ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: SMALL-SIZED PROJECT CONCEPT

Country/Region: Indonesia
Project Title: Increasing the resilience of smallholders from climate impacts through Smart Agriculture based on Livelihood Diversification in Indonesia
Thematic Focal Area: Agriculture
Implementing Entity: Kemitraan/Partnership for Governance Reform
Executing Entities: Mitra Aksi Foundation
AF Project ID: AF00000309
IE Project ID:
Requested Financing from Adaptation Fund (US Dollars): 977,939
Reviewer and contact person: Dirk Lamberts
Co-reviewer(s): Imèn Meliane
IE Contact Person: Siti Hariati Yuwani

Technical Summary	The project "Increasing the resilience of smallholders from climate impacts through Smart Agriculture based on Livelihood Diversification in Indonesia" aims to increase the resilience and adaptive capacity of individuals and communities, especially small farmers, to climate change through technical assistance for smart agricultural cultivation and diversification of livelihoods based on potential environmental services. This will be done through the five components below: Component 1: Increasing the adaptation capacity of farmers and village governments in developing strategies and adaptation steps (contingency plans) based on agro-meteorological data and information (USD 36,900); Component 2: Capacity building of Good Agriculture Practice (GAP) and Smart Agriculture Practices to reduce land degradation, protect ecosystem services and reduce the risk of crop failure for 3,850 small rural farmers around the forest (USD 45,700); Component 3: Developing the livelihood diversification of smallholders, especially women and young farmers through processing a variety of local food products and ecosystem services so they can be marketed through digital marketing (USD 220,000); Component 4: Restoration of 1,200 hectares of critical agricultural land in 8 villages around forests with agroforestry plants to be managed productively by small farmers supported by village regulations (Perdes) (USD

	175,000); Component 5: Strengthening the Community-Based Climate Adaptation Forum in supporting community food security through advocacy, monitoring and evaluation, documentation and publication of the results of Project Learning (Knowledge Management) (USD 338,100). Requested financing overview: Project/Programme Execution Cost: USD 85,626 Total Project/Programme Cost: USD 901,326 Implementing Fee: USD 76,613 Financing Requested: USD 977,939 The initial technical review raises some issues, such as with the project logical framework and the climate change adaptive capacity the different components will create, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.
Date:	25 January 2023

Review Criteria	Questions	Comments	Respond
Country Eligibility	1. Is the country party to the Kyoto Protocol, or the Paris Agreement?	**Yes.**	
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	**Yes.** Indonesia is highly vulnerable to climate change impacts, especially shifts in rainfall patterns and increasing incidence of extreme events, including flooding and landslides which threaten livelihoods and food security.	
Project Eligibility	1. Has the designated government	**Yes.**	

	authority for the Adaptation Fund endorsed the project/programme?	As per the Endorsement letter dated August 5, 2022.	
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	**Yes.** The proposal consists of 50 pages.	
	3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	**Unclear.** The description of the project objectives, components and outcomes is not consistent in the proposal. **CAR 1:** Please include or employ a single logical framework for the project, clearly showing the different levels and their mutual connections, and please use this consistently throughout the proposal. Output 1.1 (paragraph 53) will contribute to farmers receiving “climate information based on agro-meteorological data to be able to make decisions to reduce the vulnerability of the food-agriculture sub-sector to climate impacts”. There seems to be a mismatch between the time scale relevant to the farmer (up to a cropping cycle) and that of climate change (multiple decades). It lists as a key activity “(4) Developing hazard monitoring and early warning services including IT-based agro-climatological information that is inputted in smallholders' adrenaline kits”.	**CAR 1:** The logical framework is available and can be found in section B-C page 40-41. Revision to output 1.1 can be seen in paragraphs 49-50on page 15. For further information will be described in the full proposal CR 1: an explanation regarding how the climate information that will be provided to farmers will be relevant to support farmers in making short to medium term decisions can be seen in paragraphs 53 pages 16 and The identification process for soil restoration, irrigation systems, food crop procurement and agroforestry will be fully identified during the preparation of a full proposal (supported by the

		CR 1: Please clarify how the climate information to be provided to farmers will be relevant to support farmers in their short- to medium term decision making. The activities of Component 2 lack overall climate change adaptation relevance, and can be considered 'business-as-usual' development. "Precision Agriculture or Measured Agriculture is a technology-based agricultural concept" that will be promoted but it is unclear if or how that responds to a climate change adaptation need. The activities do not include technology-based interventions. It is unclear what the activities will be that justify the establishment of the Community Learning Centers (CLC) as a learning center for climate adaptive food agriculture in the communities. Component 3 is very ambitious, envisaging the entire chain of crop diversification, new forms of processing of the adopted crops, and digital marketing of the new products. It also includes references to ecosystem services but that is further limited to twice mentioning of 'agrotourism'. Component 4 includes activities that are not yet fully identified, such as soil restoration, irrigation systems, procurement of food crop seeds and agroforestry. For a full proposal, these	Design Engineering Details document). CR 2: an explanation regarding the climate change adaptive capacity that will be made by various components can be seen in table 5 Impact of Component on the targeted sectors, smallholder and national policy page 19

		will need to be fully identified in advance. **CR 2:** Please clarify the climate change adaptive capacity the different components will create.	
	4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Yes.** The project has a clear focus on the most vulnerable groups in villages around forests where women, poor families and youth who work in the rural agricultural sub-sector and around forests are groups that are very vulnerable to climate impacts. The relevant section of the proposal explains the process applied for compliance with the ESP and GP, with clear gender focus. Economic, social and environmental benefits are described.	
	5. Is the project / programme cost effective?	**Yes.** Most cost-effectiveness claims are derived from the secondary or indirect benefits from applying the learned skills and methods by the beneficiaries. Financing the restoration of critical agricultural land with food crops and agroforestry is compared with the cost of the same carried out by government and other donor agencies, showing a considerably lower cost. **CR 3:** Please clarify the cost effectiveness also from a sustainability	CR 3: Clarify about the cost effectiveness from a sustainability view can be seen in paragraph 100 page 25

		point of view.	
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	**Yes.** Relevant national and sub-national plans and strategies for sustainable development and climate action have been identified.	
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	**Unclear.** The relevant section of the proposal is a continuation of the previous section on compliance with national laws and plans and strategies. National technical standards relevant to the envisaged project activities are not mentioned. **CAR 2:** Please identify the relevant national technical standards and explain how the project will meet these.	**CAR 2:** the relevance of national technical standards with output, outcome and component can be seen in paragraph 102 on page 26
	8. Is there duplication of project / programme with other funding sources?	**No.** The proposal explains that the project will complement government initiatives in the area. No information is provided on other ongoing activities or projects but the proposal states that there will be no duplication of efforts by other funding sources. At the full proposal stage, this section needs to be further elaborated and claims of no duplication	

		and complementarity better supported.	
	9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	**Yes.** This is the focus of Component 5.	
	10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Yes.** The proposal includes an overview of the consultations held with beneficiaries, communities and local authorities. It is unclear to what extent vulnerable groups had been identified and been involved in the consultations. **CR 4:** Please clarify the involvement of vulnerable groups in the consultation process.	**CR 4:** An explanation regarding the involvement of vulnerable groups in the consultation process can be seen in paragraph 108 on page 30-31
	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	**Yes.**	
	12. Is the project / program aligned with AF's results framework?	**Yes**. The proposal specifies the alignment with the AF revised strategic results framework adopted in 2019.	
	13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	**Yes.** All key areas of sustainability are addressed, including economic, social, environmental and institutional. The institutionalization of the project outcomes and built capacity is a key element in the sustainability of the	

		project outcomes.	
	14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Yes.** The project activities have been screened for environmental and social risks as specified in the ESP and the GP. The proposal includes a UNDP-style analysis of project risks. In addition, the required risks identification according to the AF ESP and GP has also been included, with a substantiation of the risks findings.	
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?	**Yes.** The Implementing Entity fee is at 8.5 per cent of the total project budget before the fee. Budget figures are presented using different notations. **CAR 3:** Please present budget figures using a decimal dot and a comma as thousands separator (e.g. 2,000.00)(but please do not include decimals in the budget figures). The table of section C – Project / Programme Components and Financing – includes misalignments between the components and the activities.	**CAR 3:** Revision about that can be seen in paragraph 109 page 31-32 CR 5: Table overview of the project components and financing can be seen in section C project component and financing page 13

		CR 5: Please provide a coherent table with an overview of the project components and financing.	
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	**Yes.** The Project Execution Costs are at 9.5 per cent of the total project/programme budget (including the fee).	
Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	**Yes.**	
Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	2. Are there measures for financial and project/programme risk management?	n/a at concept stage	
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?	n/a at concept stage	
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage	

	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage	
	6. Is a detailed budget including budget notes included?	n/a at concept stage	
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a at 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 at concept stage	
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage	

Concept Proposal :

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 N7-700
Washington, D.C., 20433
U.S.A
Fax: +1 (202) 522-3240/5
Email: afbsec@adaptation-fund.org

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ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category: Small-Sized projects and programmes (SPs)

Country/ies: Indonesia

Title of Project/Programme: Increasing the resilience of smallholders from climate impacts through Smart Agriculture based on Livelihood Diversification in Indonesia

Type of Implementing Entity: Non Govermental Organization

Implementing Entity: Mitra Aksi Foundation, Jambi, Indonesia

Executing Entity/ies: Kemitraan/Partnership

Amount of Financing Requested: 977,939 (,00,-(in U.S Dollars Equivalent)

A. PROJECT / PROGRAMME BACKGROUND AND CONTEXT

1.1. Geografis, Population, and Vulnerability context

1. Indonesia is the largest archipelagic country in the world with 17,000 islands. Indonesia's total area is 5,193,250 km², with details of a land area of 1,919,440 km², and an ocean area of around 3,273,810 km², has a very high vulnerability to the effects of climate change on 273.5 million people (BPS, 2020), consisting of 135 337 million (male and 134 266 million female), especially of the 42 million people living in areas less than 10 meters above sea level[1][2]

2. Vulnerability of the Indonesian population to climate change, based on the results of a projected study (USAID, 2016) states that rising sea levels will submerge 2,000 small islands by 2050, which means that 42 million people are at risk of losing their homes. Dahuri (2006) also stated that as much as 75% of Indonesia's big cities are located in coastal areas which are very vulnerable to climate change.

3. Climate change events directly or indirectly have an impact on the national economy. For example, losses in the agricultural and coastal sectors due to climate change in 2100 are estimated at 2.2% of total GDP, while losses in the health and ecosystem sectors are around 3,5% of GDP in the same year. Based on the results of the analysys, the potential impact of climate change on the food, water, energy and health sectors can reduce GDP from 0,66% to

[1]) Central Bureau of Statistics of the Republic of Indonesia, 2021

[2]) Central Bureau of Statistics of the Republic of Indonesia, 2021

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3.45% in 2030. The negative impacts of climate change has also contributed to the loss of the national economy of up to IDR 544 triliun. Of the potential losses, the food agriculture sub sector is as much as 78 trillion due to decreased rice production (harvest failure due to fusofloods, food attacks and plant diseases). The losses in the food agriculture sub sector have not included damage to agricultural infrastructure, such as irrigation system and farm roads as well as hampering the production chain distribution channels from villages to cities which have an impact on increasing production costs.

4. In the context of vulnerability and poverty; women, poor families, and youth who work in the agricultural sector are groups that are particularly vulnerable to climate impacts. The results of a gender-based vulnerability and poverty analysis reveal that; Vulnerability and poverty are more common among rural women (63.6 percent), the poor (71.3 percent) and rural youth under the age of 25 (64.6 percent) due to their limited access to assets (land, fertilizer). and equipment), knowledge and decent work opportunities in the agricultural sector[~~3~~4].

5. The implementation of climate change adaptation (API) is relatively complex taking into account Indonesia's geographical position in the tropics, topographical variations, the vast land and sea areas~~...~~. A compherensive approach is urgently needed in planning adaptation actions in order to meet the basic needs of society, namely food, water, energy and health. Planned climate change adaptation measures neet to pay attention to connectivity between action program to fulfill these basic needs, so that mal-adaptation does not occur, namely actions that have a negative impact on fulfilling one the basic needs. For example, irrigation to fullfing food needs can trigger an increase in the need for fossil based energy, so alternative energy needs to be considered. Thus adaptation actions need to have basic principles of efficiency and effectiveness in the use of ecosystem service resources in sustainable manner

6. In general; adaptation programs, strategies and key actions aim to: a) reduce the triggers of vulnerability to climate change impacts, b) respond to climate change impacts and manage risks, c) increase community capacity and the sustainability of ecosystem services, d) increase the involvement of stakeholders at all levels in build climate resilience. Programs and key strategies to achieve adaptation goals in the NDC are translated into: actions that contain a high national dimension, have strong links with the Paris Agreement. The main adaptation programs, strategies and actions are contained in the 6th development agenda (Enhancing the environment and resilience to natural disasters and the impact of climate change), with a focus on water, agriculture, health, and coastal and marine ecosystems (National Medium Term Development Plan (RPJMN) 2020-2024).

1.2. Current climate hazards, variability and impact

7. Indonesia is a country that has many areas with high risk of natural disasters, including floods, extreme weather, earthquakes and tsunamis. According to The World Risk Index in 2019, Indonesia is ranked 37th out of 180 countries most vulnerable to disasters. The results of a Bappenas study (2021) related to the Coastal Vulnerability Index (CVI) which classifies the level of vulnerability based on physical and oceanographic parameters shows that the length of the coastline affected by the highest CVI category (index 5) is ~~1819~~1,819 km long. The islands of Sulawesi and Sumatra have the highest vulnerability index with 904.51 km and 487.49 km. Meanwhile, the islands of Kalimantan and Papua do not have a coastal vulnerability index with an index class category of 5.

Table -1
Coastal Vulnerability Index (CVI)
Years, 2021

Island territory	*Coastal Vulnerability Index* (CVI) Beach Length (km)				
	1	2	3	4	5
Sumatera	10824.93	1054.45	2989.37	6769.58	487.49
Kalimantan	4379.84	37.77	20008.24	3872.24	0.00
Java & Bali	4368.09	420.13	760.27	1106.41	99.32
Sulawesi	8807.00	1102.99	2608.58	4134.06	904.51
Nusa Tenggara	8334.63	72.17	205.08	40.96	279.04
Maluku	12802.45	288.26	3276.91	472.97	49.15
Papua	16965.49	1211.83	1598.78	354.35	0.00
Total Km	**66482.43**	**4187.59**	**13447.23**	**16660.57**	**1819.51**

[3] ~~) Ministry of National Development Planning (PPN)/National Development Planning Agency ((Bappenas), 2021.~~
[4]) Ministry of National Development Planning (PPN)/National Development Planning Agency ((Bappenas), 2021.

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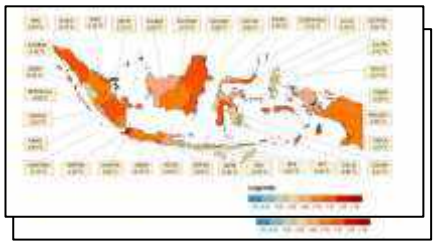
Sources data : Bappenas, 2021

8. Based on the CVI data above, Indonesian territory will experience threats in the form of reduced land area due to sinking by sea water, damage to coastal ecosystem areas due to tidal waves, changes in people's livelihoods, reduced lowland rice fields near the coast, disruption of inter-island transportation, the loss of island tourism objects, to the decline in biodiversity which is an invaluable asset.

9. The World Meteorological Organization (WMO) defines climate as statistical weather conditions for a minimum period of 30 years. Longer historical data will provide better information about climate change in a region. In general, the climatic conditions in Indonesia, both land and sea climates, are influenced by monsoons which result in changes in rainfall patterns and air temperature.

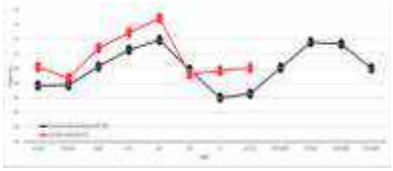
Map of
Air Temperature Anomaly in 2019 Against Normal (1981-2010) in Various Provinces in Indonesia



Sumber data : bmkg.go.id

10. According to the global atlas issued by the IPCC 2013, Indonesia is projected to experience an increase in air temperature reaching 2^{o}C on the major islands in Indonesia in 2100 (Bappenas, 2014). Based on the results of the analysis, extreme temperature changes in 2021-2050 under the CSIRO MIROC RCP 4.5 projection will occur in the provinces of Riau, South Sumatra, Lampung, the northern coastal part of Java, West Kalimantan, Central Kalimantan and Papua. The extreme temperatures here range between 28^{o}C and 30^{o}C. Based on the results of Susandi's research (2010) using the A2/IPCC scenario, an increase in temperature in Indonesia will reach 2.9^{o}C until 2100 and the impact will occur in most areas of Kalimantan and East Nusa Tenggara.

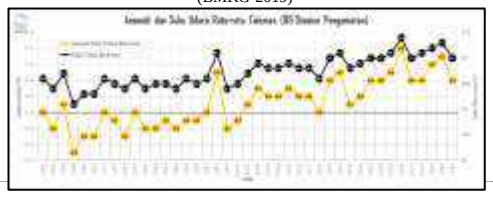
Grafik-2 : Normal monthly average temperature Indonesia
(1991 – 2020)



Sources : bmkg.go.id

11. Annual air temperature anomaly based on data from 89 BMKG observation stations, the normal air temperature for the 1981-2010 period in Indonesia was 26.6 ^{o}C and the average air temperature for 2021 was 27.0 ^{o}C. Overall, Indonesia in 2016 was the hottest year with an anomaly of 0.8°C during the observation period from 1981 to 2020. 2021 itself ranks as the 8th hottest year with an anomaly of 0.4°C, while 2020 and 2019 are ranked second and third with anomaly values of 0.7°C and 0.6°C . As a comparison, the global average temperature information released by the World Meteorological Organization (WMO) in its latest report in early December 2020 also placed 2016 as the hottest year (ranked first).

Grafik-3
Anomalies of annual mean temperature measured from 89 observation stations in Indonesia
(BMKG-2019)



Sources data : bmkg.go.id

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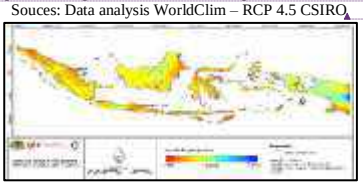
~~13.~~12. Indications of the phenomenon of climate change in Indonesia can be observed from changes in average rainfall patterns in several regions in Indonesia. Climate change has increased the frequency of La Nina and El Nino events. The normal frequency of El Nino and La Nina events is 5-7 years, but with climate change it has become more frequent, 3-5 years. La Nina has an impact in the form of flooding due to high rainfall, while El Nino has an impact in the form of extreme drought due to low rainfall. The ENSO phenomenon, especially El Nino, has had a follow-on impact in the form of land and forest fires which are a problem in various regions in Indonesia.

