



ADAPTATION FUND

AFB/PPRC.21/8
26 September 2017

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

Agenda Item 6 d)

PROPOSAL FOR INDONESIA

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 (OPG, Annex 4) 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:

1. Country Eligibility,
2. Project Eligibility,
3. Resource Availability, and
4. Eligibility of NIE/MIE.

4. The fifth criterion, applied when reviewing a fully-developed project document, is:

5. 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 consequently compliance with the Policy 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 E&S Policy.

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 small-sized project concept document titled “Development of Sustainable Seaweed and Fishery Management for Enhance Community Prosperity; Climate Change Adaptation of Coastal and Small Island at Nusa Tenggara Barat Province” was submitted by Kemitraan – The Partnership for Governance Reform, which is a National Implementing Entity of the Adaptation Fund.

10. This is first submission of the proposal. 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/Multi/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.

Project Summary

Indonesia – Development of Sustainable Seaweed and Fishery Management for Enhance Community Prosperity; Climate Change Adaptation of Coastal and Small Island at Nusa Tenggara Barat Province

Implementing Entity: *Kemitraan - The Partnership for Governance Reform*

Project/Programme Execution Cost: USD N/A

Total Project/Programme Cost: USD 911,000

Implementing Fee: USD 79,000

Financing Requested: USD 990,000

Project Background and Context:

The project objective is to develop the seaweed industry in Indonesia (coastal and small island in Nusa Tenggara Barat Province) to sustainably maintain a strong local economy, to ensure food security, as well as to protect the livelihood and welfare of the people the local people. Activities will be directed to community development in order increase the capacity of resilience in addressing the impact of climate change. The project has five main objectives:

- To develop income generation by natural resource base through participating business activity in seaweed and fishery processing,
- To give the coastal community a chance to secure the alternative income while they improve the environment quality for fishery and seaweed cultivation,
- To cultivate entrepreneurial spirit, skills and knowledge so that society as the whole can get benefit from it,
- To develop the sustainable management of seaweed and fishery cultivation and introducing of value added and clean technology of production to reduce the environment degradation, and
- To monitor and evaluate the CO2 absorption and acidification in the coastal areas.

Component 1: Field Coordination/Grouping (USD 78,000)

Component 2: Training Phase (USD 73,000)

Component 3: Production/cultivation (USD 690,000)

Component 4: Harvesting handling (USD 50,000)

Component 5: Post-harvest training (USD 20,000)



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Small-sized Project

Country/Region: **Indonesia**Project Title: **Development of Sustainable Seaweed and Fishery Management for Enhance Community Prosperity; Climate Change Adaptation of Coastal and Small Island at Nusa Tenggara Barat Province**AF Project ID: **IDN/NIE/Multi/2017/2**

IE Project ID:

Requested Financing from Adaptation Fund (US Dollars): **990,000**Reviewer and contact person: **Daouda Ndiaye**Co-reviewer(s): **Christian Severin**IE Contact Person: **Monica Tanuhandaru, Kemitraan – The Partnership for Governance Reform**

Review Criteria	Questions	Comments on 22/8/17	Comments on 11/9/17
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, Indonesia is a developing country with a strong dependence on its coastal and marine ecosystems that are particularly vulnerable to climate change.	
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	Yes, signed and dated 7 April 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>Possibly. The application of seagrass for coastal adaptation and improving food security is indeed an appropriate measure to adapt to climate change. However, the proposal should provide a stronger climate change adaptation rationale to demonstrate directly how the proposed interventions will lead to higher resilience to the impacts of climate change.</p> <p>CR1: Please include clear articulation of the climate change impacts that this project has been designed to address, the assessments and evidence of vulnerability that support the rationale of the project, and how the chosen activities address those impacts and the resilience of the chosen communities.</p>	<p>CR1: Not addressed. The response provided by the proponent outlined the scientific basis of the mitigation benefits, and to some extent, adaptation benefits of seaweed production. However, the revision fails to place the research in the context of the project, nor does it clearly outline the climate change impacts the project is addressing.</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>Requires further clarification. The proposal includes out a number of project sub-objectives that seem to be focusing on improving the socio-economic opportunities in local communities rather than addressing the impacts of climate change. CR2: Please provide further clarification on the rationale for the project and how the proposed investments will enhance resilience to the impacts of climate change in the particular geographical context and local environmental conditions. CR3: Please clarify how project locations were chosen and how the design of the project takes the cultural values of the communities into account. CR4: Please provide additional information on how the project will mitigate any potential negative impacts to the coastal environment.</p>	<p>CR2: Not addressed. The revised proposal does not provide information on the particular context of the proposed project site.</p> <p>CR3: Not addressed.</p> <p>CR4: Somewhat addressed.</p>
	<p>4. Is the project / programme cost effective?</p>	<p>Not clear. The concept does not provide sufficient information to review the project's cost-effectiveness. CR5: Please provide an analysis of why the chosen solution is cost-effective relative to viable alternatives to achieve the intended adaptation outcomes.</p>	<p>CR5: Somewhat addressed. The new analysis includes information on how profitable seaweed production can be but does not evaluate the project as a whole.</p>

	<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>	<p>Partially addressed. The concept does not provide sufficient information on relevant strategies, local policies, or regulations. CR6: Please provide additional information on local, regional, or national policies and plans that the project is aligned with.</p>	<p>CR6: Addressed for the concept stage.</p>
	<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??</p>	<p>Partially addressed. The proposal lists relevant laws but does not address how the project will maintain or meet the required standards. CR7: Please provide information on how the project will meet the required standards that are listed.</p>	<p>CR7: Addressed for the concept stage but more elaboration is needed.</p>
	<p>7. Is there duplication of project / programme with other funding sources?</p>	<p>Explanation is not sufficient. CR8: Please provide an explanation and analysis of other related projects or programs in the area from other funding sources.</p>	<p>CR8: Not addressed. The proposal does not assess any other projects in the project site.</p>

	<p>8. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?</p>	<p>Requires clarification. CR9: Please further elaborate how the project will support learning and knowledge management. The project has a training and training of trainers component which both should be explained in this section.</p>	<p>CR9: Partially addressed, the information supplied in the review sheet was not populated into the revised project document. Please consider to include activities such as online presence/repository of lessons learned, production of outreach material, both in printed format, as well as using available electronic platforms, including Facebook, text messages and a simple project website. Please also elaborate on what the strategy is to include school children and the private sector actively in the outreach campaign.</p>
	<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>Not addressed. It is unclear which groups have been consulted to inform the design of the project. CR10: Please clarify which groups have already been consulted in the design of the project, and how the project will continue to ensure a consultative process over the course of project implementation.</p>	<p>CR10: Not addressed, the project has not indicated how consultations have and will inform the proposal development and design.</p>
	<p>10. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p>Not addressed, the project must refine the adaptation rationale of the project and compare to the baseline and business and usual condition. CR11: Please reformulate this section to compare the project components with the baseline (no funds from the Adaptation Fund).</p>	<p>CR11: Not addressed.</p>
	<p>11. Is the project / program aligned with AF's results framework?</p>	<p>Possibly, pending the clarification of other issues.</p>	

	12. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	Somewhat addressed. CR12: Please provide more information on the seed fund and how it will sustain itself.	CR12: Somewhat addressed. More information should be populated on how the seed fund will be set up.
	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?	Not addressed. The project has a potential of causing environmental and social harm. The project proponent does not adequately identify or provide management measures for negative environmental or social impacts. CR13: Please provide justification for why the project proponent deems that no further assessment is required for compliance with the Environmental and Social Policy and Gender Policy of the Fund.	CR13: Not addressed, no justification has been provided as to why no further assessment is required, and the information in the review sheet was not reflected in the project document.
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	Yes	
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	Not included. CAR1	CAR1: Addressed
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	Yes, however the budget is not clear. CAR2	CAR2: Not addressed, the proposal does not clearly include an execution cost that is at or below 9.5% of the total project budget.
Eligibility of IE	4. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	Yes, Kemitraan is an accredited NIE.	

Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	N/A (not assessed at the concept stage)	
	2. Are there measures for financial and project/programme risk management?	N/A (not assessed 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 assessed at the concept stage)	
	4. Is a budget on the Implementing Entity Management Fee use included?	N/A (not assessed at the concept stage)	
	5. Is an explanation and a breakdown of the execution costs included?	N/A (not assessed at the concept stage)	
	6. Is a detailed budget including budget notes included?	N/A (not assessed 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 assessed at the concept stage)	

	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	N/A (not assessed at the concept stage)	
	9. Does the project/programme’s results framework align with the AF’s results framework? Does it include at least one core outcome indicator from the Fund’s results framework?	N/A (not assessed at the concept stage)	
	10. Is a disbursement schedule with time-bound milestones included?	N/A (not assessed at the concept stage)	

Technical Summary	<p>The proposed project seeks to improve the livelihoods of low income coastal communities and fishermen by increasing the cultivation of seaweed and seagrass. While the social and economic benefits of these activities may certainly be justified, the adaptation rationale of the project should be stronger and the project objectives and deliverables should be refined in line with a greater degree of focus on adaptation outcomes.</p> <p>The following clarification requests are made:</p> <p>CR1: Please include clear articulation of the climate change impacts that this project has been designed to address, the assessments and evidence of vulnerability that support the rationale of the project, and how the chosen activities address those impacts and the resilience of the chosen communities.</p> <p>CR2: Please provide further clarification on the rationale for the project and how the proposed investments will enhance resilience to the impacts of climate change in the particular geographical context and local environmental conditions.</p> <p>CR3: Please clarify how project locations were chosen and how the design of the project takes the cultural values of the communities into account.</p> <p>CR4: Please provide additional information on how the project will mitigate any potential negative impacts to the coastal environment.</p>
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- CR5:** Please provide an analysis of why the chosen solution is cost-effective relative to viable alternatives to achieve the intended adaptation outcomes.
- CR6:** Please provide additional information on local, regional, or national policies and plans that the project is aligned with.
- CR7:** Please provide information on how the project will meet the required standards that are listed.
- CR8:** Please provide an explanation and analysis of other related projects or programs in the area from other funding sources.
- CR9:** Please further elaborate how the project will support learning and knowledge management. The project has a training and training of trainers component which both should be explained in this section.
- CR10:** Please clarify which groups have already been consulted in the design of the project, and how the project will continue to ensure a consultative process over the course of project implementation.
- CR11:** Please reformulate this section to compare the project components with the baseline (no funds from the Adaptation Fund).
- CR12:** Please provide more information on the seed fund and how it will sustain itself.
- CR13:** Please provide justification for why the project proponent deems that no further assessment is required for compliance with the Environmental and Social Policy and Gender Policy of the Fund.
- CAR1:** Please provide the IE management fees.
- CAR2:** Please clarify the execution costs.

The final technical review finds that the revised proposal does not adequately address the fundamental concerns raised in the initial technical review. The final project review finds that the proposal fails to sufficiently address the clarifications requests made in the initial review, and does not directly or sufficiently address the issues raised.

The following observations are made:

- (i) The proposal should have a clearer adaptation rationale that defines the impacts of climate change the project has been designed to address;
- (ii) On knowledge management and outreach, please consider including activities such as online presence/repository of lessons learned, production of outreach material, both in printed format, as well as using available electronic platforms. Please also elaborate on what the strategy is to various relevant audiences actively in the outreach campaign; and
- (iii) The proponent should adequately describe the local context of the project site, review other investments/projects in the project area, and strengthen the justification of how the project is cost-effective and appropriate to increase the resilience of vulnerable populations.

Date:	11 September 2017
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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 Project Concept***

Country/ies: ***Indonesia, Indonesia Timur***

Title of Project/Programme: ***'Development of Sustainable Seaweed and Fishery Management for Enhance Community Prosperity & Climate Change Adaptation of Coastal and Small Island at Nusa Tenggara Barat Province'***

Type of Implementing Entity: ***National Implementing Entity***

Implementing Entity: ***Kemitraan (The Partnerships for Governance Reform)***

Executing Entity/ies: ***CIDES Indonesia Foundation.***

Amount of Financing Requested: ***990,000,-*** (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.

The most decisive stabilization of the effect of increasing the earth's temperature and ocean acidification is by optimizing the role of seaweed as one of the plants that can produce oxygen. Seaweed also make the process of photosynthesis to absorb carbon dioxide which leads to the increased production of oxygen (Kasim, 2014). Macroalgae can be expected to shift their distribution landward in response of sea level rise provided that the newly submerged shore areas are suitable for the primary settlement of spores or seeding. Such improvements, greatly affects the community structure changes and the spread of organisms in the sea. These problems can be slowed by increasing the oxygen content in the atmosphere produced by seaweeds.

Base on IPCC study (2014) benefits of seaweed aquaculture for climate change adaptation. The IPCC defines climate change adaptation as the process of adjustment to actual or expected climate and its effects. We address the use of seaweed aquaculture for climate change adaptation in terms of its capacity to avoid harms to human systems (e.g. coastal protection, ensure food security) and vulnerable ecosystems (e.g. provide refugia from ocean acidification and ocean deoxygenation).

By creating coastal habitats, seaweed aquaculture can potentially contribute some of the ecosystem functions that natural kelp forests and macroalgal beds support (Smale et al.2013). Some of these functions contribute, as mentioned above, to mitigate climate change while another set of functions have climate change adaptation benefits (Duarte et al., 2013). The canopies of farmed seaweeds, like those of wild seaweeds, dampen wave energy and, hence, serve as live coastal protection structures buffering against coastal erosion (Løvås and Tørum, 2001).

Rising atmospheric concentrations of carbon dioxide (CO₂) caused the oceans to absorb more of the gas and become more acidic. This rising acidity gives significant impacts on coastal and marine ecosystems, such as limit the growth of carbonate-dependent organisms, including

corals and shellfish. When CO₂ is dissolved in water, it becomes carbonic acid, which increases acidity. Since the beginning of the industrial revolution, ocean acidity has increased by 30% due to this process. Recently, scientists in China found that seaweed can remove CO₂ from the ocean and keep its acidity level down. Fast-growing seaweed takes in CO₂ through photosynthesis as it grows and is removed from the ocean at harvest. Therefore, it removes the acidifying CO₂ from the water. Indeed, the seaweed farms are not only reversing the local acidification threat, but also providing a safe and nurturing environment for shelled organisms.

