1.1.1	Socialization of coastal and mangrove ecosystem	3	package	1.243,30	3.729,90
1.1.1.2	Training of seeds collection, nursery and mangrove planting	3	package	866,66	2.600,00
1.1.1.3	Training of reforestation strategic	3	package	866,66	2.600,00
1.1.1.3	Insentive CO in field (3 person x 3 x 24 month)	72	month	160,00	11.520,00
Output 1.1.2	Mangrove reforestation activities about 628.800 plants in 3 villages				195.983,50
Input 1.1.2.1	Survey of seeds stockis by internal team	6	Days	198,31	1.189,90
1.1.2.2	Propagule collection	628.800	propagule		27.667,20
1.1.2.3	Nursery activities	6	nursery		60.364,80

1.1.2.4	Mangrove planting 628,800 plants	628.800	plants		62.880,00
1.1.2.5	Water wave barrier	3	pack/village	2.800	8.400,00
1.1.2.6	Growth Monitoring	12	frequency	297,40	3.568,80
1.1.2.7	Carbon Stock Establishment	3	package	25.392,00	25.392,00
1.1.2.8	Assessing impacts and vulnerability in Mahakam Delta	4	package	6.520,80	6.520,80
Outcome 1.2: Strengthened awareness and ownership of local communities and groups of students related to preservation of mangrove ecosystem					44.899,00
Output 1.2.1	Increased knowledge among students about the importance of mangrove ecosystem as an effort to preserve natural resources (elementary and junior high school students);				21.504,00
Input 1.1.3.1	Environment campagne in the schools	10	package	2,150,40	21.504,00
Output 1.2.2	Disseminating learning and awareness about the development of mangrove ecosystem that support alternative sustainable livelihoods				23.395,00
Input 1.1.4.1	Guidebook writing	4	books	400,00	1.600,00
1.1.4.2	Duplication of guidebooks and Publication (4 guidebooks x 100 expl)	400	expl	8,00	3.200,00
1.1.4.3	Duplicated and published the guidebooks (4 guidebooks x 100 expl)	20	doc	103,20	2.064,00
1.1.4.4	2. Duplicated of reports per semester	120	expl	3,20	384,00
1.1.4.5	Writing the policy brief documents	1	doc	1.500,00	1.500,00
1.1.4.6	1. Writing of Final Rreport	1	doc	344,00	344,00
1.1.4.7	2. Duplikated of final report	30	Expl	12,00	360,00
1.1.4.8	Pendokumentasian				
	Compiled and established the documentary film of Adaptation Fund programmes implementation	1	doc	4.000,00	4.000,00
1.1.4.9	Databased, leaning and publication officer	24	month	320,00	8.064,00
Component 2: Strengthening the institutionalization of policy and sustainability of mangrove ecosystem conservation					62.147,10
Outcome 2.1: Encouraging the institutional of policy in the preservation mangrove ecosystems					62.147,10
Output 2.1.1	Protected and preservated 100hectares of mangrove ecosystems in 3 villages				62.147,10
Input 2.1.1.1	FGDs in villages	12	package	1.190,66	14.288,00
2.1.1.2	FGD in districh	1	package	5.728,00	5.728,00
2.1.1.3	FGDs in province for police brief recommendation	2	package	6.301,00	12.602,00