~~14.~~13. Rainfall is projected to increase by more than 200 mm/month. The RCP4.5 scenario with the 25th, 50th and 75th percentiles of the CMIP5 ensemble distribution shows that annual rainfall can decrease by up to 20%, especially in the southern region for the 2016-2035 period. Rainfall is projected to increase by 20% especially in the northern and eastern parts of the region, namely Kalimantan and Papua, for the periods 2046-2065 and 2081-2100. On the island of Sumatra, rainfall has increased in September and October.

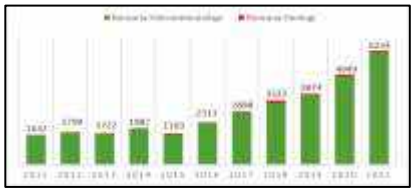
~~15.~~14. Based on BMKG observation data from 1981-2018 it shows that: (i) the trend of rainy days tends to increase by 0.1149 days every year or 1~~.~~,149 days every decade; and (ii) the trend of fractional rainfall (the ratio of certain rainfall compared to rainy days) with an intensity of 20 mm/day tends to increase by 0.624 percent every decade.

Map of : Average annual rainfall for the period 2021 – 2050
Souces: Data analysis WorldClim – RCP 4.5 CSIRO



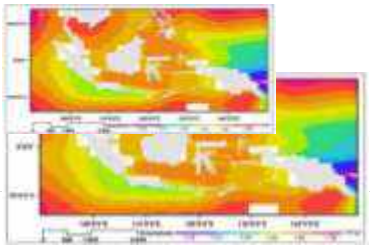
~~16.~~15. Trend of increasing rainfall increases the risk of hydrogeometeorgic disasters to 80% of the total disasters in Indonesia. Hydrometeorological disasters only cause casualties, but also threaten the livelihoods of the poor who live in disaster-prone areas. Various hydrogeometric and geological disaster events in Indonesia in the last 10 years can be seen in the following graph.

Grafik-3
Disasters in Indonesia 2011 - 2021



Sources data : BNPB,2021[5]

~~18.~~16. Sea level rise (SLR) related to climate change has also been reported in Indonesia. Based on the results of a study on the trend of sea level rise for Indonesia conducted by BAPPENAS in 2010 using Simple Ocean Data Assimilation (SODA) data, between 1960-2008 sea level rise in Indonesia was 0.8 mm/year, then increased to 1.6 mm/year. years since 1960 and jumped to 7 mm/year from 1993. By 2050, sea level rise due to global warming is projected to reach 35-40 cm relative to 2000 values. This trend is likely to be non-linear but can be exponential if the disbursement factor ice (dynamic ice melting) is taken into account. If you include the influence of the ice-seeking factor, sea level rise in Indonesia could reach 175 cm in 2100.



[5]) National Board for Disaster Management (BNPB), 2019

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Source: Bappenas, 2014

1.3. Climate change, Livelihood vulnerability and food crisis

1.3.1. Livelihood vulnerability

~~20.~~17. Degradation and deforestation are increasing the vulnerability of the Indonesian population, especially those living in rural areas and areas less than 10 meters above sea level, with their main livelihood in the agricultural sector. Ecosystem damage due to deforestation and land degradation, results in the loss of key environmental services, such as; local specific biodiversity, water catchment areas, preventing erosion and flooding. In addition, degradation and deforestation contribute significantly to the increase in greenhouse gas emissions which are a source of global warming.

~~21.~~18. An increase in the area of degraded land and deforestation in rural areas, due to low knowledge of Good Agriculture Practice (GAP) at the rural farmer level around forests. The practice of clearing land without land use planning, clearing land by burning, using high chemical inputs, has a serious impact on the destruction of important ecosystem services, such as; loss or contamination of water sources, loss of biodiversity, increased GHG emissions which trigger people's vulnerability to climate. On the other hand, low knowledge of "smart agriculture" cultivation also contributes to low productivity and the threat of crop failure.

~~22.~~19. Vulnerabilities to people's livelihoods, particularly in the food-agriculture sector, were identified based on the results of a vulnerability survey in 8 selected villages in 2 districts and 2 provinces. The results of the vulnerability survey generally show that most farmers do not have sufficient capacity to reduce the impact of climate-related disasters. Floods, droughts and attacks by Plant Destructive Organisms (OPT) are the three dominant events that disrupt farming, especially rice. To deal with floods and droughts, most farmers still tend to leave it alone due to limited resources and the location of the topography which is prone to disasters. To deal with pests, weeds, pesticides and herbicides, farmers are not regular. The impact is in addition to increasing pest resistance, it also has an impact on food security and the environment. Only a small proportion of farmers (15%) out of 175 respondents have their own way of minimizing the risks of floods, droughts and pest attacks.

~~23.~~20. Another factor that also affects the vulnerability of rural smallholders is that farmers' access to fertilizers is still difficult, mostly due to the unavailability of fertilizers in markets/kiosks and often their availability does not match the planting schedule. Likewise with the availability of seeds that are adaptive to the climate. Generally, farmers rely on their own seed production or assistance from the government according to local (micro) climatic conditions. Farmers in villages around forests do not really know what climate change is and its impacts. The unavailability of agro-meteorological/climatological information and data that can be accessed by village farmers around the forest. Determination of the planting schedule is only based on the conventional seasonal calendar which is unable to predict climate change trends

~~24.~~21. The results of the vulnerability analysis of food farming and climate risk also show the determinants of the Exposure and Sensitivity Index (IKS) and Adaptation Capacity Index (IKA) at the provincial and selected district levels (Kerinci Regency, Jambi and Langkat Regency, Sumatra, respectively). North), as follows; (i) The school enrollment rate (IKA 1) is a determining factor in the two selected provinces. For this reason, the general recommendations put forward are the 12-year compulsory education program, equal distribution of educational facilities down to the village level, enrichment of educational modules related to technical aspects and adaptation of formal education. Other determinant factors still receive attention as an effort to increase adaptation. For Exposure and Sensitivity Index (IKS), the dominant determinant factors are the ratio of rice consumption to total carbohydrate food (IKS 1), food diversification (IKS 3) and climate (IKS 12).

Table-2
Village Vulnerability Data at the Jambi Province Program Location

Province	District	Sub-District	Village	IKA	IKS	Vulnerability	Flood Risk	Dry Risk
Jambi	Kerinci	Gunung Raya	Masgo	0, 41879	0, 6863	Very high	Very high	Very high
			Selampaung	0, 52401	0, 6198	high	moderateModerate	Sedang
		Bukit Kerman	Tanjung Syam	0, 62172	0, 5333	high	moderateModerate	Sedang
			Talang Kemuning	0, 55717	0, 5419	high	moderateModerate	Sedang
			Bintang Marak	0, 54543	0, 6189	high	moderateModerate	Sedang

Table-3
Village Vulnerability Data at the North Sumatera Province Program Location

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Province	District	Sub-District	Village	IKA	IKS	Vulnerability	Flood Risk	Dry Risk
North Sumatera	Langkat	Basitang	Sekoci	0,.41666	0,.4775	Sedang	highHigh	Very high
			Bukit Kubu	0,.4915	0,.5435	Sedang	highHigh	Very high
			Kampung Lama	0,.54156	0,.521	Sedang	highHigh	Very high gi

IKA = Adaptive Capacity Index; IKS = Exposure and Sensitivity Index
Data source: SIDIK - Vulnerability Index Data Information System

1.3.3. Family and community food vurnerability

25. Indonesia is one of the countries with food security that is most vulnerable to the effects of climate change in Southeast Asia. According to The Economist Intelligence Unit (EIU) in 2018[6], using the natural resource and resilience dimensions to assess a country's exposure to climate change, its vulnerability to natural resource risks, and how the country is adapting to these risks. The value of the dimension of natural resources and resilience in Indonesia is 43.9 which is included in the category of risky conditions. This is reinforced by evidence that the value of Indonesia's food security has decreased after adjustment for climate change factors, from 54.8 to 47.10.

27. The high intensity of rainfall, and the long dry season which is increasingly occurring in Indonesia have had a serious impact on the food-agriculture sub-sector. Based on data from the Indonesian Ministry of Agriculture, the area of crop failure due to drought (puso) during the January-July 2019 period reached 31,000 hectares (ha). This area is equivalent to 0.32 percent of the total rice planting area, which is recorded at 9.46 million ha. The average puso area over the last 5 years has reached 28,000 ha[7]. (In Jambi Province which will be the target of this project, due to high rainfall, 3,529 ha of rice fields in 2020 failed to harvest due to flooding).

29. FAO study results (2005) shows variability and climate change affecting 11% of agricultural land in developing countries which can reduce food production and reduce Gross Domestic Product (GDP) by up to 16%. Meanwhile, the impact of climate variability and change can also reduce the production of food crops (cereals) in the Southeast Asian region between 2.5% and 7.8% (Fischeret al. 2002). Variability and climate change with all its impacts have the potential to cause a loss of food crop production of 20.6% for rice, 13.6% for corn and 12.4% for soybeans (Handoko et al. 2008).

31. It is estimated that in 2025 the population will reach 262 million people with a consumption of 134 kg of rice per capita. To meet the food needs of the Indonesian population, 35.1 million tons or 65.9 million tons of GKG are needed, the need will continue to increase along with the increase in population. The high demand for rice food, is not comparable with rice production. This condition can be seen from BPS data (2020), namely: (1) The rice harvest area in 2021 will reach around 10.41 million hectares, a decrease of 245.47 thousand hectares or 2.30 percent compared to the rice harvest area in 2020 of 10.66 million hectare. (2) Rice production in 2021 is 54.42 million tons of dry milled grain (GKG), a decrease of 233.91 thousand tons or 0.43 percent compared to rice production in 2020 of 54.65 million tons of dry milled grain (GKG).

33. There are indications of a decrease in food production in the areas that will become the target of the project. In Jambi Province, which will be the location of the targeted project, based on Jambi Province BPS data (2021), Jambi Province's total rice production in 2021 was around 298.149 thousand tons of GKG, or decreased by 88.26 thousand tons (22.84 thousand tons percent) compared to 2020. If rice production is converted into rice for food consumption for the population, then rice production in 2021 is equivalent to 298.15 thousand tons of rice, or decreased by 51.06 thousand tons (22.84 percent) compared to rice production in 2020 of 223.53 thousand tons. . The decline in rice production that will occur in 2021 will occur in Kerinci Regency where 30 percent of rice production in Jambi Province is contributed by Kerinci Regency. The development of rice production in Jambi Province can be seen in the graph below.

22. Sea level rise (SLR) related to climate change has also been reported in Indonesia. Based on the results of a study on the trend of sea level rise for Indonesia conducted by BAPPENAS in 2010 using Simple Ocean Data Assimilation

[6]) The Economist Intelligence Unit (EIU) tahun 2018
[7]) Ministry of Agriculture, Republic Indonesia, 2021

(SODA) data, between 1960-2008 sea level rise in Indonesia was 0.8 mm/year, then increased to 1.6 mm/year. years since 1960 and jumped to 7 mm/year from 1993. By 2050, sea level rise due to global warming is projected to reach 35-40 cm relative to 2000 values. This trend is likely to be non-linear but can be exponential if the disbursement factor ice (dynamic ice melting) is taken into account. If you include the influence of the ice-seeking factor, sea level rise in Indonesia could reach 175 cm in 2100.

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Grafik-4 : Comparison of Harvested Area and Rice Production in Jambi Province, 2020 and 2021

Sources :BPS, Jambi,2021

34.23. The same situation also occurred in North Sumatra Province. Based on BPS data (2021), the rice harvest area in North Sumatra is recorded at around 385.40 thousand hectares in 2021. This area has decreased by around 3,186 hectares or 0.82 percent compared to 2020. The decrease in harvested area has resulted in a decrease in rice harvested area. production. In 2021, North Sumatra's rice production is recorded at 2 million tons of dry milled grain (GKG). This amount decreased by 36.36 thousand tons of GKG or 1.78 percent compared to 2020 which was able to produce 2.04 million tons of GKG. This production decreased by 20.86 thousand tons or 1.78 percent compared to 2020 which reached 1.17 million tons of rice. If converted, the rice production of_ 2 million tons of GKG is equivalent to 1.15 million tons of rice per year to meet the food consumption needs of 15.18 million North Sumatran people of 1.4 million tons, so there is a rice deficit of 250,000 tons.

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35.24. Apart from being caused by climate impacts, the decline in food crop production is also closely related to the cultivation capacity of small farmers in villages around the forest. This low capacity can be seen from; (i) small farmers in villages around forests do not have land use characterized by open agricultural land, but are not managed productively which eventually turn into shrubs and are prone to fires during the dry season. (ii) from the cultivation aspect it is characterized by low productivity. This can be seen from the production of food crops, which averaged 2-3 tonnes per hectare for each growing season (while farmers in Java and Sulawesi were able to produce an average of 5-6 tonnes per hectare). Likewise with other types of plants such as; corn and soybeans, the average farmer is only able to produce 8 tonnes per hectare, while farmers in Java are able to produce 11 tonnes per hectare. (iii) land conditions are increasingly vulnerable to degradation due to the use of high chemical inputs and the absence of crop rotation.

36.25. Market price fluctuations. Fluctuations in the price of agricultural products make this agricultural sector have a high risk. In addition, the price of production inputs is always increasing, causing income and profit from the agricultural sector to decrease.

37.26. The decreased interest of the younger generation is lessinterested in the agricultural sector. Currently, there are very few young people whose main livelihood is farming. In the food crops sub sector is only +5%, in the live stock sub sector ±10 %. And the largest in the horticulture and plantation sub sector ±20%. The lack of interest of the younger generation to work in the agricultural sector, especially the food cros sub sector is due to the lack incentives in this farming business. In addition, narrow land tenure and lack of access related to land have also caused the younger generation to be reluctant to pursue this agricultural sector.

38.27. Post-harvest processing and poor road infrastructure also have an impact on the supply chain of production to food markets/consumers. Results of the study by the National Development Planning Agency (Bappenas)[8], that around 23-48 million tons of food was wasted during the 2000-2019 period, equivalent to 115-184 kilograms per capita per year. With an estimated value of economic losses reaching 213-551 trillion per year or around 4-5 percent of gross domestic

[8]) National Development Planning Agency (Bappenas), 2020

product (GDP). Food lost and wasted in Indonesia is dominated by grains, such as rice, corn, wheat and other related products. And almost all food ingredients that are produced inefficiently are vegetables, where the total wasted reaches 62.8 percent of the total domestic supply of vegetables in Indonesia. The situation above shows the failure of the current food system – how food is produced, processed, transported and consumed – which if left untreated will contribute to the threat of a food crisis.

~~39.~~28. Indications of food insecurity of the Indonesian population were reminded by President Joko Widodo in the celebration of the 50th Anniversary (HIPMI), 2022[9]. According to President Joko Widodo, currently it is estimated that there are 133 million people in various countries who are starting to go hungry due to food problems. For Indonesia, even though it is currently self-sufficient in food, the threat of vulnerability needs to be anticipated. This is because based on data from the Ministry of Agriculture's Food Insecurity Index (IKP) for 2021, as many as 70 districts or 16.83% of the 416 districts have low IKP scores.

~~40.~~29. Concerns about a food crisis were also expressed by FAO Representative for Indonesia and Timor Leste, Mark Smulders during a meeting with relevant officials at the Ministry of Agriculture and other relevant parties in Jakarta in 2019. According to Mark Smulders, although the crisis that occurred in Indonesia was not as bad as what happened in other countries such as; The Philippines and the Caribbean, but this condition of global climate change must still be watched out for, because Indonesia is an archipelagic country with a very wide area and has very diverse climate and weather characteristics. This is based on research conducted by FAO showing that Indonesia as the country with the largest economy in Southeast Asia will suffer the most from the climate crisis, especially droughts and floods. This is because climate phenomena will reduce food production and agricultural production capacity. In Java, for example, due to climate change, it is predicted that there will be a decrease in production of 5% in 2025 and a decrease of 10% in 2050. The decline in production could be even more than that. This needs to be watched out for and anticipated early.

~~41.~~30. The threat of food crisis was also one of the main discussions at the G20 Summit in Bali. Countries at the G20 Summit expressed deep concern about the challenges to global food security exacerbated by conflict and tension. "We therefore commit to take urgent action to save lives, prevent hunger and malnutrition, in particular to address the vulnerabilities of developing countries, and call for an accelerated transformation towards sustainable and resilient agriculture and food systems and supply chains[10]

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1.4. Anticipate climate change and its impacts

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~~42.~~31. Climate change is an unavoidable phenomenon. To reduce the risk and minimize the impact, it is necessary to carry out adaptation and mitigation efforts. For the agricultural sector, adaptation is the main focus without neglecting mitigation. The impact of climate change is increasingly felt in the agricultural sector due to low adaptability due to limited resources and access to climate information and technology. Providing accurate agro-meterological data and information will be able to assist farmers and local policy makers in making decisions to develop strategies and adaption measures to reduce vulnerability climate.

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~~43.~~32. Precision agriculture or measurable gardening, namely technology-based agricultural concept whose approach is through observation and measurement to produce the right data so that farming activities are more effective and efficient, a priority to be carried out in an effort to increase agricultural production in the food sector (rice).the results of observations and measurements based on precise data are needed to calculate the potential for a decrease in production due to the many conservations of paddy fields and uncultivated paddy fields, the number of pests and climate change.

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~~44.~~33. The dependence of the Indonesian population on a food source (rice) needs to be balanced with other food source to prevent the threat of a food crisis from occurring. Less diverse food consumption, in turn can weaken national food security. Therefore, this condition should make consumers and policy makers more aware to be more serious about strengthening food supply. Increasing local food production and consumption will support changes in the national food system to become more sustainable. From an environmental perspective, local food-based diets have the potential to reduce greenhouse gas emissions, reduce waste due to food spoilage during storage and transportation, and use less packaging during retail sale due to proximity to food sources, all of which can shorten food supply chains.

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~~45.~~34. Diversification of local food that has high nutritional content and economic value, such as; bananas, sago, breadfruit, soybeans, corn, sorghum need to be developed and socialized as alternatives to family and community food security. The potential of agricultural land to develop food crop diversification, especially in North Sumatra and Jambi, which will be the target locations for this project, is quite extensive. Therefore, through this project, efforts to strengthen family and community food security from climate change, in addition to increasing the capacity of small farmers to increase the productivity of the main food crop (rice), will be balanced with diversification of non-rice food crops, such as; corn, soybeans, sorghum, porang, bananas, taro/taro, breadfruit, sago and other types of food crops according to the typology

[9]) President Joko Widodo in celebration of the 50th Anniversary (HIPMI), 2022

[10]) Deklarasi G20 Bali, November,2022

and characteristics of the land.

~~46.~~35. In order to obtain added value, local food needs to be processed into products that are ready to be marketed through the use of the digital economy (digital marketing). The food agro-industry in rural areas needs to be encouraged to increase economic added value, create jobs, and create new businesses through the "integrated farming and zero waste" model, as an effort to encourage the interest of the younger generation who are reluctant to become rice farmers. Women and young farmers in rural areas need to improve their agrotechnopreneurship skills in managing a business in the agribusiness and agro-industrial sectors through the use of technology, as well as prioritizing innovation in efforts to develop business in the agri-food sector.