Seaweed can absorb the carbon dioxide (CO₂). The total carbon dioxide uptake by seaweeds is about 173 mill tons per year. The coastal habitats seem to be more efficient in carbon uptake than the rainforests (Krause-Jensen & Duarte, 2016). Seaweed growth rate is around 30 to 60 times faster than land-based plants. This rapid turnover rate makes it ideal for mass scale production. Seaweed generally produce a lot of biomass and are potential as blue carbon stocks. Researchers have estimated that if 9% of the world's ocean surface are used for seaweed farming, we would be removing 53 billion tonnes of CO₂ from the atmosphere. Seaweed farming can also produce safe sites for breeding fish as well as reversing ocean acidification. Seaweed can be used as food, medicine and fuels. It will also offer refuges for marine species under threat from increasing acidification.

It is reported that seaweed farming could produce 12 gigatonnes per year of biomethane, while storing 19 gigatonnes of CO₂ per year directly from biogas production, plus up to 34 gigatonnes per year from carbon capture of the biomethane combustion exhaust gas. All of this could come from seaweed farming which has an area equal around 9 per cent of the world's ocean surface. Moreover it will increase in sustainable fish production and provide 200 kilograms per capita per year of fish for a population of 10 billion.

Marine aquaculture is a one such alternative income generating that is increasingly popular following a number of successful introductions in certain region such as Nusa pennida a small island east of Bali. One example is the development of seaweed farming, which has been promoted over the last 10-years but other types of marine aquaculture also have potential as alternative livelihoods. These include the culture of prawns, fish, bivalves, crabs and sea cucumbers.

It has been recognized that the coastal communities are general among the poorest in Indonesia also in NTB province. That is because the price of their product (fish, seaweed and others) are very low in price especially during the harvest season and as the consequences there is considerable poverty and indebtedness. In addition, due their location and their low level of skills and educations, coastal community do not have enough alternative livelihoods, others than traditional marine and coastal activities which destroy the environment such as coral mining, dynamite fishing, poisoning and mangrove cutting.

NTB province is located in the geographical position (8°LS-10°LS and 115°-120°BT). Broad area of 20153.15 square kilometers with a population until the year 2010 as many as 4,500,212 people. Some of the natural resources is the main plantation commodities such as coffee. NTB is a tourism city. Based on calculations using the vulnerability FINGERPRINT then at NTB including areas that are not prone category. The following figure is the percentage of vulnerabilities NTB.



Table 1. The distribution of Vulnerability level in Nusa Tenggara Barat Province

No	Districts	Level of Vulnerability					Total
		1	2	3	4	5	
1	Bima	19	106	50	-	2	177
2	Dompu	11	49	19	-	-	79
3	Kota Bima	2	17	19	-	-	38
4	Kota Mataram	22	-	27	1	-	50
5	Lombok Barat	6	40	75	-	2	123
6	Lombok Tengah	21	89	29	-	-	139
7	Lombok Timur	6	104	92	1	12	215
8	Lombok Utara	-	22	11	-	-	33
9	Sumbawa	8	120	36	-	2	166
10	Sumbawa Barat	7	53	3	-	1	64
	Total	102	600	361	2	19	1084

Project / Programme Objectives:

List the main objectives of the project/programme.

Aim of the program

a) To give the coastal community to develop their potential income generating by natural resource base through participating business activity in seaweed & fishery processing which also can best effort for mitigate and adaptation for climate change in coastal area.

b) To give the coastal community a chance to secure the alternative income without ignoring their household cores while they improve the environment quality for fishery and seaweed cultivation.

c) To create the conducive situation in which entrepreneurial spirit, skills and knowledge so that society as the whole can get benefit from it.

d) To develop the sustainable management of seaweed and fishery cultivation and introducing of value added and clean technology of production to reduce the environment degradation cause the exploration in their conservative nature.

e) To monitor and evaluate the CO₂ absorption and acidification coastal area.

Project / Programme Components and Financing:

Criteria	Amount	Percentage
Honoraria management/Admin/Report etc.	79,200	7,9
Grouping/Coordination/Field/Manual book etc	78,000	7,6

<i>Training of Trainer, Groups Training</i>	<i>73,000</i>	<i>7,4</i>
<i>Seed fund for farmer/fishery/polyculture</i>	<i>690,000</i>	<i>70,1</i>
<i>Post harvest handling</i>	<i>70,000</i>	<i>7,0</i>
<i>Total</i>	<i>990,200</i>	<i>100</i>

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 subsets 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. Field Coordination/Grouping	Trained.skilled participant or groups of farmer/fishermen for seaweed & fishery cultivation	1,000 participants farmer/fishermen divided into 100 groups each group consist 4 to 15 members	78,000
2.Training Phase (Training of Trainer , Group Training etc)	Manual book/ Training module, Participant Trainer	40 Trainer of seaweed and fishery management	12,000
	Manual book/ Training module, Training Participant	Manual book/Training module on Sustainable seaweed & fishery cultivation and post harvest processing, 200 persons trained/skilled.	61,000
4. Production/Cultivation	80 hectare Gracillaria sp, Eucheuma sp	80 hectare perperiods or 1,200 hectare in 2 years	
a.Long line system	30 ha x US \$ 9,000		270,000
b.Floating line system	10 ha x US \$ 9,000		90,000
c.Polyculture system	30 ha x US \$ 10,000		330,000
			690,000
4.Harvesting Handling	Minimum 1-1,5 tons perhectar/periods	Minimum 1,600 tons of dry seaweed for 2 years	50,000
5. Post harvest training	Value Adedd Product		20,000
6. Project/Programme Execution cost			690,000
7. Total Project/Programme Cost			911,000
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			79,000
Amount of Financing Requested			990,000

Projected Calendar:

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

Milestones	Expected Dates
Start of Project/Programme Implementation	October,1 2017

Mid-term Review (if planned)	April, 1 2018, April, 1 2019
Project/Programme Closing	November, 30 2019
Terminal Evaluation	May, 30 2020

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.

Base of Kasim (2014) Seaweed (natural or cultivated) has a very important role in reducing global warming. Seaweed as biotic components can stabilize atmospheric degradation, and increased production of oxygen to reduce global warming. In addition to producing oxygen, seaweed also can stabilize global warming sea water, as well as reduce the potential for acidification as well as to supply oxygen to the atmosphere. When an earth that is triggered by an increase in carbondioxide content in the atmosphere, it will affect the increase in sea water temperature. Such improvements, greatly affects the community structure changes and the spread of organisms in the sea.

These problems can be slowed by increasing the oxygen content in the atmosphere produced by seaweeds. The most decisive stabilization of the effect of increasing the earth's temperature and ocean acidification is by optimizing the role of seaweed as one of the plants that can produce oxygen. Seaweed also make the process of photosynthesis to absorb carbon dioxide which leads to the increased production of oxygen and reduction of the coastal water acidification.

Benefits of seaweed aquaculture for climate change adaptation The IPCC defines climate change adaptation as the process of adjustment to actual or expected climate and its effects (IPCC 2014). In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities whereas in natural systems it refers to human intervention to facilitate its adjustment to expected climate and its effects (IPCC 2014). In this context, we address the use of seaweed aquaculture for climate change adaptation in terms of its capacity to avoid harms to human systems (e.g. coastal protection, ensure food security) and vulnerable ecosystems (e.g. provide refugia from ocean acidification and ocean deoxygenation).