2.1.1.4	Monev internal	12	frequency	528,00	6.336,00
2.1.1.5	Monev eksternal with province stakeholder and ect	6	frequency	779,20	4.675,20
2.1.1.6	Workshop in province	2	package	7.338,95	14.677,90
2.1.1.7	Coastal and spatial specialist	48	frequency	80,00	3.840,00
Component 3: Promoting and to develop of alternative economics development for local community.					183.283,50
Outcome 3.1: Enhance the capacity of local communities in the development of alternative economies;					37.655,10
Output 3.1.1	Increased knowledge and skills of local communities in the application and development of silvofishery fishponds				19.749,20
Input 3.1.1.1	Socialization	3	package	1.202,60	3.608,00
3.1.1.2	Training persiapan tambak silvofishery	3	package	673,10	2.019,30
3.1.1.3	Training of silvofishery tehcnic	9	package	673,10	6.057,90
3.1.1.4	Silvofishery officer	24	month	320,00	8.064,00
Output 3.1.2	Increased knowledge and skills of local communities in the management of non-timber mangrove products as alternative income				17.905,90
Input 3.1.2.1	Socialization	3	package	1.123,30	3.369,90
3.1.2.2	Training of mangrove product non timber	6	package	669,30	4.015,90
3.1.2.3	Training of provision tools processing	3	package	818,70	2.456,10
3.1.2.4	Reforestasi & mangrove product officer	24	month	320,00	8.064,00
Outcome 3.2: Increased local community income by means the promotion of sustainable alternative economics development					145.628,40
Output 3.2.1	Development of silvofishery ponds in 3 villages				137.430,00
Input 3.2.1.1	Dike and sluice gate building	36	hectares	2.079,18	74.850,80
3.2.1.2	Procurement of fishery production facilities	9	package	4.423,52	39.811,70
3.2.1.3	Kit monitoring of water quality	9	package	916,92	8.252,30
3.2.1.4	Mentoring	54	frequency	268,80	14.515,20
Output 3.2.2	Business development of non-timber mangrove product for 6 CBOs of women in 3 villages				8.198,40
Input 3.2.2.1	Procurement of non timber mangrove products processing equipment	6	package	560,00	3.360,00
3.2.2.2	Mentoring	18	frequency	268,80	4.838,40
4. Project/Programme Execution Cost					39.511,00
4.1	Programme coordinator	24	month	400,00	9.600,00

4.2	Financial and administration officer	24	month	368,00	8.832,00
4.3	Local transport	24	month	560,00	13.440,00
4.4	50% of office rent during the project ⁽¹⁾	2	Years	2.240,00	2.240,00
4.5	Office stationery	24	month	40,00	960,00
4.6	Communication and internet	24	month	80,00	1.920,00
4.7	Safety equipment	10	package	64,00	640,00
4.8	Projector	1	unit	549,00	549,00
4.9	Portable printer	1	unit	480,00	480,00
4.10	Laptop	1	unit	850,00	850,00
TOTAL PROJECT/PROGRAMME COST					546.274,00
Project/Programme Cycle Management Fee charged by the Implementing Entity (8% from Total Project/Programme Cost)					43.701,00
Amount of Financing Requested (US \$)					589.975,00
<p><i>(1) Project/Programme Executing Cost one of them allocated for "office rent". This financing each year is Rp 28,000,000. or (US\$) 2,240 as a form of responsibility YML provides 50% for "office rent" allocation and is expected to support 50% Adaptation Fund so that Office Rent total support for 2 years (US\$) 2,240 and contribution YML of (US\$) 2,240</i></p>					

1. Exchange rate (US\$) 1 = Rp. 12,500,-
2. Based on the above calculation, The Amount of Financing Requested is US \$ 589,975.00
This funding support will be felt by 137,626 residents so that the cost-per-life effectiveness is (US \$) 4.3 / person.

H. Include a disbursement schedule with time-bound milestones.

Disbursement schedule based on schedule of project/programme implementation as follows:

No	Time	Amount (US \$)	Percentage
1	Early December 2017	235,990.00	40%
2	Early May 2018	235,990.00	40%
3	Early March 2019	117,995.00	20%
	Total Budget	589,975.00	100%

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

- A. Record of endorsement on behalf of the government¹** *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