~~47.~~36. Global trade regulations that require guarantees that agricultural products must have attributes that are safe for consumption (food safety attributes), have high nutrient content (nutritional attributes), and are environmentally friendly (eco-labelling attributes), will be the focus of empowering women and young farmers in develop local processed food products.

~~48.~~37. To reduce land degradation and deforestation which will have an impact on loss of water sources, damage to soil structure, loss of biodiversity and environmental services from extractive agricultural practices, strengthening and mentoring "Good Agricultural Practice (GAP) based on land use planning at the farmer level. Related to increasing productivity, and to reduce the risk of crop failure due to climate, increasing the technical capacity of "Smart Agriculture" cultivation supported by agro-meteorological data and information will be carried out through intensive assistance at the farmer level.

~~49.~~38. For degraded agricultural land, restoration and rehabilitation with an agroforestry model will be carried out on land owned by smallholders so that it can be managed productively again for; (i) livelihood enhancement (ii) restoration of ecosystem services; (iii) protect natural forests and important ecosystem areas; and (iv) reducing GHG emissions from the food agriculture sub-sector.

1.5. Barriers and Constraints, Increasing Climate Adaptation of rural smallholders.

~~50.~~39. This project is expected to be a solution for overcoming six main problems that are identified as having an impact on food vulnerability of rural communities living around forests in the context of climate change, and efforts to achieve GHG emission reduction targets in the agricultural sub-sector. Several obstacles and challenges based on identification results at the farmer level and policy makers in rural areas around forests that are urgent to reduce food vulnerability and reduce GHG emissions are summarized below:

Key Barrier	Description
Farmers and policy makers in villages around forests do not have information and knowledge about the impacts of climate change	Climate information services and early warning systems based on agro-climatological data are inadequate or do not reach the level of rural farmers around the forest, so they do not have the knowledge and understanding to plan better responses in food agriculture. In villages around the forest, farmers still use the conventional climate calendar in determining planting time, so it is less accurate in predicting the rainy or dry seasons. The impact is that farmers often fail to harvest, production costs to reduce the risk of crop failure are high, not proportional to the production produced, causing farmers to experience substantial losses.
There is no data on the area of food farming land at the village level	The absence of data on the area of food agricultural land based on ownership status in the village government is an obstacle in calculating the availability of food production chains that can be provided by each farming family. This condition will be very vulnerable in the event of a disaster. Therefore, through this project, efforts will be made with farmers and local stakeholders (Village Government), mapping and data collection of the area of food agriculture land will be carried out, as well as input into the database system for the area of food agricultural land based on ownership status.
Unplanned land use, cultivating land by burning, and high use of chemicals accelerate land degradation and threaten the preservation of locally specific biodiversity	Unplanned land use causes a lot of land to become unproductive, neglected and turned into shrubs. Vacant lands that are left to become shrubs are prone to fires during the long dry season. On the other hand, the tendency of farmers to continue to increase the area of land in forest areas continues to occur. This condition triggers degradation and deforestation in essential ecosystem areas and has a serious impact on biodiversity conservation and increases GHG emissions in the agricultural sub-sector. Therefore, through this project, small rural farmers around the forest need to get land use assistance that is in accordance with the principles of good agricultural practices.
The low ability of small rural farmers around forests to carry out smart agricultural cultivation and diversification of food crops and agroforestry.	Knowledge and technical capacity of smart agricultural cultivation have not been mastered by small rural farmers around the forest, characterized by low productivity, crop failure and poor post-harvest processing. In addition to the low ability to grow food crops, the agricultural pattern which tends to be monoculture makes small rural farmers around the forest have no livelihood security. Therefore, to strengthen the economic resilience of families originating from the agricultural sub-sector, it is necessary to increase the knowledge and technical skills of cultivation that are oriented towards food crop diversification and agroforestry at the small farmer level around the forest.
Farmer group institutions are weak,	In practice, the institutionalization of farmer groups in rural areas around forests is more directed towards the interests of obtaining fertilizer, seeds and production inputs, such as

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and not working, so they are unable to transfer technology, do not have a strong bargaining position in bridging farmers with policy makers, markets and access to capital	handtractors from the central government. Meanwhile, important aspects related to strengthening production management, transferring climate-adaptive knowledge and technology, and empowering member farmers to gain access to markets and capital have received little attention from related institutions. This is what causes farmers in villages around forests to experience difficulties in developing smart agricultural innovations, production management, market access and capital. To overcome these weaknesses, it is necessary to increase the institutional capacity of farmer groups through; (i) advocacy training (ii) production management training; (iii) administrative and financial management training; (iv) marketing management training; (v) assistance in building access to markets and capital.
Degraded agricultural land is left to become scrubland, on the grounds that there is no capital to restore it.	Limited capital for the restoration of degraded agricultural land makes small farmers let their agricultural land become unproductive and turn into shrubs. For small rural farmers around forests, the costs required to restore degraded land, which reaches USD 2,150 per hectare, will be very heavy in the current crisis conditions. Because of that, they let it turn into shrubs, and look for replacement land that is considered more fertile by clearing forest areas, including in the National Park area around the village. Through this project intervention, the fertility of critical agricultural land covering an area of 1,200 ha spread across 8 villages around the forest will be restored, then managed productively by diversifying food crops and agroforestry. In this way small rural farmers around the forest can re-manage abandoned agricultural land into shrubs, without having to open new agricultural land in the natural forest area around them. To ensure that critical land recovery is managed productively, it will be complemented by village regulations (Perdes) and monitored every 6 months through web GIS and satellite imagery.
Gender inequality in controlling assets and controlling the means of production	The results of a gender-based vulnerability and poverty analysis reveal that; (i) vulnerability and poverty are more prevalent in rural women (63.6 percent), poor people (71.3%) and rural youth under the age of 25 (64.6 percent) due to their limited access to assets (land, fertilizers and equipment), knowledge and decent work opportunities in the agricultural sub-sector. This condition occurs because women, including young people in villages around the forest, are culturally positioned as members of the family institution. The roles, responsibilities and decision-making processes within the family are still held by the head of the family (husband/father). Likewise in social life, the decision-making process is in the power of local elites, who are represented through traditional leaders and religious leaders. This condition illustrates that the challenge that must be faced in empowering communities in rural areas around forests is that there is still a social gender gap.

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1.6 Lesson Learn

~~51.~~40. For more than 15 years, Action Partners has carried out community empowerment programs, especially small farmers and women in rural areas in increasing the resilience of people's livelihoods, in collaboration with the government (central and regional), donor agencies, CSOs, the private sector and universities in Indonesia. Some of these experiences include;

- **Kerinci cinnamon quality and quantity improvement program.** Location of Kerinci Regency, Jambi. The purpose of the activity is to assist farmers of five villages (which are now part of the TACTICAL group) in the highlands, Kerinci to implement an Environmentally friendly Healthy Agriculture System as well as in implementing an Internal Control System (ICS) for Cinnamon products so that Kerinci Cinnamon Products can be marketed to Europe. Output Increase the added value of farmers through Good Agriculture Practices (GAP) based on geographic indication data. Improving the community's economy through intercropping formation of a business unit in the form of a cinnamon farmer cooperative. Veco Indonesia Funding Sources

- **The Agriculture Program is healthy, environmentally friendly and low cost**. location of Merangin Regency, Jambi. Program objectives The initiative for the Implementation of Healthy, Environmentally Friendly and Low-cost Agricultural Models has provided new knowledge for farmers in addressing land use issues more productively and sustainably. Output: reduce deforestation and land degradation through land intensification and land use planning. Increase land productivity through healthy, environmentally friendly and low-cost agriculture. Initiated the formation of organic farming areas. and TFCA Funding Sources – Sumatra.

- **Innovative and Creative Technopreneur Development Program for Poverty Alleviation through Low Carbon Economic Growth.** The location of the program is in 14 villages spread across Tanjung Jabung Timur Regency – Muaro Jambi Regency – Kerinci Regency. Jambi Province. The goal of increasing the income of producer farmers through planned, inclusive and low-carbon land processing is integrated with the utilization of potential agricultural potential and non-timber forest products that increase income. The model is carried out by connecting farmers with an inclusive market mechanism, which is based on concrete,

transparent and mutually beneficial cooperation contracts that are carried out in an integrated, systematic and sustainable manner. Output: reduction of greenhouse gas emissions from extractive agricultural activities through land processing without burning, increase in farmers' income through improvement of food crop cultivation system and land use-based intercroping, increase in added value of low-emission agricultural commodities through strengthening farmer organizations and post-harvest improvement to be able to access modern markets (inclusive modern market), construction of 15 canal partitions in Tanjung Jabung Timur and 30 hydrant wells spread in Muara Jambi and Tanjung Jabung Timur, Improvement of irrigation system in Selampaung village, publication of 3 village profile books. MCA Funding Source – Indonesia.

- **Community-Based Peatland Restoration & Protection Program in the Keman River Production Forest (HP).** Location of Dendang District, Tanjung Jabung Timur, Jambi. Program Objectives Compile data-based land use at the village level as a basis for preparing micro-scale (village) land use planning that is integrated with peat restoration and protection policies in the Keman River HP with improved community welfare. Output: Rehabilitate, restore and protect a 3,000-hectare peat landscape in the Keman River Production Forest, Tanjung Jabung Timur Regency with various types of local plants that are adaptive to peat exosystems and the creation of canal bulkheads and community-based hydrant wells. Improving the Livelihood of Communities / Smallholders based on land use to obtain intersive margins and extensive margins of various types that are adaptive to peat ecosystems through community empowerment and organizing, the publication of the Jati Mulyo village profile book. Foundation's Wilderness Funding Sources

- **Program to build a sustainable agricultural model and restore peatland ecosostem in Dendang district, Tanjung Jabung Timur.** Location of Tanjung Jabung Timur Regency, Jambi. Objectives To Support Efforts to Achieve National and Regional Government Peatland Mitigation and Restoration Targets based on improving peatland use. Output: The establishment of 3 organic farming field schools in Dendang sub-district, the construction of 15 canal bulkheads for peat wetting, the publication of a learning book entitled Unceremonious restoration, a peat dictionary book and a pocket book. Establishment of fire-caring farmer groups in three villages of Dendang District, ICCTF Funding Source

- **Landscape Conservation Program for the Buffer Area of Kerinci Sebelat National Park Based on Land Use in Jangkat District, Merangin-Jambi Regency.** Objectives to Strengthen land use-based natural resource governance at the village and inter-village levels that support the protection of TNKS and the conservation of TNKS buffer areas in Merangin Regency; (2) Conducting land-use-based critical landscape conservation in 6 TNKS buffer villages, Jangkat District, Merangin Regency through a community-based agroforestry model; and (3) Technical assistance in intensification and diversification of land use based on adaptive agroforest crops that have long-term ecological and economic value to the welfare of the community to prevent protecting the clearing/encroachment of TNKS and its buffer village forests. Output: Regulations in 6 assisted villages (village regulations) and inter-village regulations (joint regulations) on TNKS buffer protection and conservation areas, Issuance of the Decree on Organic Agricultural Areas in Langkat District, Establishment of Village-Owned Enterprises in Renah Pelaan Village, restoration of critical and critically threatened land covering an area ~~—~~5000 acres. TFCA Sumatra Funding Sources.

- **Sustainable Agriculture Program Based on Land Use Planning to support the protection of Gajah Betalut Customary Forest in Kampar, Riau.** The purpose of the program is as an effort to strengthen the governance of natural resource utilization based on land use zoning that supports the protection of customary forests in Gajah Betalut Village as well as to support the protection of the Bukit Rimbang Baling wildlife reserve forest area. Output: the existence of a map of the use of Gajah Bertalut village, the ratification of a draft village regulation on the management of the Gajah Berlatut customary forest, a village regulation on the management of Gajah Bertalut land use. WRI Indonesia's Funding Sources.

- **Village Cadre Preparation School Program.** Location of Sorong Regency and Merauke Regency. The Program objective is to Strengthen the Resilient Power of Indigenous Peoples in the Management and Protection of Local Natural Resources. Output: spatial and social mapping process was carried out in Sorong and Merauke districts, the implementation of organic farming field schools. Econusa Foundation Funding Sources.

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- **Emission Reduction & Sequestration (EMISI) Initiative Program.** Location of Kerinci Regency, Jambi Province. Objectives Planting cinnamon trees and other agroforestry crops of economic value in the framework of individual and organizational emission offset schemes. The output is embedded ~~1392~~13,920 sweet Bark stems sourced from caterpillar foundation funding, Good Seeds, Grab.

- **Land use planning program based on land ownership data**. Location of North Sumatra, Riau, Jambi, West Papua and Papua. Activity Objectives Strengthening natural resource governance based on land use at the village and inter-village levels. The output is produced by a land use map. Source of Funding for Econusa Cooperation, WRI Indonesia.

B. Project /Programme Objectives.

Project goal is to increase the resilience and adaptive capacity of individuals and communities, especially small farmers to climate change through technical assistance for smart agricultural cultivation and diversification of livelihoods based on potential environmental services. The beneficiaries who will be protected from the direct impacts of the negative impacts of climate change are 3,850 farmers and 66,821 indirect beneficiaries, of which 49% are women.

~~52.~~41. **Project objectives:**

(1) Strengthening community resilience, especially rural smallholders in reducing climate risk in the food-agriculture sector through the transfer of knowledge, agrometerological data and information, and "smart agriculture" innovation based on land use planning.
(2) Developing the livelihood diversification of small farmers, especially women and young farmers through the management of diversified food products and ecosystem services (NTFPs, agrotourism, etc.).
(3) Restoring degraded agricultural land with agroforestry so that it can be managed productively, and improving ecosystem function.
(4) Developing project learning models through documentation, recording, reporting and publication

~~53.~~42. **Project Outcome and Indicator**s

Outcome 1 : ~~Reducing exposure~~Exposure related to climate hazards and threats is reduced by increasing ~~community~~the collective knowledge and awareness of the community in developing adaptation strategies and actions based on agro-meteorological data and information.

Indicators Outcome :
- Availability of climate information and agro-meteorological data to be disseminated to smallholders and stakeholders in a timely manner
- Percentage of target population that knows the estimated adverse impacts of climate change, and the appropriate responses
- There are community-based policies, strategies and adaptation measures developed by the local government

Outcome 2 : ~~Increasing the~~Increased productivity and effectiveness of land use patterns through Good Agriculture Practices to reduce land degradation and ~~the~~ecosystem vulnerability ~~of ecosystems~~ to climate change.

Indicator Outcome:
- Presentation of smallholders who have land use planning.
- Presentation of smallholders implementing Good Agriculture Practice

Outcome 3 : ~~Increase the skills of smallholders in developing the~~Increased productivity of ~~community~~ rural smallholders food ~~supply chains~~agriculture around the forest

Indicator Outcome:
- Number smallholders who can increase the productivity of food agriculture by 50% per ha per planting season (from baseline data) through smart agriculture cultivation.
- Number rural smallholders around the forest whose income has increased from the food-agriculture sub-sector (at least 50% of their income has increased compared to before the project intervention)

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- Total cadre farmers who have the capacity to disseminate smart agriculture knowledge

Outcome 4 : ~~Increasing~~Increased livelihoods, especially for women and young people through the ~~management~~processing of diversified food products and environmental services (NTFs, ecotourism and other potential ecosystem services identified at each site) supported by joint business units ~~(Koperasi, MSMEs) based on markerpleace/digital marketing.~~

Indicator Outcome :

- Percentage of women and young people who have more secure access to livelihood assets
- Number of diversified processed food products and environmental services produced as a source of livelihood for women and young people
- Joint Business Units (Koperasi, MSMEs) formed with strong management in product marketing ~~through digital marketing.~~

Outcome 5 : ~~Reduction of~~ 1,200 ha of degraded agricultural land in 8 project location villages ~~for restoration~~restored to restore and ~~protection of~~protect ecosystem services around the forest

Indicator Outcome

- Number of smallholders who benefit from restoration of degraded land.
- Number and types of agroforestry plants developed and managed productively
- Land area and forest ecosystem area protected by regulation (perdes)

Outcome-6. ~~Improvement~~Formation of Local Institutions in monitoring and managing climate adaptation learning.

Indicator Outcome

- Number of members of local institutional forums formed to support community-based sustainable climate adaptation
- Number of KM products produced and published
- Number and frequency of monitoring and reporting

~~54.~~43. Project Component

The project components are formulated to address various constraints and challenges in the food-agriculture sub-sector, and are integrated with the restoration of critical agricultural land to enhance community livelihood security, restoration and protection of ecosystem services in the buffer zone of National Parks in Jambi and North Sumatra Provinces.

Component-1: Increasing ~~the adaptation capacity of farmers and village governments in developing strategies and adaptation steps (contingency plans) based on agro-meteorological~~community resilience, especially rural smallholders in reducing climate risk in the food-agriculture sector through smart agriculture innovations, which are supported by the transfer of knowledge, agrometerological data and information~~., and policies at the local level~~.

Component-2: ~~Capacity building of Good Agriculture Practice (GAP) and Smart Agriculture Practices to reduce land degradation, protect ecosystem services and reduce the risk of crop failure for~~ Increasing~~3,850~~ small rural farmers around ~~the forest.~~

~~Component 3 : Developing~~ the ~~livelihood~~ diversification of ~~smallholders~~the livelihoods of small farmers, especially women ~~and~~, young ~~farmers through processing a variety of local food products and ecosystem services so they can be marketed through digital marketing.~~rural farmers.

Component-~~4~~3: Restoration of 1,200 hectares of critical agricultural land in 8 villages around forests with agroforestry plants to be managed productively by small farmers supported by village regulations (Perdes).