By creating coastal habitats, seaweed aquaculture can potentially contribute some of the ecosystem functions that natural kelp forests and macroalgal beds support (Smale et al., Provisional 2013). Some of these functions contribute, as mentioned above, to mitigate climate change while another set of functions have climate change adaptation benefits (Duarte et al., 2013). For example, the canopies of farmed seaweeds, like those of wild seaweeds, dampen wave energy and, hence, serve as live coastal protection structures buffering against coastal erosion (Løvås and Tørum, 2001; Mork, 1996).

The islands in the eastern part of the Indonesian archipelago are some areas with The highest poverty and food insecurity in the State Indonesia. community livelihoods mostly located in rural areas and depend on ecosystem services provided by terrestrial and marine habitats, and are very sensitive to the climate change. Currently there are no approaches

are available to assess the vulnerability of livelihoods on islands to climate change or other factors driving change as growth resident, or to design adaptation strategies 'no regrets' that brings benefits on a variety of future scenarios.

The government has established the principle of sustainable development used in the 2015-2019 RPJMN that is economically feasible, socially acceptable, environmentally sustainable. To implement these principles require the prerequisites are improved governance. One of very important to improve governance is in the field of nature and natural resources Living environment. Sustainable development is constructed based on the basis of synergy ecological, economic base, and the social bases of development in all sectors.

Indonesia is an archipelago lying areas Low spacious, Indonesia is vulnerable to the negative impacts of changes climate. Indonesia has experienced extreme climate events such as floods and drought, and are likely to experience long-term effects of the increase in sea levels. With the population of Indonesia, the natural disasters caused climate change will affect more humans and daily living, so it would be difficult to rise to reduce poverty. Most of the poor tend to live in areas at high risk of prone to rising sea levels.

The Indonesian government considered the concept of integrated between mitigation and adaptation to climate change as an attempt to build resilience and safeguards against flooding, availability of water and energy resources, and has undertake significant efforts in developing and implementing the Action Plan National Adaptation to Climate Change (RAN-API), which consists of a framework for adaptation initiatives that have been mainstreamed into the Development Plan National.

With the understanding that build resilience requires a process long, the cost of adaptation to climate change Indonesia will continue to grow. Therefore, the goal is to maintain the adaptation Indonesia a strong local economy, to ensure food security, as well as to protect the livelihood and welfare of the people by building durability for the affected communities as well as the resilience of the sector such as ecosystem resilience, economic and livelihood systems. Action adaptation will be directed to community development in order increase the capacity of resilience in addressing the impact of climate change.

The degree of vulnerability to climate change is determined by the indicators that affect the exposure, sensitivity and adaptive capacity system. These three factors are changed according to time in line with implementation of development activities and adaptation efforts. Level exposure and sensitivity levels can be reflected by biophysical and environmental and socio-economic conditions. To support efforts to reduce the risks and impacts of climate change The Directorate General of Climate Change through the Directorate Develop climate change adaptation and Data Information System Index Vulnerability to Climate Change that present data and information vulnerability climate change unit in villages across Indonesia. Currently FINGERPRINT utilize socio-economic data, demographics, geography, and the environment PODES infrastructure. The goal is to present the information the vulnerability to climate change to support policy development by central and local governments in adaptation planning efforts and reduce risks and impacts of climate change.

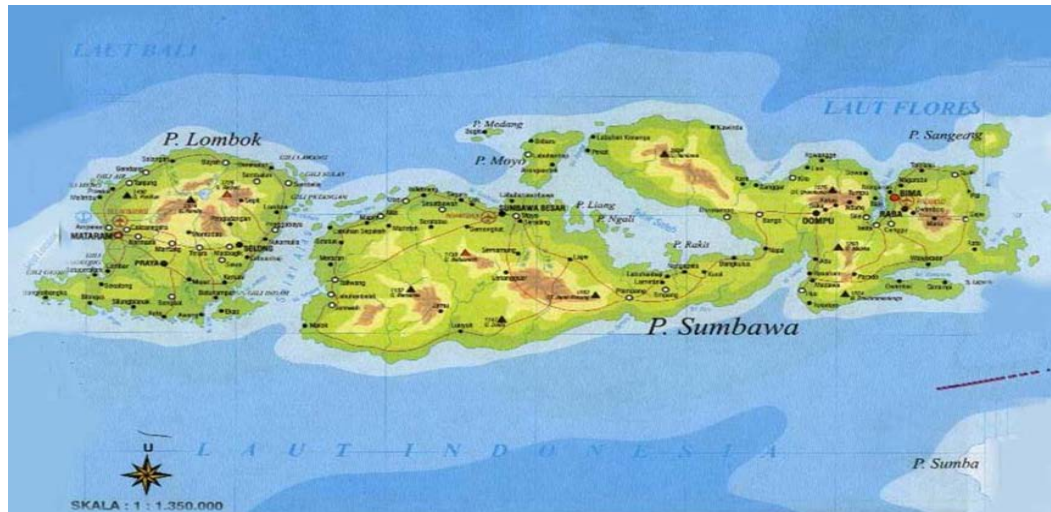


Figure 1. The administration area of Nusa Tenggara Barat Province

- B.** Describe how the project / programme provide 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.

This project will directly provide economic benefits to the community, especially the poor who did not / do not own a business on seaweed farming is done directly by them. Executor of the project will act as a mentor in production, product quality and post-harvest seaweed also helps on networking market. Similarly, in the cultivation environment seaweed area will improve the quality of the local environment since it will increase the oxygen content and prevent acidification of the waters and become a source of nutrients to the local ecosystem. In terms of gender This project will empower many women because about 60% seaweed farmers are women. Marine aquaculture is a one such alternative income generating that is increasingly popular following a number of successful introductions in certain region such as Nusa pennida a small island east of Bali. One example is the development of seaweed farming, which has been promoted over the last 10-years but other types of marine aquaculture also have potential as alternative livelihoods. These include the culture of prawns, fish, bivalves, crabs and sea cucumbers.

The cultivation of seaweed is widely perceived as one of the most environmentally benign types of aquaculture activity, as it does not require additional feed or fertilisers. Consequently, it has been actively promoted by government initiatives, particularly in many developing countries where communities have reduced access to alternative livelihoods or are involved in more destructive fishing methods (e.g., dynamite fishing). The cultivated seaweed and the associated infrastructure provide multiple direct and indirect environmental benefits on both a range of spatial and temporal scales.

It has been recognized that the coastal communities are general among the poorest in Indonesia. That is because the price of their product (fish, seaweed and others) are very low in price especially during the harvest season and as the consequences there is considerable poverty and indebtedness. In addition, due their location and their low level of skills and educations, coastal community do not have enough alternative livelihoods, others than traditional marine and coastal activities which destroy the environment such as coral mining, dynamite fishing, poisoning and mangrove cutting. In the 'low income groups' this coastal and marine sector of main income. This sector is the labor based –instead of technology or capital based economic activity. The development of this non formal sector can have positive impact especially increasing social welfare of coastal and marine community.

In “low income groups” non-formal sector is the source of main income. This sector is labor-based -instead of technology or capital based economical activity. The development of non-formal sector can have positive impact especially in increasing social welfare. One particular characteristic of non-formal sector potential roles of women both as labor and as entrepreneur. For women who has family, this sector can be her choice for she can have roles both on her household chores and in this non-formal economic activity can have positive impact in sense that it can generate additional income.

The development of non-formal sector is very slow. This can related to many constraints among others to low quality of human resource education, scarcity of capital, technology and marketing. All these constraints can make the benefit of non-formal sector lower than is cost or all efforts done for it. The low benefit can be seen from how low are its output, product, income and quality.