The endorsement letters are attached

<i>Name, Position, Ministry</i>	<i>Date: (Month, day, year)</i>
Ir. H. Riza Indra Riadi, M.Si. Director of East Kalimantan Provincial Environmental Service	4 April 2017
Drs. Tri Bangun Laksana Director Center of Development Control in Kalimantan Ecoregion, Ministry of Environment and Forestry	4 April 2017
Ir. H. Totok Heru Subroto, M.Si. Director of Development Planning Agency at Sub-National Level, Kutai Kartanegara District	24 April 2013
Hj. Norhairi, S.Sos.,MM Head of Anggana Sub-District, Kutai Kartanegara District	21 October 2013
Drs. H. Sunggono, MM Head of Muara Badak Sub-District, Kutai Kartanegara District	30 Juli 2013
Zainal Farihin Head of Muara Badak Ulu Village, Muara Badak Sub-District, Kutai Kartanegara District	17 Juli 2013
H. A. Rasyid S. Head of Muara Pantuan Village, Anggana Sub-District, Kutai Kartanegara District	22 October 2013

- B. Implementing Entity certification** *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

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.

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 year 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 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.



Monica Tanuhandaru
Executive Director of Partnership for Governance Reform in Indonesia (Kemitraan)
 Implementing Entity Coordinator

Date: *July, 28, 2016*

Tel. and email: +62-21-22780580;
Monica.Tanuhandaru@kemitraan.or.id

Project Contact Person:

Dewi Rizki

Tel. And Email:

+62-21-22780580; Dewi.Rizki@kemitraan.or.id



MINISTRY OF ENVIRONMENT AND FORESTRY DIRECTORATE GENERAL OF CLIMATE CHANGE

Mangala Wanabakti Building Block VII 12th Floor, Jl. Gatot Subroto – Senayan, Jakarta 10270
Phone +62 21 5730144 Fax. : +62 21 5720194

Website : <http://ditjenppi.menlhk.go.id>

email : tusetditppi@gmail.com;

Jakarta, April 7, 2017

Ref : 5.100/PP1/MSAR/PP1-3/4/2017

Enc :

Subject : Letter of Endorsement

To The Adaptation Fund Board

c/o Adaptation Fund Board Secretariat

Email: secretariat@adaptation-fund.org

Fax: 202 522 3240/5

Dear Adaptation Fund Board Secretariat,

I'm writing to you in my capacity as National Designated Authority for the Adaptation Fund in Indonesia. We have received request for endorsement of the following proposals for Adaptation Fund:

1. The Mitigation and Adaptation to Support Sustainable Livelihood for Local Communities in Mangrove Ecosystem in the Mahakam Delta, East Kalimantan executed by Yayasan Mangrove Lestari;
2. Improving Community's Resilience and Government Policy Response for Climate Change Adaptation in West Papua Province of Indonesia executed by Yayasan Konservasi Strategy Indonesia;
3. Developing Community Resilience to Adapt Climate Change in Maratua executed by JAVLEC;
4. Build and Strengthen Resilience of Coastal Community Againsts Climate Change Impacts by Perempuan Inspirasi Perubahan Pesisir (PINISI) or Women Inspiration for Coastal Change in Bulukumba District executed by Forum Lingkungan Mulawarman ;
5. Community Adaptation for Forest Food Based Management in Saddang Watershed Ecosystem executed by Konsorsium Adaptasi Perubahan Iklim dan Lingkungan ;
6. Development of Sustainable Seaweed and Fishery Management for Entrance Community Prosperity and Climate Change Adaptation of Coastal and Small Island of Nusa Tenggara Barat Province executed by Yayasan Cides.

We see that the proposals are in accordance with the national priorities in implementing adaptation programmes and activities to reduce adverse impacts of, and risks, posed by climate change in the vulnerable regions in Indonesia.

With this consideration, we strongly recommend the six proposals to be granted support from the Adaptation Fund. The programs will be implemented by Partnership for Governance Reform in Indonesia (Kemitraan) and executed by each Executing Agency.

Thank you for your kind consideration.

Yours sincerely,

Dr. Nur Masripatin

Director General of Climate Change

Ministry of Environment and Forestry of Indonesia/

National Focal Point for UNFCCC