Component-~~5~~4: Strengthening the Community-Based Climate Adaptation Forum in supporting community food security through advocacy, monitoring and evaluation, documentation and publication of the results of Project Learning (Knowledge Management)

~~55.~~44. Beneficiaries

The direct beneficiaries of this project are 3,850 smallholders and indirectly 66,821 beneficiaries, and 49% are women. Distribution of the main beneficiaries can be seen in table-4 below

Table -4

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Distribution Beneficiaries per Location

No	District	Sub-district	Village	Direct Beneficiaries			Indirect Benaficiaries		
				Male	Female	Total	Male	Female	Total
1	Kerinci, Jambi	Bukit Kerman	Tanjung Syam	275	100	375	5,742	5,810	11,552
			Talang Kemuning	400	200	600			
			Bintang Marak	450	150	600			
		Gunung Raya	Salampaung	350	125	475	4,010	3,979	7,989
			Masgo	275	100	375			
2	Langkat, North Sumatera	Besitang	Bukit Kubu	350	150	500	23,878	23,402	47,280
			Kampung Lama	300	175	475			
			Sekoci	300	150	450			
Total Beneficiaries				2,700	1,150	3,850	33,630	33,191	66,821

C. Project / Programme Components and Financing.

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
Component-1: Increasing community resilience, especially rural smallholders in reducing climate risk in the ~~adaptation capacity~~food-agriculture sector through smart agriculture innovations, which are supported by the transfer of ~~farmers and village governments in developing strategies and adaptation steps (contingency plans) based on agro-meteorological~~knowledge, agrometerological data and information~~.~~, and policies at the local level	1.1. ~~Local~~Dissemination of climate information based on agrometerological data to local governments and communities, especially smallholders~~, receive climate information based on agro-meteorological data to be able to make decisions to reduce the vulnerability of the food-agriculture sub-sector to climate impacts.~~ ~~1.1.~~ 1.2. The ~~village government together with the community, develop strategies and~~ formulation of climate adaptation ~~measures~~strategies and steps by smallholders and village policy makers in order to reduce the risk of climate exposure in the food ~~agriculture sub-~~ sector ~~1.2.~~	Outcome-1. ~~Reducing exposure~~Exposure related to climate hazards and threats is reduced by increasing the collective knowledge and ~~collective~~ awareness of the community in developing adaptation ~~and mitigation~~ strategies and ~~measures~~actions based on agro-meteorological data and information.	36,900.00
~~Component-2: Capacity building of Good Agriculture Practice (GAP) and Smart Agriculture Practices to reduce land degradation, protect ecosystem services and reduce the risk of crop failure for 3,850 small rural farmers around the forest.~~	2.1. ~~Smallholders can make land~~Land use planning ~~for food agriculture~~is made by smallholders	Outcome-2: ~~Increasing the~~Increased productivity and effectiveness of land use patterns through Good Agriculture Practices to reduce land degradation and ~~the~~ecosystem vulnerability ~~of ecosystems~~ to climate change.	45,700.00
	2.2. Implementation of Good ~~Agriculture practices in land management are implemented by~~Agricultural Practices at the smallholders level		
	~~3.1. Smallholders acquire the knowledge and technical skills of smart agriculture cultivation to increase productivity in strengthening community food supply chains~~3.1. Farmers can choose types of food crops that are climate resistant	Outcome-3 : ~~Increase the skills of smallholders in developing the~~Increased productivity of ~~community~~ rural smallholders food ~~supply chains~~agriculture around the forest	150,000.00
	~~3.2. produced 120 cadre farmers who have the capacity to cultivate Smart Agriculture (30% female cadre farmers, 20% young farmers) from 8 villages~~3.2. Increased productivity of farmers' food crops		30,000.00
	3.3. ~~. 2 units~~Implementation of ~~Community Learning Center (CLC) were built as~~smart agriculture learning ~~centers for~~through a climate ~~adaptive food agriculture~~adaptation forums		40,000.00

Component 3 : Developing2: Increasing the livelihood diversification of smallholdersthe livelihoods of small farmers, especially women and young farmers through processing a variety of local food products and ecosystem services so they can be marketed through digital marketing.rural farmers	4.1. smallholders in 8 project locations develop The development of livelihood diversification of based on local food productsingredients and potential environmental services (NTFPs, agrotourism, etc.)NTFs, ecotororurim, and other local potentials) 4.2. Women and young people in the target villages have aA new source of income is obtained from the processingmanagement of diversifiedprocessed food products and environmental services for women's groups and young people in the village who have a source of income 4.3. Establishment ofEstablished Joint Business units (Koperasi, UMKM) for marketing processed food products and ecosystem services through digital marketingexample: Cooperatives	Outcome 4: IncreasingIncreased livelihoods, especially for women and young people through the managementprocessing of diversified food products and environmental services (NTFs, ecotourism and other potential ecosystem services identified at each site) supported by joint business units (Koperasi, MSMEs) based on markerpleace/digital marketing.	97,000.00 60,000.00 18,000.00
Component 43: Restoration of 1,200 hectares of critical agricultural land in 8 villages around forests with agroforestry plants to be managed productively by small farmers supported by village regulations (Perdes)	5.1. critical agricultural land of 1,200 ha based on smallholder ownership in 8 villages was restored to fertility, planted with agroforestry, and managed productively 5.2. Availability of village regulations (Perdes) to protect agricultural land and ecosystem services that support resilience to climate impacts	**Outcome 5:** Reduction of **1,200 ha of degraded agricultural land in 8 project location villages** for restorationrestored to restore **and** protection ofprotect **ecosystem services around the forest**	185,600.00 65,000.00
Component 5: 4 Strengthening the Community-Based Climate Adaptation Forum in supporting community food security through advocacy, monitoring and evaluation, documentation and publication of the results of Project Learning (Knowledge Management)	6.1. A climate adaptation forum was formed for food security at the District level 6.2. Learning outcomes are recorded, documentedDocumented and published inlearning outcomes through Mainstream media, MSM, Website, social media and public expose (seminar) 6.3 project results are monitored, evaluated and reported regularly	Outcome 6. ImprovementFormation of Local Institutions in monitoring and managing climate adaptation learning.	19,000.00 43,500.00 25,000.00
6. Project/Programme Execution cost			85,626.00
7. Total Project/Programme Cost			901,326.00
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			76,613.00
Amount of Financing Requested			977,939.00

D. Projected Calendar:

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

Milestones	Expected Dates
Start of Project/Programme Implementation	2022
Mid-term Review (if planned)	2023 and 20244
Project/Programme Closing	October 2025
Terminal Evaluation	2023, 2024 and 2025

PART II: PROJECT / PROGRAMME JUSTIFICATION

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

56.45. **Project**This project proposes to increase the adaptive capacity of smallholders in securing the food production chain in facing climate change. A series of actions designed in line with climate change adaptation commitments to achieve communities and ecosystems that are resilient to the risks and impacts of climate change by 2030. This commitment is reinforced in **line with the results of** the Updated NDC where adaptation is enhanced through programs, strategies and actions aimed at achieving economic resilience **economic**, social, and livelihoods, as well as ecosystems and landscapes that are integrated with national development for the 2020-2024 period; an indicative path towards a long-term vision (Visi Indonesia 2045) and the Long-Term Strategy on Low Carbon and

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Climate Resilient Development 2050 (LTS-LCCR 2050).

~~57.~~46. In general the project will; (i) Providing accurate agro-meteorological data and information will be able to assist farmers and local stakeholders in making decisions to develop adaptation strategies and measures to reduce climate vulnerability; (ii) Presicion Agriculture or Measured Agriculture, which is a technology-based agricultural concept whose approach is through observation and measurement to produce the right data so that farming activities are more effective and efficient and climate adaptive (smart agriculture) through the Good Agriculture Practice (GAP) approach; (iii) Development and advocacy for local food diversification through a food agro-industry approach in rural areas by utilizing the digital economy (digital marketing) and managed by women and young rural farmers; and (iv) restoring degraded agricultural land using an agroforestry approach that can be managed productively by rural smallholders, and protecting ecosystem services through local government regulations. ~~**The schematic diagram of the three components is provided in Figure.**~~

~~58.~~47. Strategies and concrete steps to overcome obstacles and challenges to the food-agriculture sub-sector, as well as to protect ecosystem services that are vulnerable to climate change for individuals, communities, especially smallholders in rural areas around forests in Jambi and North Sumatra Provinces, are developed through the following project activity components:

~~60.~~48. **Component ~~1:Increasing the adaptation capacity of farmers and village~~ I: Local governments ~~in developing strategies and adaptation steps (contingency plans)~~and communities, especially smallholders, receive climate information based on ~~agro-meteorological~~agrometerological data ~~and information.~~ to be able to make decisions.** Farmers' knowledge of using the conventional season calendar without being equipped with climate change data and information, makes them inaccurate in predicting the rainy season or long dry season. As a result they often experience crop failure. With climate knowledge and information based on serial and updated climatological data using language and media that can be understood by smallholders, it will help smallholders in villages around forests carry out mitigation; when is the right time to start cultivating food crops and types of climate-resistant food plant varieties so that the risk of failure and loss in the food-agriculture sub-sector can be minimized. Adaptation strategies and steps (Contingencies Plan) will also be developed with the community and micro stakeholders (Village and District governments) in dealing with disaster scenarios that affect the food-agriculture sub-sub-sector.

~~61.~~49. ***Output 1.1.*** ~~*Local*~~***Dissemination of climate information based on agrometerological data to local governments and communities, especially smallholders*~~*~~, receive climate information based on agro-meteorological data to be able to make decisions to reduce the vulnerability of the food-agriculture sub-sector to climate impacts~~*. ~~Transforming~~. Climate training and campaigns will become a medium for transferring knowledge and educating the community, especially small farmers, women farmer ~~women's~~ groups, young farmers and village stakeholders around forests through the use of film media; presentation of climatological data for the last 10 years from the Meteorology and Climatology Agency (BMKG); records of climate events in the village and their impact on their livelihoods related to their livelihoods; designing a climate recording system using in-situ data and local knowledge/priorities; develop a communication system and information dissemination method for warning the community, especially small farmers and stakeholders in villages around the forest~~.~~, including (i) Weather information: weather information to help farmers make good planning and decision making in agriculture. (ii) Weather-based irrigation information: to ensure that crops receive the right amount of water and at the right time. (iii) Soil and water information: to ensure that farmers' crops are suitable for soil type, soil pH and receive the required amount of water and nutrients. appropriate. Information is passed on to farmers through platforms such as smartphone applications, websites, or SMS. Farmers can monitor and understand weather information to make wise farming decisions.

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62.50. **Key Activities;** (1) Distribution and dissemination of climate information through film media about climate and climatology data for the last 10 years from BMKG and continued with discussions with smallholders, women farmer groups, young farmers and rural stakeholders around the forest; (2) Recording of climate events in the village and their impact on livelihoods, particularly in the food-agriculture sub-sector through discussions at the smallholder level; (3) Installation of 2 weather stations; 4 rain gauges, designing a climate recording and information system in the Community Learning Centeragricultural demonstration plot that can be accessed quickly by stakeholders in villages around the forest; (4) Developing hazard monitoring and early warning services including IT-based agro-climatological information that is inputted in smallholders' adrenaline kitsapplication in smartphone; and (5) Prepare and strengthen the capacity of the team supported by a Village Head Decree for recording and collecting data, inputting data, informing the planting calendar, climate-adaptive plant varieties, and making decisions regarding food crop cultivation at the smallholder level.

63.51. ***Output 1.2. The village government together with the community, develop strategies and formulation of climate adaptation measuresstrategies and steps by smallholders and village policy makers in order to reduce the risk of climate exposure in the food agriculture sub sector.*** This output will involve village governments,training of smallholders, women'swomen farmer groups, young farmers, and other stakeholders and village governments around forests to be able to developformulate strategies and measures for climate adaptation (contingency plans) in increasing livelihood security, especiallyparticularly in the food-agriculture sub-sector. This output will also support community and smallholder capacity on integrated climate risk management; increasing the capacity ofbuilding for village governmentsgovernment authorities in drafting regulations (perdes) on climate change adaptation to the livelihoods of communities living around the forest.

52. Key Activities; (1)
1. Workshop on Strategy Formulation and adaptation measures (Contingency Plan) related to the food agriculture sub-sector; (2) .
2. Compilation of Regulations (Perdes) regarding climate change adaptation to the livelihoods of communities living around the forest; (3). .

64.3. Establishment and Improvement of Social Gender Inclusion-based Local Organizational Governance (GESI) to support the Climate Adaptation Work Plan at the village level.

65. Impact of Component 1 on the targeted sectors, smallholder and national policy

Table 5
Impact of Component -1 on the targeted sectors, smallholder and national policy

Adaptation under component 1	Expected impact on the targeted sectors (agriculture), support under component 2	Expected benefits to smallholders and climate change adaptation	National Policy Contribution
Interventions: Agro-climatological knowledge and information is received and strengthened by village governments and rural communities, especially smallholders, women farmer groups and young rural farmers around forests to be able to make decisions in dealing with climate change in the food agriculture sub-sector	(1) Transformational planning and programming in the rice value chain at the smallholder level through knowledge, information and use of climate data produced by component 1: • to inform the development of the NDC NAP, national strategic planning in agriculture and especially on the sustainability of the food production chain • agro-climatological information will help develop a comprehensive climate risk profile to support policies in the agriculture/forestry sub-sector, land use in the development of the food-agriculture sub-sector. • This climate information will enable the program to increase awareness, design capacity building and institutional development of smallholders in strengthening	• smallholders, women farmer groups, young farmers and village policy makers have the capacity and participate in making climate adaptation decisions for the sustainability of the agri-food production chain • smallholders, women farmer groups and young rural farmers around the forest master information and agro-climatological data in making appropriate adaptation decisions to reduce the risk of crop failure in the food-agriculture sub-sector due to climate • Smallholders and village policy	• The 2030 Sustainable Development Goals (SDGs), especially SDG1 (no poverty); SDG 2 (zero hunger); SDG 13 (climate action) • REDD target • Land used resolution conlict in community level

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	the food production chain to face climate challenges (component- 2) supporting stronger national adaptation to climate impacts and local and national food security policies	makers have contingency plan scenarios when a disaster occurs that impacts livelihoods.	

66. **Component 2: Capacity building of Good Agriculture Practice (GAP) and Smart Agriculture Practices to reduce land degradation, protect ecosystem services and reduce the risk of crop failure for 3,850 small rural farmers around the forest.** Presicion Agriculture or Measured Agriculture is a technology-based agricultural concept whose approach is through observation and measurement to produce the right data so that farming activities are more effective and efficient in an effort to increase production in the agri-food sector. This approach will be complemented by "Good Agriculture Practice/GAP" to reduce land loss and important ecosystem services, such as; damage to soil structure, water sources, extinction of biodiversity, increase in GHG emissions. To reduce the risk of crop failure due to climate, "smart agriculture" cultivation knowledge will be introduced, starting from; adoption of climate-appropriate crop varieties; cultivation techniques (planting patterns, plant care, fertilization, pest control and post-harvest processing); increasing the institutional capacity of farmers to be able to access climate information, appropriate technology, access to markets and capital; and strengthening cadre farmers who can transfer knowledge in promoting "smart agriculture" in their communities. Smallholder empowerment will be complemented by a Community Learning Center (CLC) as a learning center for climate adaptive food agriculture.

67. **Output 2.1.** ***Smallholders can make landLand*** *use planning* ***for food agriculture.***

53. ***is made by smallholders.*** The biggest obstacle and challenge at the rural smallholders level around the forest is the absence of land use planning, both for the cultivation of the food-agriculture sub-sector and for other uses causing a lot of land in rural areas to become unproductive. At outputOutput 2.1. In this case,will facilitate smallholders in each project location will be facilitated in preparing land use planning based on ownership status and land area. Through land use planning assistance, it will provide accurate information and data about the condition of land, soil, environment with various characters and biodiversity, and is useful in managing production chains and crop rotation.

54. Key ***Activity:*** Activities

(1) Workshop on developing agreements (FPIC) at the smallholders level to collect data on ownership status and land area in 8 villages;

69. (2) Data on ownership status and land area of each smallholder household in 8 villages which will be inputted into the village data base system to become a source of data and information for decision making in increasing productivityproduction and protecting food agricultural land for each smallholder family, including land ownership by female heads of households; and (3) Discussion and facilitationof the head of the land use planning process based on land ownership data for each smallholder household in 8 villagesfamily woman.

(3) Discussion and facilitation of land use planning based on land ownership data for each smallholder household in 8 villages

70.55. ***Output-2.2. Implementation of Good Agriculture practices in land management are implemented byAgricultural Practices at the smallholders level.*** Provide technical assistance to smallholders in 8 project locations in land management by introducing the principle of "Good Agricultural Practice", so that agricultural land is not degraded which has an impact on increasing GHG emissions, and increasing the vulnerability of ecosystems as a source of life.

71.56. ***Key Activity***: (1) Technical assistance for land management without burning; (2) Crop pattern arrangement technique based on land typology, crop rotation technique; and (3)Technical assistance for the manufacture of organic fertilizers, biopesticides for soil enrichment

72.57. ***Output-3.1. Smallholders acquire the knowledge and technical skills of smart agriculture cultivation to increase productivity in strengthening community food supply chains.Farmers can choose types of food crops that are climate resistant.*** This output is focused on reducing the risk of crop failure due to climate, as well as increasing production of

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food crops at the smallholders level. Key Activity; (i) technical assistance for selection and selection of climate resistant seeds; (ii) determination of planting time; (iii) introduction of System Rice Intensification (SRI) and intercropping cultivation of food crops; (iv) improvement of irrigation systems; (v) maintenance and care of plants with organic fertilization techniques; (vi) integrated control of pests and plant disturbing organisms, technical harvesting and post-harvest processing/treatment; and (vii) as well as and assistance with food production chain governance, including calculating production costs and Cost of Production (HPP).

73.58. ***Output-3.2.*** ***produced 120 cadre farmers who have the capacity to cultivate Smart Agriculture*** ***Increased productivity of farmers' food crops*** ***(30% female cadre farmers, (20% young farmers) from 8 villages.*** Train local farmer cadres to be able to play the role of "agent of change" in transforming climate-adaptive sustainable agriculture in society. At the end of the project, it is targeted that there will be 120 trained cadre farmers from 8 villages, 30% of whom are female cadre farmers and 20% of cadre farmers who come from young people. **Key Activity**: (1) Training Teknik Good Agriculture Practice (GAP); (2) Training Budidaya Smart Agriculture; and (3**)** Training Advokasi pertanian adaptif Iklim.

74.59. ***Output-3.3.*** ***2 units*** ***Implementation*** ***of*** ***Community Learning Center (CLC) were built as*** ***smart agriculture*** ***learning centers for*** ***through a*** ***climate*** ***adaptive food agriculture.*** ***adaptation forums.*** This output will become an "on farm and off farm" learning center managed with a gender and social inclusion (GESI) approach. On farm will be focused on increasing expert farmers who have transformative capacity of technical knowledge and skills such as; land use planning, low emission land management techniques, dissemination of early warning products (including agro-climatological information), understanding climate variability, developing and interpreting maps and charts on climate, triggering systems for making decisions based on climate events and thresholds, and adoption of relevant practices with a proven climate that can increase productivity and crop failure at the smallholders level; bridging the needs of production equipment (climate adaptive seeds/seeds, organic fertilizers, appropriate technology for land management, harvesting and post-harvesting). Meanwhile, at the Off Farm level, the focus will be on strengthening harvest and post-harvest management to gain added value in the inclusive market chain.