In efforts to increase the benefit of non-formal sector which can improve social welfare, it is necessary that the constraints to its developments are handled or (re) solved. One way on how to do the latter is by improving human resource through encouraging and increasing women capability in high quality enterprising, improving their productivity and technological processing as well as improving their marketing capability.

In determining which sector to be develop it is necessary to refer to several criteria like : home based industry, simple technology, easy to produce, potential for developing further, labor force and raw materials available in abundance and has interrelation with other sectors so that capable of creating a network of enterprising community. In accordance with criteria set up, the processing of sea grass food is informal sector worth and potential to be developed. Several further reasons why this field of economic activity is chosen are as follow:

a.Improving this sector can have wide interrelation in both upstream and downstream of economic activity. In upstream economic activity, this sector can induce to increase the productivity of raw material i.e. seaweed and fishery. While in downstream economic activity, this sector can create food processing industry both in supplying local market and export market.

b. This sector has good potential to supply local and export market. Moreover, not many

c. Seaweed food and fish product is food which contain of high nutrients as protein sources.

d. Raw material in the form of seaweed is abundantly available due the increasing activity in growing and cultivation of seaweed.

e. Seaweed food and fish processing is appropriate for community activity in their spare time while they are tending their house hold.

f. The economic activity has no or minimum impact in polluting on its environment.

Otherside, unexpected weather and more and more extreme climate events exacerbate income generation from the primary economic sector. The project will cover around 1,200 people who directly involve on seaweed cultivation in West Nusa Tenggara Province. The multiplier effect of the project could more than double such as trading, post harvest production etc.

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

The project financial cost effective analysis is an approach to determine whether a project is feasible or not implemented. The approach used in this analysis consists of Project Cash Flow, Projects Loss / profit, Net Present Value, Internal Rate of Return (IRR) and Payback Period. Base on study by Indonesia Central Bank for seaweed small business projects with financing commercial bank can return of capital within one year of production.

Based on the projected profit / loss is calculated from the difference between sales revenue and total costs (production costs, depreciation, interest and taxes). The project is able to generate profits annually. Profit margin in year 1 at 33.13% and subsequent years 32.52% per year. Breakeven point can be achieved in the first year of production of 33.186 kg and subsequent years 31 566 kg. Net Present Value (NPV) is calculated based on the difference between the present value of receipts to be received from the sale of seaweed production is reduced by the present value on the cost to be incurred over the life of the project including the payment of taxes.

- 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.

Base on Indonesian National Action Planning RAN-GRK i.e. Regulation of The President Republic of Indonesia Number 61 of 2011 on National Action Plan for Reduction of Green House Gas Emissions. The rehabilitation of the action plan of the coastal ecosystem (Mangroves, coastal vegetation, seagrass, coral reefs) in the coastal region Integrating adaptation and mitigation of climate change into planning regulatory, institutional capacity and management of fishing Development of seaweed cultivation in eastern Indonesia 2010-2020. This program coordinated by Ministry of Marine and Fishery Affairs cq. Directorate General of Coastal and Small Island.

Projections based on the assessment of the impact of the driving factors of the products and ecosystem services (PPE), which supports rural livelihoods and well-being community. Because of the diversity of products and ecosystem services as a dependency of society on

Lombok and Sumbawa, the typology is needed to simplify the analysis. In 2010 there were 105 rural sub-districts in the province. Overall, a total of 84 products and ecosystem services have been identified from 9 habitat (Figure below). Manufacture of PPE (eg relative volume produced or used) is estimated from BPS-National Statistics Agency and PODES secondary data and survey to the community if the data not available (Suadnya, 2010). Statistical analysis of the blend of PPE and level production, revealed seven types of typologies. The whole typology except typology 7 contained Lombok and Sumbawa.

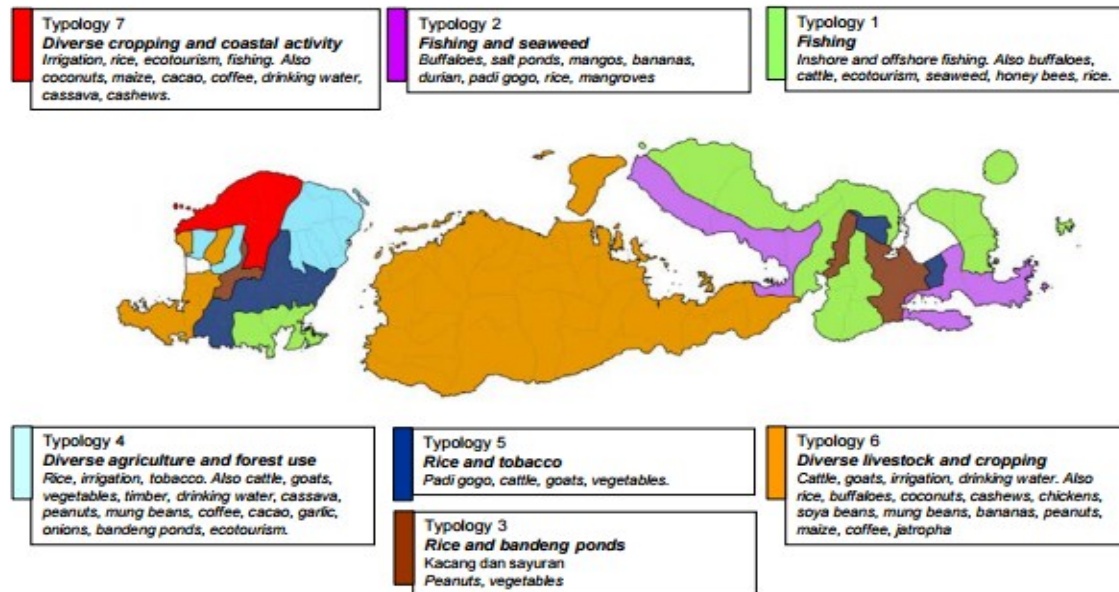


Figure 2. The distribution of habitat in Nusa Tenggara Barat Province (CSIRO,2014)

- E. Describe how the project / programme meet relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and comply with the Environmental and Social Policy of the Adaptation Fund. There is several National Standard related to Seaweed Cultivation and Fishery Management launch by Indonesian National Standard Agency. Such as :
- SNI 7579.2.2010. The Cultivation of Seaweed *Eucheuma cottoni* by the Long Line system.
 - SNI 7902 2013 Cultivation of Seaweed *Gracillaria verucosa* by pond system.
 - SNI 7902-2013 and SNI 7903.2013 The Seedling of Seaweed *Gracillaria Verucosa* and Seaweed nursery of *Gracillaria verucosa* by long line system in pond.
 - SNI 7904 2013 The Seedling of seaweed *Gracillaria verucosa* pond system by spreading method.
 - SNI 7917 Management of Fishery Infrastructure by PET Floating Net system and Fish rearing in open sea pond method.
 - SNI for seaweed cultivation and product processing and SNI for Milkfish cultivation.
- F. Describe if there is duplication of project / programme with other funding sources, if any.
No
- G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

The project will publish a book report, book training module, a module for seaweed cultivation system with longline gear, cages and polyculture and post-harvest technology seaweed as lapora activities and dissemination of lessons from seaweed cultivation in the province of Nusa Tenggara.