Table 6

Impact of

Component 2 on: Increasing the targeted sectors, smallholder and national policy

Strategi Intervention under component 2	Expected impact on the targeted sectors (agriculture)	Expected benefits to smallholders and climate change adaptation	National Policy Contribution
Interventions: Capacity Building for Smallholders through the Gender and Social Inclusion (GESI) approach related to 'Climate Smart Agriculture" and Good Agriculture Practice" for:: *dddd. Reducing degradation and deforestation, reducing GHG emissions in the food agriculture sub-sector* *eeee. Productivity of food agriculture in ensuring the availability and sustainability of the supply chain of food products in families and communities.* *ffff. Increased income of smallholders in the food agriculture sub-sector*	(1) Productive use of land, protecting agricultural land from degradation, reducing GHG emissions in the agricultural sub-sector, protecting forest ecosystem services from deforestation from extractive agricultural activities. (2) Strengthening the sustainability of community food supply chains. (3) Reducing poverty at the smallholders level	• Empowering smallholders, women farmer groups, young farmers in reducing crop failure in the pangen agriculture sub-sector caused by climate change • Increased productivity of food crops at the level of smallholders, women's farmer groups and young rural farmers around the forest • Easy access to innovation technology, climate adaptive seeds/seeds, production facilities, market access, capital and fair selling prices for food commodities for smallholders	• REDD target • Land used resolution conlict in community level • Long-Term Low Carbon and Climate Resilience Strategy (LTS-LCCR) 2050 • Potential synergy with implementation of UNCCD • Potential co-benefit to mitigation in-AFOLU • Target net zero emission (NZE) di tahun 2060 atau lebih cepat • Food security

100.60. **Component 3 : Developing the livelihood diversification of smallholders the livelihoods of small farmers, especially women and young farmers through processing a variety of local food products and ecosystem services so they can be marketed through digital marketing., young rural farmers.** The dependence of the Indonesian population on a food source (rice) needs to be balanced with other food sources to prevent the threat of a food crisis from occurring. Less diverse food consumption, in turn, can weaken national food security. Increasing local food production and consumption will support changes in the national food system to become more sustainable. From an

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~~environmental perspective, local food based diets have the potential to reduce greenhouse gas emissions, reduce waste due to food spoilage during storage and transportation, and use less packaging during retail sale due to proximity to food sources, all of which can shorten food supply chains.~~

~~101.~~61. Through this project, diversification of non-rice food crops with potential superior commodities, such as; corn, soybeans, sorghum, porang, bananas, taro/taro, breadfruit, sago and other types of food crops according to the typology and characteristics of the land~~.~~ will be developed at each site. In order to obtain added value, local food needs to be processed into products that are ready to be marketed ~~through the use of the digital economy (digital marketing).~~ The food agro-industry in rural areas needs to be encouraged to increase economic added value, create jobs, and create new businesses through the "integrated farming and zero waste" model, as an effort to encourage the interest of the younger generation who are reluctant to become rice farmers. Women and young farmers in rural areas need to improve their agrotechnopreneurship ~~skills~~abilities in managing a business in the agribusiness and agro-industrial sectors through the use of technology, as well as prioritizing innovation in efforts to develop ~~business in the agri-food sector. Global trade regulations that require guarantees that agricultural products must have attributes that are safe for consumption (food safety attribute), have high nutrition content (nutritional attributes), and are environmentally friendly (eco-labelling attributes), will be the focus of empowering women and young farmers in developing products. local processed food~~community-based businesses by utilizing digital access.

62. Component-2 will consist of Output 4.1. ~~***smallholders***~~Smallholders in 8 project locations develop diversification of food products and environmental services (NTFPs, ~~***agrotourism, etc.).***~~ ~~Dependence~~ecotourism and development of other local food potentials); Output-4.2. Women's and youth groups in the village have a source of income from managing processed food products and environmental services 4.3. Established Joint Business units example: Cooperatives

~~103.~~63. ***Output 4.1. The development of livelihood diversification based on local food ingredients and potential environmental services (NTFs, ecotorurim, and other local potentials).*** Strategies and steps to mitigate the threat of dependence on rice food sources ~~needs~~need to be balanced with diversification of non-rice food ingredients~~.~~ and potential superior commodity products. This output will empower smallholders, especially women's groups and young farmers to spearhead the diversification of non-rice food crops, such as; sorghum, porang, breadfruit, beans, corn, bananas, cassava and sweet potato, taro and sago as well as various types of food ingredients according to with the land potential in each location. The availability of various types of non-rice food ingredients will strengthen the resilience of families and communities in facing food insecurity. ~~In addition, increasing the livelihoods of women and young people is carried out through the management of NTFPs, agrotourism and other local potentials.~~

64. Key Activities~~;~~.

(1) Workshop on Determining the Variety of Food Plants to be cultivated according to land typology, readiness of smallholders and local community acceptance.

(2) Formation of farmer groups based on Hamparan management

~~104.~~ (3) Assistance with land preparation, preparation of seeds/seeds based on the group's choice and land typology/characteristics, and support for production facilities ~~(4) Cultivation technical assistance based on plant types based on overlay groups (5) Harvesting technical assistance and post-harvest processing/treatment~~

(4) Cultivation technical assistance based on plant types based on overlay groups

(5) Harvesting technical assistance and post-harvest processing/treatment

~~105.~~65. ***Output 4.2. ~~Women and young people in the target villages have a~~A new source of income is obtained from the ~~processing~~management of ~~diversified~~processed food products and environmental services***. ~~Availability of various types of food that are ready~~ ***for*** ~~consumption and easily accessible in the community is the focus of empowering women~~***women's groups and young people in the village who have a source of income.*** The development of potential superior commodities from both environmental services and ~~young farmers to~~non-rice commodities will be ~~able to process~~processed into value-added products which will certainly increase the income of women's groups and ~~promote various types of food to the community through the use of information technology~~rural youth.

66. Key Activities~~;~~.

(1) Training on processing various types of food products that are acceptable in the inclusive market (for women's groups and young farmers~~);~~)

(2) ~~Facilitation of~~Facilitating production facilities for processing diversified foodstuffs ~~that have~~to obtain added value~~;~~

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and

106. (3) Food Safety Standard Training, (food safety attribute), and environmentally friendly (eco-labelling attributes) (4)Education, promotion and non-rice food consumption campaigns through social media and Mainstream media, MSM.

(4) Education, promotion and non-rice food consumption campaigns through social media and digital platforms.

67. **Ouput-4.3.** ***Establishment ofEstablished Joint Business units (Koperasi, UMKM) for marketing processed food products and ecosystem services through digital marketing.example: Cooperatives.*** Joint Business Groups and Household Enterprises

107. (UMKM) to process and market various types of non-rice food products will be formed in each project village. Policy advocacy at the district level will be carried out to ensure diversified food products from smallholders are accepted by the community and market inclusion

108.68. **Key Activity:** (1) Formation of Joint Business Groups which have legitimacy and are formally registered to be able to market diversified food products in the community; (2) Business Management Training and Utilization of IT/Digital Marketing Technology; marketplace/digitization of diversified food products and potential local natural resources (NTFPs, agrotourism)' and (3) Policy advocacy at the district level to strengthen non-rice food diversification

Table 7

Impact of

Component 3 on the targeted sectors, smallholder and national policy

Strategi Intervention under component 3	Expected impact on the targeted sectors of family and community food security	Expected benefits to smallholders and climate change adaptation	National Policy Contribution
Intervention. Empowering smallholders, women farmers and young farmers in developing livelihood diversification by producing, developing and promoting a variety of non-rice food to strengthen family and community food security	• Resilience of families and communities from the threat of food crises and hunger • Reducing the poverty rate in villages around the forest • Strengthening microeconomic growth	• Livelihood resilience of rural residents around the forest from the results of diversification of food agriculture • Families and communities have choices of various types of foodstuffs • Land use in villages around the forest has become more productive. • Women and young farmers have a source of income	• Sustainable Development (SDGs) 2030 especially SDG1 (without poverty); SDG 2 (zero hunger) • food security • Gross National Product (GNP)

128.69. **Component 4: Restoration of 1,200 hectares of critical agricultural land in 8 villages around forests with agroforestry plants to be managed productively by small farmers supported by village regulations (Perdes).** High cost of restoring critical agricultural land (an average of USD 2,150 per ha), makes smallholders in villages around the forest let their land turn into shrubs. To replace agricultural land that is considered no longer fertile, they are looking for replacement land in forest areas that are considered more fertile by deforesting. To control and reduce deforestation and the impact of land degradation on increasing GHG emissions in the rural agriculture sub-sector, 1,200 ha of critical agricultural land spread over 8 villages around the forest will be restored to fertility, and then managed productively by diversifying food crops and agroforestry. Degraded agricultural land that has been restored is expected to be managed productively and smallholders will no longer open new agricultural land in natural forest areas around them. Landscape-based restoration management by prioritizing Gender and Inclusive (GESI) principles will be a method of empowerment and organization at the community level.

129.70. ***Output-5.1. critical agricultural land of 1,200 ha based on smallholder ownership in 8 villages was restored to fertility, planted with agroforestry, and managed productively.*** Empowering smallholders to carry out the restoration of critical agricultural land, so that it can be managed productively to increase their welfare. In addition, restoring critical land with agroforestry plants will have a positive impact on restoring ecosystem services, and protecting essential ecosystem areas and their biodiversity. The area of critical agricultural land whose fertility will be restored and planted with agroforestry in 8 villages is 1,200 ha. Forms of empowerment are carried out through support for soil restoration, irrigation systems, procurement of food crop seeds and agroforestry. In addition, collaboration will be carried out with local farmer groups through an MoU to ensure that the restored land is managed productively according to the principles of Good Agriculture Practice (GAP). Land management will be monitored every 6 months using web GIS and satellite imagery.

130.71. **Key Activities:** (1) Workshop on agreement and preparation of critical agricultural land restoration plans in 8 villages

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(target for 8 villages of 1,200 ha); (2) Formation of a stretch-based Restoration Group; (3) Assistance in the process of restoring soil fertility, improving irrigation systems; (4) Procurement of seeds for food crops and agroforestry (each hectare will be planted with 250 stems of agroforestry plants which are determined based on the agreement of the land owner); Management and maintenance of food crops and agroforestry on restored land; and (6) Monitoring the management of restored land through web GIS

131.72. ***Output 45.2. Availability of village regulations (Perdes) to protect agricultural land and ecosystem services that support resilience to climate impacts.*** To protect agricultural land and forest areas from being converted to other uses, an agreement will be made with the village government and the community through regulations (Perdes) regarding sustainable agricultural land management and protection of forest ecosystems.

132.73. **Key Activity:** (1) Public discussion of the process of collecting ideas, input for the preparation of Perdes for sustainable agricultural land management and protection of forest ecosystems; (2) Facilitation of the Village Regulation Planning Process regarding sustainable agricultural land management and protection of forest ecosystems; and (3) Public Consultation and Drafting of Village Regulation Plans regarding sustainable agricultural land management and protection of forest ecosystems

Table 8
Impact of Component –4 on the targeted sectors, smallholder and national policy

Strategi Intervention under component 4	Expected impact on the targeted sectors Forestry (LULUCF)	Expected benefits to smallholders and climate change adaptation	National Policy Contribution
Intervention : *Restoring critical agricultural land of 1,200 ha in 8 villages so that it can be managed again as a source of community livelihoods and as a solution to reduce the opening of new agricultural land in forest areas which has an impact on deforestation, biodiversity conservation and increased GHG emissions*	• Reducing GHG emissions from land degradation • Restoration of degraded ecosystems • Protect ecosystem services and reduce the impact of climate change, including its variability. • Reducing the threat of disasters in the community (land fires, landslides, floods, land conflicts, human-animal conflicts)	• Community resilience to land fires, landslides and floods due to land degradation • Recovery of people's livelihoods from agroforestry management • Increasing the economic and ecological value of the land	• REDD targets • Potential synergy with implementation of UNCCD • Potential co-benefit to mitigate in AFOLU • Target net zero emission (NZE) in 2060 or sooner • Potential synergy with Sendai

155.74. **~~Component 5~~Component 4: Strengthening the Community-Based Climate Adaptation Forum in supporting community food security through advocacy, monitoring and evaluation, documentation and publication of the results of Project Learning (Knowledge Management).**

156.75. ***Output- 6.1. A climate adaptation forum was formed for food security at the District level***. This output will focus on strengthening the management forum to be able to carry out advocacy work on climate adaptation policies for the food-agriculture sub-sector based on the principles of Gender and Social Inclusion (GESI); transfer of knowledge and information, technology for climate adaptation for the agricultural sub-sector.

157.76. Key Activities: (1) Formation and preparation of the organizational structure and management of the Community-Based Climate Adaptation Forum for the District Food Agriculture Subsector; (2) Financial Management Training; (3) Policy advocacy training; and(4) Development of networks and cooperation with district-provincial and national multi-stakeholders

158.77. ***Output-6. Projects are documented and published as multistakeholder learning .2. A climate adaptation forum was formed for food security at the District level***. Learning outcomes are recorded, documented and published in Mainstream media, MSM, Website, social media and public expose (seminar).

159.78. **Output-6.3.** ***project results are monitored, evaluated and reported regularly***. Project performance management, starting from the preparation, planning, implementation and post-project stages is monitored, evaluated and reported periodically to AF through Executing Entities (Partnerships) as well as to policy stakeholders. This is important for the transparency and accountability of project management.

79. Each component in the project will contribute to and be in line with Indonesian government policies and regulations. The impact of climate change from each component for small farmers and climate change adaptation can be seen in

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table 5 below:

Table ~~9~~ 5

Impact of Component ~~5~~ on the targeted sectors, ~~smallholders~~smallholder and national policy

Adaptation under component-1	Expected impact on the targeted sectors (food crops)	Expected benefits to smallholders and climate change adaptation	National Policy Contribution
Interventions: Agro-climatological knowledge and information is received and strengthened by village governments and rural communities, especially smallholders, women farmer groups and young rural farmers around forests to be able to make decisions in dealing with climate change in the food-agriculture sub-sector	(1) Transformational planning and programming in the rice value chain at the smallholder level through knowledge, information and use of climate data produced by component 1: (2) to inform the development of the RAN NDC, national strategic planning in agriculture and especially on the sustainability of the food production chain (3) agro-climatological information will help develop a comprehensive climate risk profile to support agricultural/forestry sub-sector policies, land use in the development of the food-agriculture sub-sector. (4) This climate information will enable the program to increase awareness, design capacity building and institutional development of smallholders in strengthening food production chains to face climate challenges (5) Support stronger national adaptation to climate impacts and local and national food security policies (6) Productive land use, protecting agricultural land from degradation, reducing GHG emissions in the agricultural subsector, protecting forest ecosystem services from deforestation from extractive agricultural activities. (7) The productivity of food commodities at the smallholder level can be increased from 3 tonnes per ha (base line) to 5 tonnes per ha at the end of the project (8) Sustainability of the supply chain of food products (supply change) for community food security. (9) Support for regional and central government policies through the Ministry of Agriculture, KLHK, and related sub-sector ministries for improving the welfare of rural smallholders around forests in increasing food productivity and maintaining/protecting forest ecosystem services and biodiversity,	• Empowered; smallholders, women farmer groups, young farmers and village policy makers have the capacity and participate in making climate adaptation decisions for the sustainability of the agri-food production chain • smallholders, women farmer groups and young rural farmers around the forest master information and agro-climatological data in making appropriate adaptation decisions to reduce the risk of crop failure in the food-agriculture sub-sector due to climate • Smallholders and village policy makers have contingency plan scenarios when a disaster occurs that impacts livelihoods. • Empowered; smallholders, women farmer groups, young farmers in reducing crop failures in the food agriculture sub-sector caused by climate change • Increased productivity of food crops at the level of smallholders, women's farmer groups and young rural farmers around the forest • Easy access to innovative technology, climate adaptive seeds/seeds, production facilities, market access, capital and fair selling prices for food commodities for smallholders	• The 2030 Sustainable Development Goals (SDGs), especially SDG1 (no poverty); SDG 2 (zero hunger); SDG 13 (climate action • REDD targets • Land used resolution conflicts at community level • Long-Term Low Carbon and Climate Resilience Strategy (LTS-LCCR) 2050 • Potential synergy with implementation of UNCCD • Potential co-benefit to mitigation in AFOLU • Target net zero emission (NZE) in 2060 or sooner • Food security
Strategi Intervention under component-2	**Expected impact on the targeted sectors of family and community food security**	**Expected benefits to smallholders and climate change adaptation**	**National Policy Contribution**
Intervention. Empowering smallholders, women farmers	• Resilience of families and communities from the threat of food crises and hunger	• Livelihood resilience of rural residents around the	• Sustainable Development (SDGs) 2030 especially

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and young farmers in developing livelihood diversification by producing, developing and promoting a variety of non-rice food to strengthen family and community food security	• Reducing the poverty rate in villages around the forest • Strengthening microeconomic growth • will certainly increase the income of women's groups and rural youth.	forest from the results of diversification of food agriculture • Families and communities have choices of various types of foodstuffs • Land use in villages around the forest has become more productive. • Women and young farmers have a source of income	SDG1 (without poverty); SDG 2 (zero hunger) • food security • Gross National Product (GNP)
Strategi Intervention under component-3	**Expected impact on the targeted sectors Forestry (LULUCF)**	**Expected benefits to smallholders and climate change adaptation**	**National Policy Contribution**
Intervention : *Restoring critical agricultural land of 1,200 ha in 8 villages so that it can be managed again as a source of community livelihoods and as a solution to reduce the opening of new agricultural land in forest areas which has an impact on deforestation, biodiversity conservation and increased GHG emissions*	• Reducing GHG emissions from land degradation • Restoration of degraded ecosystems • Protect ecosystem services and reduce the impact of climate change, including its variability. • Reducing the threat of disasters in the community (land fires, landslides, floods, land conflicts, human-animal conflicts)	• Community resilience to land fires, landslides and floods due to land degradation • Recovery of people's livelihoods from agroforestry management • Increasing the economic and ecological value of the land	• REDD targets • Potential synergy with implementation of UNCCD • Potential co-benefit to mitigate in AFOLU • Target net zero emission (NZE) in 2060 or sooner • Potential synergy with Sendai
Strategi Intervention under component-4	**Expected impact on the targeted Project Akuntabilities**	**The expected benefits of Reporting, Evaluation and KM of IE and Beneficiaries**	**National Policy Contribution**
(1) Intervention Improving the institutional governance of farmer groups through: training, thematic discussions, comparative studies, workshops (2) Monitoring, evaluate and report project performance periodically (quarterly) to Executing Entities (Partnerships) and policy makers to receive feedback (3) Recording, Documenting and Publication of project learning outcomes through Mainstream media, MSM, Websites, social media and public expose (seminars).	• Community-based climate adaptation forum is a strategic partner for the government • Project performance starting from preparation, planning, implementation and post-project can be monitored, evaluated by AF, EEs and policy makers • Transparency and accountability of project management • Project good practices are published and become a reference for policy makers and other stakeholders	• Smallholders benefit from the presence of a strong farmer group • Ensuring project performance is according to plan • Project performance improvements • Learning for IE and Beneficiaries	Transfer knowledge best practice adaptation dan mitigation community based models

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

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impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

~~160.~~80. Focus of this project is to increase the adaptive capacity and resilience of local communities, especially small rural farmers around forests to climate change in 2 provinces (Jambi and North Sumatra) of Indonesia. As stated above, this project will target the most vulnerable groups such as; small farmers, women's groups, poor groups and young farmers in villages around forests, because in the context of vulnerability and poverty in rural areas, women, poor families, and youth who work in the rural agricultural sub-sector and around forests are groups that are very vulnerable to climate impacts. The most vulnerable populations targeted to receive significant economic and social benefits from the project were selected based on the results of a gender-based vulnerability and poverty analysis which revealed that; (i) vulnerability and poverty are more prevalent among rural women (63.6 percent), the poor (71.3%) and rural youth under the age of 25 (64.6 percent). Poverty and vulnerability in the agricultural sub-sector are due to their limited access to assets (land, fertilizers and equipment), knowledge and decent work opportunities in the agricultural sub-sector. The project will target 20,000 villages around the forest as the main beneficiaries, 10,000 young farmers and 6,500 poor people out of a total of 66,821 beneficiaries in the 3 sub-districts that are project locations.

~~161.~~81. Project will comply and comply with national and international laws (Principle 1: Compliance with Laws) which is a prerequisite for the "Risk of Environmental and Social Impacts" assessment. At the national level, the project is integrated with several laws and regulations which are listed below::

(1) Law Number 21 of 1999 concerning Ratification of ILO Convention No.111 concerning Discrimination in Employment and Occupation
(2) Law Number 13 of 2003 concerning Manpower
(3) Law Number 11 of 2005 concerning Ratification of Law No. International Covenant concerning Economic, Social and Cultural Rights
(4) Law no. 32 of 2009 concerning Environmental Protection and Management
(5) Law no. 18/2012 Concerning Food
(6) Law of the Republic of Indonesia Number: 61 of 2016 concerning Ratification of the Paris Agreement to The Nations Framework Convention on Climate Change.
(7) Presidential Regulation Number: 98 of 2021 concerning Implementation of Economic Value of Carbon to Achieve Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development
(8) RI Law No. 11 of 2020 concerning Job Creation
(9) Presidential Regulation Number: 18 of 2020 concerning the 2020-2024 National Medium Term Development Plan.
(10) Ministry of Environment and Forestry Regulation Number: P.33/Menlhk/Setjen/Kum.1/3/2016 concerning Guidelines for Preparing Climate Change Adaptation Actions
(11) Regulation of the Governor of Jambi Province Number 11 of 2021 concerning the Work Plan of the Regional Government of Jambi Province in 2022
(12) Regulation of the Governor of North Sumatra Number: 22 of 2020. Regional Action Plans for Sustainable Development Goals

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~~162.~~82. Regarding the other principles, a screening process was conducted at the early formulation stage of the ESMS to identify the Adaptation Fund ESP Principles that could potentially apply to this project. According to the Adaptation Fund ESP Guidelines, there are three ESPs that form the basis of project ESPs, namely: (1) ESP 1 – Compliance with Laws, (2) ESP 4 – Human Rights, and (3) ESP 6 – Core Labor Rights. While other ESPs will be screened to determine their relevance to the proposed project.

~~163.~~83. Screening is done at the level of project activities, not on project components. This is done to provide clarity and more detail on how the project might impact the surrounding environment compared to using potentially generic project components. Clarity about these impacts will then assist in formulating a more appropriate and effective mitigation plan. Identification is carried out to determine which environmental components related to the screened ESP are potentially affected by the project sub-activities. Impact of this sub-activity on the environmental component is not always negative or severe, but can also have a positive impact. Screening and identification results are presented in Appendix D. Screening and identification showed that 2 of the 15 ESP Principles did not apply to project implementation. The two ESP Principles and justifications for their exclusion are described below.

a. Standard 8: Pollution Prevention and Resource Efficiency: the project does not build factories, changes the landscape by means of land clearing which can cause pollution and environmental damage.
b. Standard 9: :Displacement and Resettlement : The project does not carry out forced displacement or resettlement of rural communities around the forest.

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~~164.~~84. Conclusion, social conflict may emerge as the main challenge when collecting data or mapping land ownership status

in communities, this is because most rural communities do not have land boundaries that are legitimized by the National Land Agency (BPN). Another social conflict is related to the interests of local elites who have so far controlled access to outside assistance for community empowerment in their villages. However, as mentioned above, these challenges will be mitigated through continuous communication and discussion with stakeholders at every stage. The strategic engagement will also adapt flexibly to maintain relationships between stakeholders as well as to ensure continuous collaboration in realizing the project objectives.

165.85. Based on an analysis of 15 principles under the Adaptation Fund, Social and Environmental Policy, this project is highly feasible to implement economically, socially, and environmentally. Project will generate multiple socio-economic and environmental benefits without significant negative risks. The number of target direct beneficiaries of the project for each component is listed below

Tabel-106

Direct and Indirect Socio-Economic Beneficiaries Based on Project Components

Component Project	Direct Beneficiaries			Total	Indirect Beneficiaries			Total
	Male	Famele	Vurnerabel Group		Male	Female	Vurnerable Group	
Component-1Group	2.500	1.000	350	3.850	3.,500	2.,000	900	6.,400
Component-1Componen-2	2.350,500	1.100,000	400350	3.,850	20.,000	12.,000	4.,600	36.,600
Componen-3.2	8502,350	1.200,100	200400	3,8502.250	10.,821	12.,000	1.,000	12.,200
Componen-43	2.200850	8001,200	850200	3.8502,250				
TotalComponen-4	7.9002,200	4.100800	1.800850	13.8003,850	34.,321	26.,000	6.,500	66.,821

166.86. Other socio-economic benefits that will be obtained from this project are related to the livelihood security of smallholders, women and young farmers in villages around the forest through the diversification of non-rice food crop cultivation which is managed into processed products to be marketed through the use of the digital economy (marketplace). This activity will be a new source of income for women and young farmers to improve their welfare. In addition, with the restoration of critical agricultural land with agroforestry and managed productively, in the future (3-year predictions agroforestry can generate economic and ecological values through environmental services) will increase the source of income for rural smallholders around forests. Diversification of non-rice food products is expected to strengthen food security and nutrition for families and rural communities around the forest, and will ensure the continuity of the national food supply change to reduce the threat of vulnerability and hunger.

167.87. In the context of the Indonesian government's national policy, this project will contribute to the 2030 Sustainable Development Goals (SDGs), specifically SDG1 (no poverty); SDG 2 (zero hunger); SDG 5 (gender equality and social inclusion), SDG-12 (sustainable production and consumption patterns); and SDG 13 (climate action). This project will also contribute to Indonesia's 2030 NDC target of 29 percent with independent efforts, and increase the target to 41 percent with financial and technological support from developed countries, both government and private; The low carbon development and climate resilience that the Indonesian government has formulated in the 2050 Long-Term Low Carbon and Climate Resilience Strategy (LTS-LCCR) policy, which will be contributed through Good Agriculture Practice (GAP) activities, Restoration of 1.,200 ha of Critical Agricultural land in 8 villages with agroforestry crops that are integrated with the protection of forest areas and along with the existing ecosystem services in the area.

1.1. Environmental and social considerations

168.88. Increasing access to and utilization of agro-meteorological and agri-climatological data and information will reduce climate-related disaster risk through increasing community preparedness in the agri-food sub-sector for response through strategies and contingency plan measures, in accordance with the target of Sustainable Development Goals (SDG) 13.1 and Target SGD 13.3 concerning strengthening institutional capacity in climate change mitigation and adaptation. Furthermore, "Climate Smart Agriculture" will generate benefits for food security, especially in relation to adaptation to climate change (micro-climate). In addition, through the "Good Agriculture Practice " approach, it will provide important experiences and lessons for smallholders and rural communities around forests contributing to SDGs 12, ensuring sustainable production and consumption patterns, and achieving sustainable natural and environmental management as life support, and contributing towards SDG 15. Protect, restore and enhance sustainable use of terrestrial ecosystems, manage forests in a sustainable manner, halt and restore land degradation and halt loss of biodiversity.

169.89. Unavailability of land use planning data for food crops based on ownership status and land area in villages around the forest, is an obstacle in calculating the production chain (supply change), including in efforts to calculate the climate impacts experienced by smallholders. This project will collect data on the area of food agriculture land based on the ownership status of each family of smallholders in villages around the forest, which will become the basis for planning land use for food agriculture and other related sub-sectors in villages around the forest, as well as for planning and

technical actions to increase productivity in maintaining food production chain (supply change) in the community. Through this project, it is hoped that the process of empowering smallholders in strengthening food security in the face of the climate will be evidence-based.

~~170.~~90. GAP and Smart Agriculture are climate resistant, it is hoped that they will not only increase agricultural food yields, but also have an impact on improving environmental quality, reducing GHG emissions, controlling degradation, preventing deforestation and protecting biodiversity in essential ecosystems. If the principles of Good Agriculture Practice (GAP) can be properly implemented by smallholders and supported by local level stakeholders, this project investment will become a model for green economic development and a strategy for achieving NDC targets in the rural agriculture sub-sector around forests.

1.2. Economi Benefit

~~171.~~91. project focuses on the agricultural sub-sector which is a fundamental aspect of the Indonesian economy. As many as 38.23 million people work in the agricultural sub-sector (BPS, 2020), and 75% of them are in rural areas and around forests. The agriculture and fisheries sub-sector contributed 13.28% to the national GDP. Empowering and increasing the resilience of smallholders in developing the food-agriculture sub-sector, not only guaranteeing community food supply chains are met, but also reducing gender-based vulnerability and poverty in rural areas and contributing to Indonesia's GDP. Increasing food production, because crop failure due to climate can be mitigated and cultivation management has been controlled by smallholders, which has an impact on increasing their income. Increased income is correlated with increased purchasing power of smallholders, including women and young farmers for goods and services, thus contributing to the real sub-sector economic growth in rural areas.

~~172.~~92. Consumptive behavior is a new phenomenon in Indonesian society, including in rural areas. Through this project, smallholders, women and young farmers will receive financial management assistance, so that the income from the food-agriculture sub-sector is not used up for short-term consumptive interests and adds to household costs. Training them to save to Cooperatives, Commercial Banks and Land Asset Investment is a sub-activity of this project. Beneficiaries will also be trained to set aside income to build a contingency fund for the food-agriculture sub-sector plan. This is important to do as a mitigation measure when a disaster occurs which affects the livelihoods of smallholders. Further analysis of the economic, social and environmental benefits of the project will be carried out during the development of a full proposal and as the project progresses its impacts can be recorded, monitored and analyzed.

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1.3. Target Social Gender (Gender and Sosial Inklusi/GESI)

~~173.~~93. Cultural construction of rural communities in Indonesia is still patriarchal. Power and control over assets (land, houses, income etc.) are owned by men. Factually in the food agriculture sub-sector activities in rural areas, women have a higher workload than man. Women's workload starts from the process of preparing seeds/seeds, planting, care and maintenance of plants, harvesting and post-harvest processing. The role of men is generally in the process of preparing the land and marketing the crops. Income from the sale of agricultural products is controlled by men, women only wait for gifts from men. Even the income from men is used by women for household expenses.

~~174.~~94. Condition of gender inequality in the rural agricultural sub-sector, is more common among rural women (63.6 percent), the poor (71.3%) and rural youth under the age of 25 years (64.6 percent). The social gender gap is due to their limited access to assets (land, fertilizers and equipment), knowledge and decent work opportunities in the agricultural sub-sector. Therefore, the project will empower women, youth and poor groups of rural smallholders families around the forest with a target of 32,742 people from 66,821 beneficiaries or 49%. The project will adhere to AF's established social and gender policies designed to address social and gender equality and child protection issues. The project development phase consists of a thorough gender and social assessment and strategies to inform activities about inclusiveness believing that the project community will be stronger if individual families and families are empowered to contribute to development. The Gender Plan has been attached. .

~~175.~~95. Participation of women, including youth and vulnerable groups of at least 30% of adult male beneficiaries, will be carried out starting from the process of preparation, planning, implementation, monitoring evaluation and after the project ends. The Principles of Gender and Social Inclusion (GESI) in every project decision-making will be promoted and monitored at the project management committee level. Establishing criteria for organizing community project

committees will include proportional representation of both men and women, including youth. This will be detailed in a Project Implementation Manual (PIM) which will be finalized during project commencement. The role of youth will be encouraged in targeting project beneficiaries and the project will ensure that implementing partners are knowledgeable about inclusivity. The results of gender analysis can be seen in Appendix 3: Gender Analysis/Assessment.

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

176.96. Total cost of the planned implementation of the project Increasing the resilience of smallholders from climate impacts through Smart Agriculture based on Livelihood Diversification in Indonesia is US$977,939 which will have a direct impact on 3,850 rural smallholders around forests in 8 villages, and have an indirect impact on 66,821 people who are scattered in 3 Districts, 2 Regencies and 2 Provinces in Sumatra, Indonesia. The uses and benefits generated for the beneficiaries of each project component are as follows:

Table-117

Costs and Beneficiaries based on Project Components

Project Component	Alokasi Budget	%	Direct Beneficiaries				Indirect Beneficiaries			
			Male	Female	VG	Total	Male	Famele	VG	Total
Component-1	36.,900	4%	2.,500	1.,000	350	3.,850	3.,500	2.,000	900	6.,400
Component-2	265.,700	29%	2.,350	1.,100	400	3.,850	20.,000	12.,000	4.,600	36.,600
Component-3	175.,000	19%	850	1.,200	200	2.,250	10.,821	12.,000	1.,000	12.,200
Component-4	250.,600	28%	2.,200	800	850	3.,850	N/a	N/a	N/a	N/a
Component-5	87.,500	10%	1.,200	700	500	2.,400	15.,000	8.,000	3.,000	26.,000
Project Support	85.,626	10%	20	15		35				

Note : VG =Vulnerable Gruop

177.97. Project will increase the capacity of smallholders in reducing the cost burden of producing fertilizers and pesticides that they have to buy from agents. Information from farmers, the cost of fertilizers and pesticides is 40% of the total production cost. By producing their own organic fertilizers and biopesticides through the transfer of appropriate technology by utilizing materials/media to produce organic fertilizers/biopesticides in the village, farmers can save production costs of 25-30%.

Table-128

Production Value and Production Cost per Planting Season per Hectare of Cultivation of Food Crops (Rice Field, Paddy Field, Corn and Soybeans), 2020

Deccription	Commodity Food Plants (Conversi in US$)			
	Rice Field (US$)	Paddy Field (US$)	Corn (US$)	Soybeans (US$)
(US$)Production Value *)	1.277Soybeans	741	987	739
(US$)Production Cost **)	935	583	703	624
Production Value *)Income	3421,277	158	284	115

Sources data : BPS,2020

Table-139

Production Value and Production Cost per Planting Season per Hectare of Cultivation of Food Crops (Rice Field, Paddy Field, Corn and Soybeans) are leveled through the project

Description	Commodity Food Plants (Conversi in US$)			
	Rice Field (US$)	Paddy Field (US$)	Corn (US$)	Soybeans (US$)
Production Value *)(US$)	1.500	975	1.,150	1.,000
Production Cost **)Value *)	8001,500	475	500	500
Production Cost **)Income	700800	500	650	500

*) Production Value is the total production value in nominal money generated by a household from a business of one hectare of rice commodity per planting season. The total production value includes the main production value in standard quality and the secondary production value

**) Production Costs are the total costs/costs incurred by households for the business of one hectare of rice commodity per planting season. The total costs only include production activities up to standard quality (excluding post-harvest activities) and estimated rental of own land/rent free, estimated rental of equipment /own business facilities/rent free, estimated wages of unpaid workers/family, and estimated interest on own capital credit/interest free which is calculated by imputation.

178.98. Financing the restoration of critical agricultural land with food crops and agroforestry, when compared to projects carried out by the government and other donor agencies, is also very efficient by using a cost-sharing approach with land owners. The average cost for rehabilitation of critical agricultural land budgeted by the government or other institutions per hectare is US$1,725, while the investment in this project is only US$500.

~~179.~~99. Effectiveness of project financing can also be seen by comparing project input costs with the results obtained by smallholders (comparing without project intervention vs. project intervention) which can be seen in table 14 below.

Tabel ~~14~~10
Comparison of Income of Smallholders Without Project VS Investment with Projects

	Description	Total (USD)
	Project Title : Increasing the resilience of smallholders from climate impacts through Smart Agriculture based on Livelihood Diversification in Indonesia	
	Total Budget cost	977,939
	Total Beneficiaries: small farmers, women vulnerable groups	2,750
A	**Before Project**	
1	The average monthly income of smallholders from the land-based agriculture sector based on the survey results (Baseline) is accumulated in USD (1USD=IDR14,500)	192
2	Potential loss of income from crop failure due to climate change is assumed to be 40% of total monthly income	76,8
	Total income per month: (1 – 2) in USD	115,2
B	**Project Cost**	
1	Project investment costs incurred per smallholders to obtain increased capacity for climate adaptation and mitigation in the food agriculture sector (providing information, training, technical assistance in smart agriculture, CLC infrastructure, modules and learning media, etc) = Component 1,2,3 and 5	640,500
2	Cost of restoration of 1,200 hectares of critical agricultural land, including for the procurement of seeds, planting costs, fertilizers and maintenance for 1 year) = Component 4	250,600
3	The project Execution Costs are at 9.5 per cent of the total requested project budget.	84,600
	Total project cost	**977,939**
C	**Improved Income melalui model Smart Agriculture**	
1	Smallholders income target per month from increased production of food crops (rice) in USD	250
2	Target income of farmers per month from diversification of non-rice food crops in USD	175
3	Targeted income from ecosystem services (agroistas, cultural festivals, etc.) through the provision of home stay packages	50
4	**Total income smallholders per months (USD)**	475
5	Total cumulative income 80% of 2,750 beneficiaries (smallholders)	1,045,000
D	**Efektive ratio**	
1	Before Project (USD)	115,2
2	By project investation (USD)	475
3	**Difference in investment costs versus total cumulative income (C-D) (C-D)**	**67,061**
4	**Income of farmers without project vs project (D=2-1)**	~~359,8360~~

100. In addition to coming from AF, project financing is sought from contributions from smallholders in the form of in-kind contributions with a value of US$230,800. Contributions from beneficiaries are a form of responsibility in project ownership. From a sustainability perspective, this project provides direct benefits, namely farmers' income increases due to increased productivity and new livelihoods/diversification of livelihoods, for example with NTFs, processing food into value-added products such as chips, handicrafts and the like. Then there is, efficiency in terms of the use of organic fertilizers and pesticides which are processed from nearby materials, farmers can determine the types of plants that are climate resistant and the planting season (planting calendar), thereby minimizing the risk of crop failure. In addition to the direct benefits, the indirect benefits for farmers are soil fertility from the use of natural, environmentally friendly fertilizers and pesticides

~~180.~~

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

~~181.~~101. Project is in line with and will support Indonesia's climate change adaptation goals which are to reduce risk, increase adaptive capacity, strengthen resilience and reduce food vulnerability of individuals, families and communities from climate impacts. Project is also in line with and will support the Adaptation Fund's policies in reducing the vulnerability of individuals and communities, especially in the agricultural sub-sector to climate impacts. In detail, the climate adaptation policies, strategies and measures that will be supported through this project initiative are as follows:

(1) The target implementing the NDC in the field of food security focuses on the adaptation needs to fulfill citizens food sources from loss production in the agricultural sector due to the impact of climate change
(2) To support the 2020-2024 RPJMN, climate change has become a development priority in the National Priority (PN) No 6 (Enhancing the environment and resilience to natural disasters and the effects of climate change), with a focus on water, agriculture, health, and coastal ecosystems and sea. In general, the main adaptation programs, strategies and actions aim to; (a) reduce the triggers of vulnerability to the impacts of climate change; (b) responding to climate change impacts and managing risks; (c) increasing community capacity and sustainability of ecosystem services; and (d) increasing the involvement of stakeholders at all levels in building climate resilience), with a target of reducing the potential loss of GDP in sectors affected by climate hazards 0,34% in 2020 and 1.15% in 2024.