In the 2-year project the executor will organized Workshop : The Development of 'Bio-Based Economy' Sustainable Management of Biodiversity as Economic Future Solution Indonesia as a maritime continent and development of strategy to reduce CO₂ and acidification of the coastal area in collaboration with the Faculty of Biology, University of Gadjah Mada and relevant stakeholders from within and outside the country. It is expected that this forum will be born in the formulation and improvement of cooperation in the field of management of sea grass and fishery as the welfare of the Indonesian people in the future and will formulate development of strategy to increase CO₂ absorption and to reduce the coastal water acidification.

- 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.

CIDES has initiated coastal community empowerment with seaweed commodities in cooperation with the research group Seaweeds BPP Teknologi while the initiative of Formation Seaweed Development Study Center in Nusa Tenggara that time, but this plan constrained on funding limitations.

During the project implementation the project executor (later call executor) has consultative stakeholder i.e., Ministry of Marine and Fishery Affairs (MMAF) local Office and Ministry of Cooperative and Small Scale Enterprize local office for sustainability of the project, Ministry of Industry local office and Agency for Application and Asessment of technology especially for post harves technology, the Ministry of Environment and Forestry (central and local office) for Aspects of Adapation Study and Ministry of Industry and Trading for Marketing network and support the project.

Seeking the scheme for the vulnerable groups as the target of project the executor will consultative with the local government (Governor, Bupati/Head of District / Major, Sub district head and head of community or head of indegenous people). For the gender aspects we will consultative or coordinate with groups of official wife (PKK) especiall cause the participants target of the project is more female gender than male and also the leader of the community (Indigenous people if any).

The list of consultative stakeholder

<i>Stakeholder</i>	<i>Status</i>
<i>Governor NTB Administration</i>	<i>Support</i>
<i>Dinas Kelautan dan Perikanan NTB</i>	<i>Support</i>
<i>Dinas Koperasi dan UKM NTB</i>	<i>Support</i>
<i>Dinas Perindustrian & Pertanian NTB</i>	<i>Support</i>
<i>Head of District (Bupati/Walikota)</i>	<i>Support</i>
<i>Head of PKK Kabupaten, Kecamatan, Desa</i>	<i>Support</i>

- I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning. Base on call for proposal by Kemitraan Adaptation Fund for Propose the project for climate change adaptation to Kemitraan – Adaptation Fund and our previous discussion with the local government of Nusa Tenggara Barat Province for creating the project which combine

on climate mitigation and adaptation also the coastal community development in West Nusa Tenggara. Also, there very difficult procedure for farmer and fishermen on credit request from commercial bank. They face some of fundamental constraints i.e. no and or limit asset for bank's guarrantee and or non bankable criteria of entrepreuner by comercial bank. Under the Marine and Fisheries Agency reports Lombok is known that it is the fishermen and farmers did trouble NTB capital without collateral.

The Index of Vulnerability, NTB province is located in the geographical position (8°LS-10°LS and 115°-120°BT). Broad area of 20153.15 square kilometers with a population until the year 2010 as many as 4,500,212 people. Some of the natural resources is the main plantation commodities such as coffee. NTB is a tourism city. Based on calculations using the vulnerability FINGERPRINT then at NTB including areas that are not prone category. The following figure is the percentage of vulnerabilities NTB.(see table 1 above)

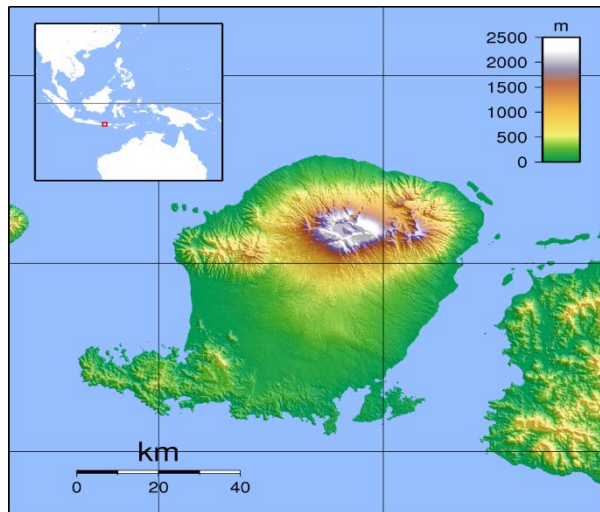


Figure 6.The detail of land elevation of Lombok island

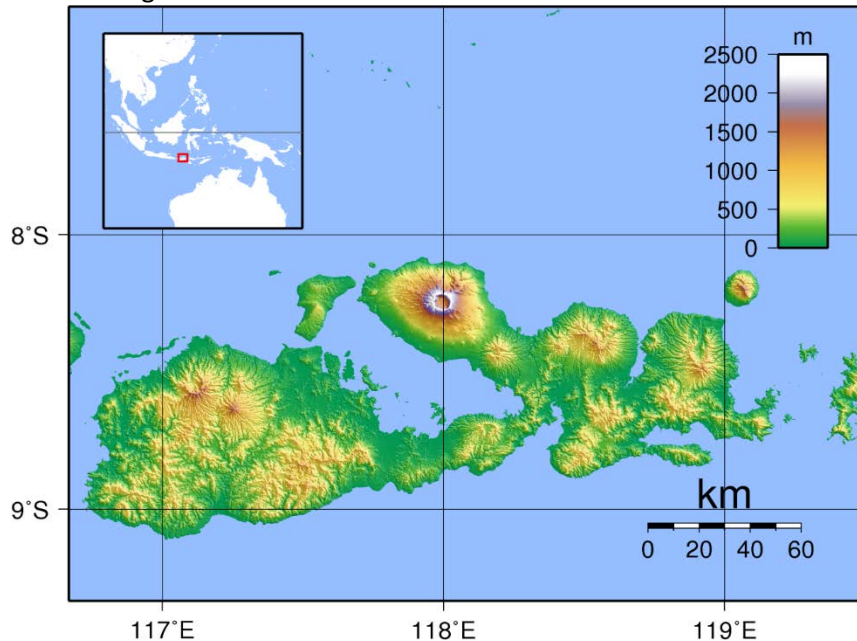


Figure 7.The detail of Land elevation of Sumbawa island

Tabel 2.The Potential Area for Seaweed/Polyculture Cultivation

	Kecamatan/Sub-district	Potential (hectare)	Cultivated (hectare)
Lombok Barat	Pangantap	944	644
Lombok Tengah	Garupuk/Awang	475	214
Lombok Timur	Sarewe	2,460	2,000
	Brewe	800	600
Sumbawa Barat	Labuan Mapin	3,200	2,000
Sumbawa Barat	Kertasari	900	700
Sumbawa Barat	Terano	2,000	200
Dompu	Kuangko	800	200
Bima	Wawaroda	3,207	800

Projections based on the assessment of the impact of the driving factors of the products and ecosystem services (PPE), which supports rural livelihoods and well-being community. Because of the diversity of products and ecosystem services as a dependency of society on Lombok and Sumbawa, the typology is needed to simplify the analysis. In 2010 there were 105 rural sub-districts in the province. Overall, a total of 84 products and ecosystem services have been identified from 9 habitat (Figure below). Manufacture of PPE (eg relative volume produced or used) is estimated from BPS-National Statistics Agency and PODES secondary data and survey to the community if the data not available (Suadnya, 2010). Statistical analysis of the blend of PPE and level production, revealed seven types of typologies. The whole typology except typology 7 contained Lombok and Sumbawa.

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

The cultivation phase can be renewed every maximum 4 months depend on the cycle of cultivation. Theoretically, in one year one group hopefully already get the Break Even Point (BEP) of their seaweed and fishery business and have own capital and revolving the seed fund to executor. So, the executor will start nurturing the new groups. Also, the post harvest processing of seaweed and fishery could become more value added product so directly will impact on rising of groups income. In this scheme the break even could be achieved faster. So the project could grow in groups numbers or participants. All of the farmer/fishermen groups will coordinate by cooperative system which will develop by the project executor in cooperation with the local government. The 'seed fund' of the groups will apply by revolving system for running of new groups in other area. All the activities of this project will be reported regularly every 6 months during 2 year project complete which will cover the progress report, documentation and last but not least evaluation and improvement effort to achieve the goal of project.

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

The project will impact on accelerating the local economy which has been chosen for the project. Economic activity in the agribusiness seaweed cultivation is done profitably. Income communities who cultivated seaweed is higher when compared to people who do not do seaweed cultivation. Significantly this effect on increasing welfare owned by coastal communities. Previous study proved that analysis of indicators describe the level of welfare.

families who have seaweed cultivation better than families which have not seaweed farming. Change livelihood pattern also occurred that society shifted from being just fishing extraction from nature become cultivated society farmers. For environment aspects, the project also will enrich the nutrient content of surrounding waters close to the project. The benefit of the high content of nutrient will enrich the ecosystem and fishery sector in the area.

Macroalgae cultivation can be expected to shift their distribution landward in response of sea level rise provided that the newly submerged shore areas are suitable for the primary settlement of spores or seeding. Seaweed in particular are frequently exposed at the red tide and have become adapted to ambient air temperature and rainfall.

Such improvements, greatly affects the community structure changes and the spread of organisms in the sea. These problems can be slowed by increasing the oxygen content in the atmosphere produced by seaweeds.

Seaweed aquaculture can potentially contribute some of the ecosystem functions that natural kelp forests and macroalgal beds support (Smale et al., 2013). Some of these functions contribute, as mentioned above, to mitigate climate change while another set of functions have climate change adaptation benefits (Duarte et al., 2013). For example, the canopies of farmed seaweeds, like those of wild seaweeds, dampen wave energy and, hence, serve as live coastal protection structures buffering against coastal erosion (Løvås and Tørum, 2001).

Base on the Governor advise the project will spread in Lombok and Sumbawa island as the mainland of Nusa Tenggara Barat Province. The table of potential area for sea weed cultivation in NTB Province.

No	Disctrict	Kecamatan, (Teluk)	Allocation area (hectare)
1	Lombok Barat	Pengantap	300
2	Lombok Tengah	Teluk Gerupuk	200
3	Lombok Timur	Teluk Sarewe	400
4	Sumbawa Barat	Kertasari	200
5	Sumbawa Barat	Terano	1.500
6	Dompu	Kuangko	500
7	Bima	Waworada	1.800

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 Labor 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>	√	

Pollution Prevention and Resource Efficiency	√	
Public Health	√	
Physical and Cultural Heritage	√	
Lands and Soil Conservation	√	

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

The project is directly executed by executor coordinated by CIDES Indonesia in cooperation with Faculty of Biology Gadjah Mada University also supporting by the local government administration and local administration (indigenous people). The first step project is Training of the Technicians & Trainer Assume that 40 technician is required to support 1,200 farmers of seaweed and fishery during at least two years.

The technicians are the keys to success, and they need to be well trained. CIDES Indonesia in cooperation with BPPT, Faculty of Biology Gadjah Mada University and Center for Coastal and Marine Studies University Mataram will offer a training package course on theory and practice for prospective seaweed and fishery farming technicians. Train the best people available. Start the farms slowly, step-by-step, and with small groups of well-motivated and well-trained farmers. Establish clear 'rules of the game' from the start and don't persist with unmotivated farmers. Faculty of Biology UGM will also do activity to monitor and value the CO2 absorption and acidification of the coastal area.

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

	Risk		Response Measure
Economy	<i>Fluctuation in exchange rate (USD : IDR)</i>	<i>medium</i>	<i>The project manager will closely monitor the fluctuation in exchange rate and make decision accordingly</i>
	<i>Delays in the disbursement of funds, procurement and institutional inefficiencies (e.g. lengthy approval processes) result in delayed recruitment of project staff and hence project implementation.</i>	<i>low</i>	<i>Communication between project manager and everyone involved in this project for minimalizing misunderstanding between party</i>
Project	<i>Delays for infrastructure stabilization</i>	<i>low</i>	<i>Project manager will be manage the executor for tightly follow the time schedule</i>
	<i>Farmer Acceptance</i>	<i>low</i>	<i>Project team will introduce the project comprehensively and involve related key players</i>

The executor will base on the minimum target achievement vs time and fund disbursement. The complete and details is show on disbursement of fund below.

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

The measure of environment and social risk is handled by doing research before and after the project. Some of indicator which can use i.e. environment quality before and after the project (e.g.turbidity of water, dissolve oxygen etc, abundance of species etc).

	Risk		Response Measure
Economy	<i>Social jealousy between people who get cultivation training and who do not</i>	<i>Medium</i>	<i>The project was conducted in a sample area that invited community representatives from other regions. So that people in other areas can learn through these representatives</i>
	<i>Distribution of cultivation and its sales</i>	<i>Medium</i>	<i>Distribution and sales channels of cultivation shall be made through local government and project implementers</i>
	<i>The abundance of cultivation products</i>	<i>low</i>	<i>Diversification and processing of raw products into semi-finished or finished products</i>
Environment	<i>Environmental impact for local areas</i>	<i>Medium</i>	<i>The environmental factor measured periodically. The environmental factor consists of pH, salinity, water turbidity, temperature, dissolved oxygen and species abundance</i>
	<i>The existence of endemic disease in the cultivation process</i>	<i>Low</i>	<i>Periodic monitoring of cultivation commodities against exposure to diseases</i>
	<i>The presence of pests that cause production to decline</i>	<i>Low</i>	<i>Periodic monitoring of pests that interfere with cultivation commodities</i>

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

The monitoring and evaluation will be base on the activity and amount of budget disbursement. The executor will report periodically every 6 months.

For monitoring and evaluation activities will described below :

Start up

For starting up will be held in the first month of the project started. The aim for this evaluation is to make sure every preparation was done accordingly.

Six-Month evaluation

Project will be evaluated every six-month including financial reports and working progress

End of Project

Evaluation for the end of project will take place three months prior to project termination

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

Criteria	Milestone	Target	Indicator
Grouping	Number of groups	100 groups farmer/fishermen	The existing/ sustainable group after the project
Training of Trainers	Number of Trainer	40 Trainers	Manual book, The certificated Trainer
Training groups	Number of participant	100 participants	Sustain /skilled participants
Cultivation phase	The wide area of cultivaton	80 hectares of seaweed cultivation	The sustain of cultivated area seaweed/fishey
Post harvest handling	Kind and amount product	Value added product of seaweed/fish	The vary of seaweed /fish product
Monitoring and evaluation of CO ₂ capture and water acidification	Level of CO ₂ in Water and atmosphere and acidification of coastal water.	Along the targeted coastal area	Reduction of CO ₂ and acidification level

Through this project created at least could be created for seaweed cultivation in polyculture and longline systems (long line) 80 hectares of distribution throughout the province Nusa Tenggara Barat involving at least 1,200 direct labor. After operating for a year the cultivation and processing of seaweed and fishing can take place with further sustainable farmers, fishermen and seaweed, fish and dairy products producers will be contained in the form of cooperatives under the coordination of the University of Mataram which will be formed later.