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(3) Climate change response has also become a priority in development goals with the establishment of the main objective of the Sustainable Development Goals (SDGs) No.13: Climate Action. The RAN API 2014 document which is currently being updated as a strategic action to prepare development plans that are resilient to climate change encourages the need for an assessment of adaptation contributions in national development planning; government policies in strengthening family and community food security in an inclusive way through increasing productivity, developing food crop diversification and ensuring a sustainable supply chain of food production, as well as supporting the goals of SDGs 1 and SDGs-12.

(4) Supporting the improvement of the Convention on Biological Diversity (CBD) which has a strong link with adaptation efforts, especially in achieving ecosystem and landscape resilience which will have a positive impact on economic resilience and social resilience and people's livelihoods, especially in achieving SDGs-2 goals; SDGs-3, and SDGs 5.

(5) Support the goals of SDGs-13, implementation of the climate change convention (from the UNFCCC to the Paris Agreement) discussing all aspects related to taking immediate action to combat climate change and its impacts, as well as other related SDG goals that have been prepared and put on the agenda in the work plans of the Central Government and The area at the project site.

(6) Supporting the implementation of the UNCCD Strategic Framework 2018-2030, Government of Indonesia, in restoring degraded lands including those affected by landslides, droughts and floods, and supporting SDGs goals, particularly SDGs-15 related to protecting, restoring and increasing sustainable use to terrestrial ecosystems, and manage forests sustainably, combat certification, halt and restore degraded lands and halt loss of biodiversity.

(7) Strengthening local food security policies, particularly in the provinces of Jambi and North Sumatra which are the project location targets.

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.

~~182.~~102. Project will ensure that potential adverse environmental impacts are identified and avoided, and if impacts cannot be avoided, appropriate plans are prepared to mitigate those impacts and managed. Applicable and relevant national technical standards including environmental best practices will be used to deliver the planned activities..

The project's technical standard compliance is developed on the following basis:

AF Principle	National Text Enacting the Standard	Standart	Relevant Activity
1. Compliance with law	Environment Code	Article 1, Law of the Republic of Indonesia No. 23 of 1997 concerning Environmental Management	• **Outcome-2: Increased productivity and effectiveness of land use patterns through Good Agriculture Practices to reduce land degradation and ecosystem vulnerability to climate change.** • Output 2.1 Land use planning is made by smallholders • Output 2.2 Implementation of Good Agricultural Practices at the smallholders level • Outcome 3: Increased productivity of rural smallholders food agriculture around the forest • Output 3.1 Farmers can choose types of food crops that are climate resistant • Output 3.2 Increased productivity of farmers' food crops • Output 3.3 Implementation of smart agriculture learning through a climate adaptation forum • Component 3 Restoration of 1,200 hectares of critical

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			agricultural land in 8 villages around forests with agroforestry plants to be managed productively by small farmers supported by village regulations (Perdes). • Output 5.1: smallholder ownership in 8 villages was restored to fertility, planted with agroforestry, and managed productively. • Output 5.2 Availability of village regulations (Perdes) to protect agricultural land and ecosystem services that support resilience to climate impacts
	National Action Plan for Climate Change Adaptation 2014 (Rencana Aksi Nasional Adaptasi Perubahan Ikilm 2014)	AFB/PPRC.27/6 Page 76 of 182 By considering the notion of adaptation to climate change and its objectives, adaptation can be said to be an effort to increase the resilience of a system to the effects of climate change. Adaptation to climate change in Indonesia is directed as follows: 1. Adjustment efforts in the form of strategies, policies, management, technology and (negative) attitudes to climate change impacts can be reduced to a minimum, and even if possible can utilize and maximize the positive impacts. 2. Efforts to reduce the impact (effect) caused by climate change, both directly and indirectly, both continuously and intermittently and permanently and the impact according to its level. In short, the action plan is directed so that: (a) the impacts of climate change are reduced to a minimum, (b) can increase resilience and reduce the level of vulnerability of livelihoods affected by climate change. To support the field of sustainable living system resilience and resilience to climate change, the main target of the food agriculture sub-sub-sector is to increase the capacity of farmers through; (i) robust data-based climate information and early warning services; (ii) reducing triggers of vulnerability to climate change impacts by developing an early warning system (CIEWS), (iii) responding to climate change impacts and managing risks by implementing contingency plan strategies; (iv) increase community capacity and land quality and ecosystem services from agricultural practices, d) increase stakeholder engagement at all levels in building climate resilience	• Outcome 1: **Exposure related to climate hazards and threats is reduced by increasing the collective knowledge and awareness of the community in developing adaptation strategies and actions based on agro-meteorological data and information.** • Output 1.1: Dissemination of climate information based on agrometerological data to local governments and communities, especially smallholders • Output 1.2 The formulation of climate adaptation strategies and steps by smallholders and village policy makers in order to reduce the risk of climate exposure in the food sector • Outcome 3: Increased productivity of rural smallholders food agriculture around the forest • Output 3.1 Farmers can choose types of food crops that are climate resistant • Output 3.2 Increased productivity of farmers' food crops • Output 3.3 Implementation of smart agriculture learning through a climate adaptation forums • Component 3 Restoration of 1,200 hectares of critical agricultural land in 8 villages around forests with agroforestry plants to be managed productively by small farmers supported by village regulations (Perdes). • Output 5.1: smallholder ownership in 8 villages was restored to fertility, planted with agroforestry, and managed

			productively. • Output 5.2 Availability of village regulations (Perdes) to protect agricultural land and ecosystem services that support resilience to climate impacts • Component 4 Strengthening the Community-Based Climate Adaptation Forum in supporting community food security through advocacy, monitoring and evaluation, documentation and publication of the results of Project Learning (Knowledge Management). • Output 6.1 A climate adaptation forum was formed for food security at the District level • Output 6.2 Documented and published learning outcomes through Mainstream media, MSM, Website, social media and public expose (seminar) • Ouput 6.3 project results are monitored, evaluated and reported regularly
	Food security code	Law of the Republic of Indonesia Number 18 of 2012, in article 1, paragraph (1) to paragraph (16) regulates the implementation and implementation of food security from the National, Regional to individual levels which will be the basis for this project intervention in increasing resilience capacity smallholder food.	• Component 1 dan Component 2, can see in table 5
	Ministry of Environmental and Forestry Regulation No. P.33/Menlhk/Setjen/Kum.1/ 3/2016 About Development Guideline for National Adaptation Plan	The importance of integrating climate change adaptation actions into development plan policies, and/or programs (Article 4 [letter e], Article 9 [paragraph 3], Article 10, Article 11.	• Components 1 to 5 support the Ministry of Environment program
	Nationally Determined Contribution (NDC) the Republic of Indonesia 2017	The Government of Indonesia will implement enhanced actions to study and map regional vulnerabilities as a basis for adaptation information systems, and to strengthen institutional capacity and enactment of climate change sensitive policies and regulations by 2020. The goal of Indonesia's climate change adaptation strategy is to reduce risks to all development sub-sectors (agriculture, water, energy security, forestry, marine and fisheries, health, public services, infrastructure and urban systems) by 2030 through strengthening local capacities, improving knowledge management, convergent policies on climate change adaptation and disaster risk reduction, as well as the application of adaptive technology	• Component 3 Restoration of 1,200 hectares of critical agricultural land in 8 villages around forests with agroforestry plants to be managed productively by small farmers supported by village regulations (Perdes). • Output 5.1: smallholder ownership in 8 villages was restored to fertility, planted with agroforestry, and managed productively. • Output 5.2 Availability of village regulations (Perdes) to protect agricultural land and ecosystem services that support resilience to climate impacts
	Nationally Determined Contribution (NDC) the	Annex 2 :Enhanced Nationally Determined Contribution (NDC)	

	Republic of Indonesia;The Updated NDC submitted in 2021.	Republic of Indonesia . Linking existing conditions, milestones and national development for the 2020-2024 period, and indicative paths towards a long-term vision (Indonesia's Vision 2045 and Long-Term Strategy for Low Carbon and Climate Resilience Development 2050).	
	Gender and Sosial Inklusi (GESI)	Gender and social inclusion are the commitments of the Indonesian government since the ratification of Law no. 7 of 1984 concerning Ratification of the Convention Concerning the Elimination of All Forms of Discrimination Against Women; Presidential Instruction (Inpres) No. 9 of 2000 concerning Gender Mainstreaming in National Development. and Regulation of the Minister of Home Affairs No. 15/2008 concerning Guidelines for Implementation of Gender Mainstreaming in the Regions. The Indonesian government also has a strong commitment to social inclusion as reflected in the ratification of various legal bases, including Law no. 23 of 2002 concerning Child Protection' Law no. 13 of 1998 concerning Elderly Welfare, and Law no. 8 of 2016 concerning Persons with Disabilities, as well as discussion of the Indigenous Peoples.	• Component 3 Restoration of 1,200 hectares of critical agricultural land in 8 villages around forests with agroforestry plants to be managed productively by small farmers supported by village regulations (Perdes). • Output 5.1: smallholder ownership in 8 villages was restored to fertility, planted with agroforestry, and managed productively. • Output 5.2 Availability of village regulations (Perdes) to protect agricultural land and ecosystem services that support resilience to climate impacts
	(1) Compliance with policies and guidelines set by AF, such as; (1) identifying environmental and social risks in accordance with the 15 ESP principles following an evidence-based, comprehensive and commensurate process; (2) an assessment of the anticipated impact of the identified risks; (3) identify adequate measures to avoid, minimize or manage such impacts; (4) develop a plan to implement and implement social environmental impact mitigation measures from each project activity; and (5) other technical guides set by AF (2) IPC standards that will serve as guidelines for such as; Assessment and Management of Environmental and Social Risks and Impacts (PS-1), labor (PS-2), resource efficiency and pollution prevention (PS-3) and conservation of natural resources (PS-6). regarding community health, safety and security (PS-4), indigenous peoples (PS-7), and cultural heritage (PS-8)		All components 1 and 5 have been identified according to the policy and guilness set by AF. Identification results are attached.

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

~~183. This project will complement the initiatives undertaken by the Indonesian government in efforts to adapt and mitigate climate change through:1. Food estates project in North Sumatera Province; 2. Improving community food security through the rice project, corn, soybean. At present there is no duplication of activities such as in this project sourced from other funding, but for activities with a separate focus such as cadaster data collection, sustainable agriculture assistance and the formation of village regulations in buffer villages of national park areas that have been carried out, while activities in this fund adaptation project more integrated.~~

103. No, This project has never been duplicated elsewhere from other funding

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

~~184.~~104. Effective communication, knowledge management and learning are critical to the success of this project. Management of knowledge management and learning is carried out in each component of activities/sub-activities will be recorded, documented and published in the form of books, modules, fact sheets, use of social media (website, Facebook, twiter, You Tube, Video), mainstream media/ MSM.

~~185.~~105. Process of communication and knowledge transformation at the community level which aims to increase community climate knowledge and awareness, especially smallholders, women, young people and local stakeholders is carried out through the media of films, videos, followed by thematic discussions, in Indonesian and local languages accordance with the educational background and local culture.

~~186.~~106. Regarding strengthening the resilience of local agricultural production systems to the impacts of climate change starting from land use planning, cultivation techniques and post-harvest processing, strengthening production supply chain management, development for knowledge transfer, innovation technology in the agri-food sub-sector and market access is carried out through various approaches , like; Field Schools, Thematic Discussions, Observations, transects, recording and documenting field findings and the results of reflection on learning, simulation and use of information technology. The knowledge transfer process at the smallholder level will also be carried out through the ~~Community Learning Center (CLC)~~demonstration plot in field school which will be built in 2 project locations. Knowledge transfer and capacity building are carried out under the principle of Social Gender Inclusion, using language and media that beneficiaries can easily understand. Documents prepared and translated into languages, picture boxes, audiovisual aids, role plays and simulations will become factors of community ownership. The formation of joint business groups and MSMEs is strengthened through business management assistance, financial management, comparative studies, meetings with business people and digital marketing. All processes will be recorded, documented and published through mass media (TV, newspapers, online media)

~~187.~~107. Policy products, such as village regulations (Perdes), contingency plan documents and written agreements produced through discussion processes, including FPIC processes with beneficiaries and local policy makers, are documented and published on the website

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

~~188.~~108. The consultative process involves stakeholders at various levels from decision makers to community representatives. The consultation team involved Gender and Social Inclusion (GESI) experts, Environmental Experts, Good Agriculture Specialists, Food crop cultivation experts, ~~and a project management team with an appropriate gender balance.~~ project management team and vulnerable group with an appropriate gender balance. Vulnerable groups identified and involved in the consultation process consisted of women's groups, female RT heads, poor young farmers, poor indigenous peoples and indigenous people. Groups invited in every consultation held Representation of vulnerable groups in every consultation 30-40% of the total participants present in every consultation activity held. Stakeholder consultation is needed to obtain data and information, as well as local policies that will be taken into consideration in the preparation of planning, implementation, monitoring and evaluation as well as project sustainability. The consultation process with stakeholders resulted in the following commitments:

Table ~~15~~11
Process Consultations Multistakeholders

Date Consultation	Posisition/Stakeholders	Achievement	Documentation
May,24,2022	Team Expert and Management Mitra Aksi	Consultation and discussion on preparation of project concept notes to be submitted to AF	

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May,31,2022	- Kepala Dinas Pertanian Pangan Provinsi Jambi - Direktur Program Mitra Aksi - Program Manager Agriculture Mitra Aksi	Dukungan dari Kepala Dinas Pertanian Pangan Provinsi Jambi terhadap rencana program dari sumber pendanaan AF yang dibuktikan dengan pemberian rekomendasi	
6 June 2022	- Rektor Unv. Jambi - Dekan Fak.Pertanian Unv.Jambi - Ketua Pengurus Mitra Aksi dan Team - Team Ahli Ekonomi Unv.Jambi	Dukungan dan kerjasama dari Unv.Jambi dalam perencanaan dan pelaksanaan program dari sumber pendanaan AF	
9 June 2022	- Head of village government - Representative local leaders - Team expert Mitra Aksi	Consultation and collection of data and information, building the commitment of the village government and local leaders to implement projects from AF funding sources in their area	
11 June,2022	- Representative vilage young people - Team expert Mitra Aksi	Consultation and collection of information, ideas, building commitment from village youth to actively participate in implementing projects from AF funding sources in their village	
20 June 2022	- Representative religious leaders - Team expert Mitra Aksi	consulting and building support from religious leaders in project implementation in their villages	
24 June 2022	- Village women's representative - Village Vurnerable group - Team expert Mitra Aksi	Consultation with representatives of women and vulnerable groups, to gather suggestions, ideas and ensure their role in each activity and obtain project benefits from AF funding	
26 June 2022	- Representatives of smallholders, women, village government - Team expert Mitra Aksi	Consultation, collection of proposals, hopes and ideas. build smallholders' commitment to support and be actively involved in every project process, including its sustainability	

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

~~189.~~109. The full funding from AF of USD977,939 will be focused on supporting capacity building of 3,850 smallholders, women and vulnerable groups in 8 target villages, with the distribution of financing as follows :

Project Component	Description activities component	Budget (US$)	%
Component-1	Increasing the adaptive capacity of smallholders and village governments in formulating strategies and adaptation measures (contingency plans) based on agrometeorological data and information.	36~~.~~,900.00	4%
Component-2	Capacity building for good agriculture practice/smart agriculture to 3,850 rural smallholders around the forest in increasing productivity, reducing degradation and deforestation from extractive farming practices	265~~.~~,700.00	27
Component-3	Develop and promote food crop diversification to strengthen the supply and change of food security for families and communities.	175~~.~~,000.00	18%
Component-4	Restoration of 1,200 hectares of critical agricultural land in 8 villages around the forest to be managed productively by smallholders with food crops and agroforestry supported by village regulations (Perdes)	250~~.~~,600.00	26%
Component-5	Strengthening Institutional Management of Farmer Groups in supporting inclusive food supply chains, Monitoring and Evaluation of Project Performance Periodically; Documentation and Publication of Project Learning outcomes (Knowledge Management)	87~~.~~,500.00	9%
Project/Programme Execution cost		85~~.~~,626.00	9%
Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)		76~~.~~,613.00	8%

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Total Budget	977,939.00	100

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~~190.~~110. Funding for social, environmental and gender studies, as well as ESMS monitoring amounting to USD40,000 is sourced from the Implementing Partner's contribution.

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

~~191.~~111. Sustainability of initiatives to increase food security for rural communities around climate-sensitive forests, as well as protect essential ecosystem services from extractive farming activities. Project is designed to integrate climate change adaptation into local development strategies, particularly related to the sustainability of the food production chain in families and communities, and contribute to achieving Indonesia's NDC target of reducing GHG emissions in the agricultural sector. Gradually during project implementation and definitively at the end of the programmed activities, adaptation to climate change must lead to community livelihood sustainability, socio-economic sustainability, environmental sustainability and institutional sustainability.

~~192.~~112. Sustainability of community livelihoods, especially smallholders, women, young rural farmers around the forest. Even though the projected trend of global warming and its consequences in the food-agriculture sub-sector continues to occur, through increased adaptive capacity, smallholders and key stakeholders in rural areas around forests who benefit from robust technology will demonstrate a good level of resilience and resistance to climate impacts. Despite extreme weather, farmers can ensure that planting time and plant varieties are suitable for climatic conditions, so that the risk of crop failure that can affect their livelihoods can be avoided. The existence of strategies and adaptation measures (contingency plans) prepared by key stakeholders at each project location will assist them in dealing with the climate crisis on the sustainability of people's livelihoods.

~~193.~~113. Social and economic sustainability: Ensuring good crop yields, high levels of food production accompanied by diversification of food crops and agroforestry, enables people to develop economic opportunities in rural communities. Project will focus on creating new opportunities for producers of corn, cowpea, soybean, cassava, vegetable crops, sorghum, breadfruit, taro, sago and rice by taking into account the characteristics and typology of land as well as market potential and local wisdom. Agricultural food products will be processed into food products that have added value by a joint business group driven by women and young farmers. In order to be able to develop the agri-food business chain through joint ventures, women's groups and young farmers will be trained in production management, financial management, digital marketing, and connecting them with other economic opportunities along the agricultural value chain. Increasing management capacity to support sustainability, carried out through; training, assistance workshops, comparative studies, and meetings with business people. Mechanisms for dividing roles, functions and responsibilities, as well as communication, coordination and decision-making, will be developed with beneficiaries and key stakeholders. If this effort goes well and is successful, it will improve the socio-economic welfare of the community, especially women and young rural farmers around the forest in a sustainable manner.