100 groups from the villages learned how to process seaweed into chips and syrup, milkfish product etc. CIDES Indonesia, Faculty of Biology, UGM and related partners will provided teaching material regarding bleaching methods, syrup processing, chips, milkfish processing and business analysis of the seaweed product market. Additionally, CIDES Indonesia and partner provides processing equipment for each district.

Once ToT participants return to their villages they can transfer the knowledge to neighbours, so that they are able to produce seaweed chips themselves. Some of them already apply continuous production, although still on a small scale, and are even getting orders from outside the area.

Although the women are now knowledgeable on processing techniques, difficulties in business permit application, a lack of capital to invest in raw products and equipment and unstable electric power supply hamper the production of seaweed products. To overcome these obstacles, CIDES Indonesia has coordinated with the respective local government offices and followed up on raised issues. As an example, the health department will issue the Certificate of Domestic Industry Processing (S-PIRT) as the requirement for home industry chips production and the Cooperative and Industrial Trading office will provide assistance on the seaweed chips packaging for the active groups. The local government also promises to

support the seaweed processing activity by providing market strategy such as exhibition to establish Lombok Barat as centrum of seaweed processing in Nusa Tenggara Barat.

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

Project Objective(s) ¹	Project Objective Indicator	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Resilience/ adaptation In coastal area	Manage minimum 1,200 hectare of seaweed/fishery cultivation	Seaweed product business	Coastal and environment service	78,000
Income generating for vulnerable community	Multifier effect on local economy minimum 3,600 people	Local economy growth	Family expennses	73,000
Monitoring and evaluation of CO ₂ and acidification level	Increase of CO ₂ capture and decrease of acidification			
Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Group entreprise Skilledfarmer/ fishermen	Minimum 1,000 new seaweed/fishery cultivator	Enhance of skill personel	Increasing of Daily income	690,000
Value added product	Diversification of seaweed/fishery product i.e.syrop, seaweed jelly, starch etc	Enhance of product price/quality	Increasing of product price/quality	70,000
Awareness of community in CO ₂ and acidification mitigation	Active community of CO ₂ and acidification monitoring			

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.

Firstly, the project will be started by coordination and grouping the community members. Most of those who are grouped are women (approximately 80 %). The consideration to pick up women as the majority in the groups is because women have more time to support this project compared than their male spouses. There will be 100 groups each will consist of 10 -15 members.

The groups will be trained prior to the implementation of the program. The training will be specifically adjusted with their educational background/interest/skill/ability. Further training will be conducted by those who are considered capable for becoming the trainers. Some criteria will be adopted to recruit the trainers from the selected groups. Approximately, there will be 40 members who will be further trained to be the trainers in their own community to support the project.

¹ The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

The training sites will be conducted in three cities (Yogyakarta, Malang, and Mataram). The predicted expenses for the above activities are \$ 70, 000 (the expenses include training modules, allowance for each participant, allowance for trainers, accommodation, etc.). After the training program is completed, the production phase will be directly applied in the field. All the materials of the training programs are expected to be effectively applied by all the members of trainees/trainers under the supervision the Faculty of Biology UGM (Gadjah Mada University). In this case, the methods which will be applied are: long line, floating, and polyculture methods in 80 hectares of production area . The total amount for the above project is going to be \$ 770, 000 (includes seed fund).
 The other predicted expenses are management fee (\$ 80,000) which will be allocated to the project officers, local partners (e.g., local communities), and post-harvest handling, as well as product exhibition (e.g., marketing, certification, etc.). The total expenses predicted for this project is about \$ 990, 000.

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

Schedule of Budget Disbursement Year I

Activity/Month	1	2	3	4	5	6	7	8	9	10	11	12
Preparation	V											
Site activity	V											
Grouping	V	V										
Training of Trainer		V	V	V								
Training for Group				V	V	V						
Practising					V	V	V					
Nursery						V	V	V	V	V	V	V
Cultivation Phase												
a.Long line							V			V		
b.Floating							V			V		
c.Polyculture							V			V		
Post harvest									V			V
Midterm Review						V						V

Schedule of Budget Disbursement Year II

Activity	13	14	15	16	17	18	19	20	21	22	23	24
Postharvest	V	V	V	V	V	V	V	V	V	V	V	V
Exhibition				V				V				
Cultivation Phase												
a.Long Line	V			V			V			V		
b.Floating	V			V			V			V		
c.Polyculture	V			V			V			V		
Post harvest			V			V			V			V
Mid Term Review						V						V
Reporting												V

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


A. Record of endorsement on behalf of the government²

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:

TGH.DR.M.Zainul Majdi, MA Governor of West Nusa Tenggara	Date: April, 4 2017
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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

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, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund</u> 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

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.

Appendix 1. Details of Budgeting.

	Criteria	Price per-unit US \$	Unit	#unit	Amount
1	Management				
a	Project staff 1	1,200	24 months	1 person	28,800
b	Staff 2	1,100	12 months	1 person	13,200
c	Staff 3	1,000	12 months	1 person	12,000
d	Staff	500	12 months	1 person	6,000
e	Local Staff	400	12 months	2 person	19,200
	Sub-total				79,200
2	Field Coordination/Grouping				
a	Grouping	3	10 location	100 persons	30,000
b	Transportation	1,000	12 months	2 package	24,000
c	Site secretariat	1,000	24 months	1 package	24,000
	Sub-total				78,000
3	Training Phase				
a	Module/Manual Book	10	750	4 package	30,000
b	Training of Trainer	300	20 pers	2 package	12,000
c	Group Training	2,000	10 location	1 package	20,000
d	Demoplot-practising	1,100	10	1 package	11,000
	Subtotal				73,000
4	Implementation Phase				
a	Long line system cultivation				
	a.Eucheuma cottoni	30 hectare	9,000		270,000
	b.Gracillaria sp				
b	Floating system cultivation				
	a.Gracillaria sp	10 hectare	9,000		90,000
	b.Eucheuma cottoni				
c	Polyculture system (IMTA,Integrated Multitropic Agriculture)				
	-Seaweed(Gracillaria sp)	30 hectare	11,000		330,000
	-Shrimp (Penaeus monodon)				
	-Milkfish (Chanos chanos)				
	Sub total				690,000
d	Post harvest handling				
	a.Starch processing	1,000	1 package	7 location	7,000
	b.Seaweed chips processing	1,000	1 package	7 location	7,000
	c.Seaweed syrop processing	1,000	1 package	7 location	7,000
	d.Seaweed (dodol) processing	1,000	1 package	7 location	7,000
	e.Milkfish processing	1,000	1 package	7 location	7,000
	f.Shrimp processing	1,000	1 package	7 location	7,000
	g.Product packaging	1,000	1 package	7 location	7,000
	h.Gum processing	1,000	1 package	7 Location	7,000
	I.Jelly processing	1,000	1 Package	7 Location	7,000
	j.Nori Processing	1,000	1 package	7 Location	7,000
	Subtotal				70,000
	Total				990,200



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-1/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