~~194.~~114. Environmental sustainability: Application of Good Agriculture Practice (GAP), starting from land use planning, land management without burning, cultivation practices through setting cropping patterns with crop rotation and diversification systems, organic fertilizers, pest and plant pest control using the biopesticide method , restoration of critical agricultural land with agroforestry plants, and equipped with regulations (Perdes) for Land Use, Ecosystem Management and Protection through sustainable agricultural practices which will be monitored regularly using IT technology (web GIS and Satellite Imagery) will provide environmental benefits in a sustainable manner. Environmental sustainability will be obtained from; reduction of degraded agricultural land, deforestation of forest areas can be avoided, biodiversity and environmental services which play an important role in reducing climate impacts are protected, as well as protected by environmentally friendly post-harvest production and processing technologies, which will lead to increased productivity, ensuring the sustainability of the family food supply chain and the community, and contribute to reducing GHG emissions in the agricultural sector.

~~195.~~115. Institutional sustainability. Project is developed by involving key stakeholders, such as; smallholders, farmer groups, women's groups, young farmer groups, local policy makers, and key stakeholders at district and provincial levels. This is demonstrated by involving administrative authorities, who have a legal mandate to oversee development activities at project sites other than beneficiaries. Institutional sustainability is carried out through the establishment of a climate adaptation forum for the food-agriculture sub-sector with the involvement of local beneficiary organizations (representatives of farmer groups, women's representatives, representatives of young farmers), village governments, and other stakeholders, such as; District food agriculture extension officers, District BMKG, Community Empowerment Agency and District Village Administration, District Agriculture Food and Horticulture Service, Forest Management

Unit (KPH) Forest Service, Private Sector and Academics, through the participation of their representatives, will be carried out in monitoring and integration of project activities , and upon completion to ensure the sustainability of the results. Linking project activities and long-term development plans for empowering rural smallholders around forests to policy makers at the District, Provincial and National levels, as well as linking opportunities for empowering the food-agriculture sub-sector in villages around forests to Academics, District and Provincial Government Institutions, the Banking Sector , and public funding agencies (Philanthropy, CSR) will do.

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

~~196.~~116. This project will adhere and comply with national and international laws (Principle 1: Compliance with Laws) which is a prerequisite for the "Risk of Environmental and Social Impacts" assessment. At the national level, the project is integrated with several laws and regulations which are listed below:\

(a) Law Number 21 of 1999 concerning Ratification of ILO Convention No.111 concerning Discrimination in Employment and Occupation

(b) Law Number 13 of 2003 concerning Manpower

(c) Law Number 11 of 2005 concerning Ratification of the International Covenant on Economic, Social and Cultural Rights

(d) Law no. 32 of 2009 concerning Environmental Protection and Management

(e) Law no. 18/2012 Concerning Food

(f) Law of the Republic of Indonesia Number: 61 of 2016 concerning Ratification of the Paris Agreement to The Nations Framework Convention on Climate Change.

(g) Presidential Regulation Number: 18 of 2020 concerning the 2020-2024 National Medium Term Development Plan.

(h) Ministry of Environment and Forestry Regulation Number: P.33/Menlhk/Setjen/Kum.1/3/2016 concerning Guidelines for Preparing Climate Change Adaptation Actions

(i) Regulation of the Governor of Jambi Province Number 11 of 2021 concerning the Work Plan of the Regional Government of Jambi Province in 2022

(j) Regulation of the Governor of North Sumatra Number: 22 of 2020. Regional Action Plans for Sustainable Development Goals

~~197.~~117. Regarding the other principles, a screening process was carried out at the initial formulation stage of the ESMS to identify the Adaptation Fund ESP Principles that could potentially apply to this project. According to the Adaptation Fund ESP Guidelines, there are three ESPs that form the basis of project ESPs, namely: (1) ESP 1 – Compliance with Laws, (2) ESP 4 – Human Rights, and (3) ESP 6 – Core Labor Rights. While other ESPs will be screened to determine their relevance to the proposed project.

~~198.~~118. Screening is done at the level of project activities, not on project components. This is done to provide clarity and more detail on how the project might impact the surrounding environment compared to the use of potentially generic project components. Clarity about these impacts will then assist in formulating a more appropriate and effective mitigation plan. Identification is carried out to determine which environmental components related to the screened ESP are potentially affected by the project sub-activities. The impact of this sub-activity on the environmental component is not always negative or severe, but can also have a positive impact. The results of screening and identification are presented in the table below

QUESTION 2: What are the Potential Social and Environmental Risks? Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any "Yes" responses). If no risks have been identified in Attachment 1 then note "No Risks Identified" and skip to Question 4 and Select "Low Risk".Questions 5 and 6 not required for Low Risk Projects		Note: Respond to Questions 4 and 5 below before proceeding to Question 6		QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
Risk Description	Impact and Probability (1-5)	Significance (Low,Moderat, and High)	Comment	Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required

				note that the assessment should consider all potential impacts and risks
Risk-1 : Land ownership of residents around the forest, including smallholders, generally do not have land rights certificates.	I = 2 P = 2	Moderat	Land ownership status is generally carried out with recognition based on an agreement between land owners from generation to generation. Even if it has legality over land ownership status, in general it is still in the form of girik or sporadic issued by the village government. This condition allows for land boundary conflicts when data collection is carried out based on ownership and land area. However, through consultation and validation of the legality of ownership status based on its area and boundaries by involving traditional leaders, possible conflicts can be resolved.	It is necessary to collect data on ownership and land area owned by smallholders. To reduce the risk of land ownership conflicts, it is necessary to conduct consultations, ground checks and verifications by involving traditional leaders, between land owners, village governments and relevant policy makers; such as ATR/BPN, KPH and National Park Management
Risk 2. Conflict Tenure	I = 3 P = 3	Moderat, potential	Several villages that will become project locations are directly adjacent to the buffer zone of national parks, production and protection forests, as well as private plantations), which can trigger conflicts over access to land management between communities (smallholders). This is compounded by the absence of good data on land ownership status that has legal legality in the community	Tenure conflict resolution mediation needs to be done. The Social Forestry scheme with the Conservation Community Forest Partnership model is a more equitable management option for areas that have overlapping management and are claimed by communities, companies or national parks
Risk 3: Impact of diversification of community livelihoods and community-based businesses around the forest	I = 2 P = 2	Moderate	Diversification of community livelihoods and forest-based community-based enterprises (eg ecotourism and natural resource-based, NTFPs, etc.) can affect species and habitats if not managed and implemented properly. Likewise, the introduction of climate-adaptive plant species and replanting degraded land with agroforestry plant species whose seeds are imported from outside the area, if not selected through a good quarantine system, will affect local plant species.	Diversification of community livelihoods and community-based businesses around the forest (eg ecotourism and natural resource-based, NTFP, etc.) needs to be regulated and agreed upon through the PFIC mechanism. Strict seed/seedling selection needs to be carried out when bringing in seeds/seedlings from outside for the application of Smart Agriculture and agroforestry practices
Risk 4. Resistance from local elites and farmers in the application of GAP and CRA	I = 2 P = 2	Moderate	The application of the principles of Good Agriculture Practice (GAP) and Smart Agriculture may have an unwanted impact on local elites who have large capital to expand new land clearing in forest areas. In addition, the application of GAP will significantly reduce the use of chemical inputs (fertilizers and pesticides). This can create resistance for local elites who have capital and who have fertilizer and pesticide businesses for smallholders	It is necessary to convince smallholders and local elites of the long-term socio-economic and ecological benefits of reducing climate impacts through the implementation of GAP and Smart Agriculture Demonstrations of models to change the paradigm of smallholders and local elites on the benefits and advantages of GAP / Smart Agriculture are important to do.
Risk 5. local business actors (touke, collectors), resistance.	I = 2 P = 2	Moderate	Impact of increasing the added value of smallholders' agricultural products supported by joint business unit institutions (Koperasi), in order to have a better bargaining position in the business chain in inclusive markets will cause resistance in local business actors (touke, collectors), because they no longer have monopoly rights. on	It is necessary to approach the collectors, toukes and capital owners in the village. The process of building a business chain of agricultural products that is mutually beneficial and can cooperate with smallholders will be carried out. For example, through transparent cooperation contracts in determining the basic price of

			products and prices at the level of smallholders	smallholders' agricultural products.
Risk 6. Restricted access for women and marginalized groups	I = 2 P = 2	Moderate	Local elites and/or influential groups at the local level may have more control over decision-making at the local level and will try to exclude women and marginalized groups. As a result they may not benefit from the initiatives of the project activities	Project implementation ensures that women and vulnerable groups in local communities are involved in the consultation process, decision-making in every project activity, including in monitoring and evaluation. An affirmative action approach will be taken to ensure at least 30% representation of women and vulnerable groups participates in every decision making and in every project activity.
Risk-7 : The implications of the proposed Social Forestry scheme will restrict some communities, including smallholders, from entering forest areas	I = 3 P= 2	Moderate	forest area that has obtained a social forestry permit, can no longer be freely exploited. This will lead to reduced sources of income for people who have been taking wood (illegal logging) or changing the function of the forest as an agricultural area.	To replace sources of income from illegal longing activities and forest conversion for agricultural land expansion, the development of ecosystem services and potential non-timber forest products (NTFP) will be a solution to diversify the livelihoods of communities who have been dependent on forests.
Risk 8. Natural disasters and climate change can affect the implementation and outcomes of project initiatives	I = 3 P= 2	Moderate	Extreme climate change may be encountered during the project, and this will certainly affect the project plans and work schedules in the community.	If an unavoidable disaster and extreme climate event occurs, and the impact will disrupt the project's outputs and outcomes, then with the community's approval, the work plan will be rescheduled.
Risk 9: Indigenous people's cultural identity or traditional knowledge may be inadvertently impaired during project activities.	I = 2 P =2	Moderate	The entry of new knowledge through GAP and Smart Agriculture practices, allows shifting conventional knowledge in land-based agricultural activities.	Project implementers will identify local wisdom and practices that support GAP/Smart Agriculture Local wisdom will be harmonized with modern knowledge based on scientific data, so that it is expected to produce new knowledge that is more adaptive to climate impacts at the smallholder level.
Risk 10: Involvement of children and women at high risk in agricultural activities.	I = 3 P = 2	Moderate staking	The activities of the land-based agricultural sector may inadvertently involve minors and pregnant women at high risk of doing this work. Of course, this must be reminded through awareness that this action is a violation of international labor standards.	The project implementer will provide awareness to each individual and smallholder family, not to employ underage children and high-risk pregnant women when carrying out agricultural activities. Project implementers will socialize international standards and Indonesian laws and their sanctions, if they employ minors and pregnant women are at high risk of doing work that will endanger their lives.
Risk 11: Impact of the Covid-19 pandemic and endemic diseases (malaria, DHF, etc.).	I = 3 P= 2	Moderate	The COVID19 pandemic with its new variant that has not ended, as well as the potential for outbreaks of other pandemic diseases can cause difficulties when interacting with the public, especially in activities that require face-to-face meetings and field practice	Implementation of health protocols in each project activity will be required. Standard 3: Community Health, Safety and Working Conditions will be a guide in reducing the risk of exposure to endemic diseases; such as Covid-19, malaria, dengue, etc.
	QUESTION 4: What is the overall Project risk categorization?			
	Select one (see SESP for guidance)		Comments	
	Low risk		If mitigation measures and International standards and laws guide and are applied appropriately and consistently throughout the project, the project will have a low risk of short to long term impact.	
	Moderate risk	V		
	High risk			
	QUESTION 5: Based on the identified risks and			

	risk categorization, what requirements of the SES are relevant?		
	Check all that apply		Comments
	Principle 1 : compliance with the law	Low risk	This project does not violate applicable international laws and standards related to this project.
	Principle 2: Human Rights	Moderate	The project has no impact on human rights
	Principle 3: Gender Equality and Women's Empowerment	Moderate	The project will build gender equality and equity, including affirmative action for women's empowerment
	Principle 4 : Environmental Sustainability	Low risk	This project does not damage the environment and causes pollution impacts and threats to biodiversity
	Principle 5 : core labour rights	Low risk	This project does not violate workers' rights, does not employ minors and high-risk pregnant women
	Standard 1 : Access and Equity	Moderate	Projects provide access and equity for smallholders, women and vulnerable groups
	Standard 2 : Biodiversity Conservation and Natural Resource Management	Low risk	This project will have overall benefits on the sustainability of natural resources and protection of vulnerable ecosystem services from extractive land use practices and the impact of increasing deforestation and land degradation. Through the GAP and CRA approaches, it will strengthen the protection of natural resources and ecosystem services in reducing climate risk and its variability for communities, smallholders, and vulnerable groups around the forest.
	Standard 3 : Climate Change Mitigation and Adaptation	Moderate	This project will improve the livelihood resilience of smallholders, women and vulnerable groups from climate impacts. The Smart Agriculture practice, which is integrated with livelihood diversification that has added value in the inclusive market business chain, will strengthen them in dealing with climate impacts.
	Standard 4 : Community Health, Safety and Working Conditions	Moderate	The project does not introduce the use of chemical inputs and hazardous and toxic materials that can threaten Community Health, Safety and Working Conditions
	Standard 5 :Cultural Heritage	Low risk	The project will avoid damage to cultural sites and archaeological objects that are protected by law
	Standard 6 : Protection of HCV and Natural Habitats	Moderate	Project will protect HCV and Natural Habitats
	Standard 7 : Indigenous Peoples	Moderate	The rights of indigenous peoples are protected and respected. The principle of FPIC will be carried out at the time of project planning
	Standard 8 :Pollution Prevention and Resource Efficiency	No appreciable risk	the project has no pollution impact, and ineffective (wasteful) use of natural resources
	Standard 9: :Displacement and Resettlement	No appreciable risk	the project does not involve forced resettlement and resettlement of communities

Table-~~16~~12

Project Social and Environmental Safeguards Matrix

Cecklist of Enviromental and Social Principle	**No additional assessment required for compliance**	**Potential impacts and risks – further assessment and management required for compliance**
Compliance with the Law	Proposed project has been developed in accordance with the provisions of the Multilateral Environmental Agreement and applicable laws at the national level, including the Legal Framework on the Environment, the Law on Climate Change, Laws and regulations related to food safety, health, soil management, water, biodiversity life, etc. With respect to the environmental and social assessment, a detailed assessment will be carried out during development of the full proposed project.	
Access and Equity	Project provides equitable access to all targets, especially women, young farmers and vulnerable rural groups around the forest in all project locations. To ensure that no one is left behind, selection criteria will be developed and agreed upon during the proposal development	However, certain categories of people, such as; those currently infected with a communicable disease (malaria, DHF, Corona Virus, etc.) may be excluded because of their status.

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	stage in a consultative manner under the GESI (Gender and Social Inclusion) principle.	
Marginalized and Vulnerable Groups	Project prioritizes the most vulnerable people among the targeted communities, namely, smallholders, women farmers, young farmers, and vulnerable households.	However, some target populations who are illiterate may not benefit from outcomes such as implementation guides for adaptation to change. To overcome this difficulty, an illustrated and visualized version of the guide in local languages will be developed. Likewise, populations without electronic media (Radio, TV, cell phones) may not benefit from agrometeorological information. This risk will be overcome by using traditional communication tools, such as; delivery of information face to face, home visit.
Human Rights	Project guarantees respect for the rights of its direct beneficiaries, namely, men, women, youth and children, depending on their involvement in implementation. Stakeholder consultation prior to the preparation of this Concept Note is part of this logic. Adaptation to Climate Change is seen as belonging to everyone, both individually and in groups regardless of social status, gender, ethnicity, religion, etc. The project will ensure that all contribute and benefit	
Gender Equality and Women's Empowerment	The design of this project basically takes into account gender equality and the Empowerment of Women, including female heads of households and young women. The main activity of each component will place women in an equal position with men in every decision making that affects their existence.	However, because rural communities around forests in Indonesia are dominated by a patriarchal culture, there may be a risk of inequality. A participatory and inclusive approach to the design and implementation of project activities and the empowerment of women for tasks falling within their competence will contribute to the promotion of these values
Core Labour Rights		Unequal wages between men and women and child labor are risks that can impact the proper implementation of activities. The project will remain vigilant to ensure compliance with the Labor Code applicable in the Republic of Indonesia. Attention will be paid to eliminating child labor in the food-agriculture sub-sector.
Indigenous Peoples		Beneficiaries in Jambi province, are indigenous peoples. To avoid local elite bias. This project will ensure that all vulnerable groups benefit fully from the implementation of the project, including the recognition of their rights as stipulated in the UN charter on the Rights of Indigenous Peoples.
Involuntary Resettlement	Project activities will be implemented with the communities in the area, including their own agricultural land. There will be no resettlement of the population in the new area.	However, there may be several smallholder families who establish garden houses and cultivate land illegally within the National Park area. This project will mediate smallholders who clear and use land illegally in the NP through the Conservation Partnership scheme provided by the Government of Indonesia, through the Ministry of Environment and Forestry in the case above.
Protection of Natural Habitats		Project implementation strategy envisages the protection of endangered plant species through reforestation, which is supported by the preparation of local regulations (Perdes). etc. In addition, productivity gains resulting from the adoption of resilient technologies may lead some actors to convert natural areas into agricultural land. For this reason, the project will identify protected areas within the zone intervention during environmental and social impact assessments and will raise awareness among the population about the importance of guarding and protecting these areas.
Conservation of Biological Diversity		Despite the many environmental benefits of the project, including improved soil health, water conservation, and reduced use of chemical fertilizers and pesticides, land conversion for crop production can affect biological differences. Consultations will be needed in developing an environmental and social impact framework to identify appropriate measures and develop training modules that incorporate these concerns
Climate Change	No further assessment is required. Activities initiated under this project aim to strengthen the resilience and support of their beneficiary communities in adapting their livelihoods and ecosystems to climate	

	change in a sustainable manner	
Pollution Prevention and Resource Efficiency		Project will contribute to sustainable land management, water use efficiency and water pollution prevention. However, soil fertility, restoration and plant processing activities can cause pollution. The environmental and social impact assessment will identify avoidance measurements
Public Health	The various climate adaptation interventions planned for the project should enable to improve the health of beneficiary communities (reduction in disease risk and financial capacity to meet health care costs).	
Physical and Cultural Heritage	None of the project activities will impact the physical and cultural heritage of mankind. On the contrary, the project aims to enhance traditional knowledge and knowledge about the people and to accompany them to live in harmony with nature and its various components.	
Lands and Soil Conservation	Project is not expected to cause damage to the land and soil. Instead, sustainable land management techniques and adaptive food production and processing technologies promoted by the project should contribute to strengthening the resilience of soil and soil resources	

~~199.~~119. Screening and identification showed that 2 of the 15 ESP Principles did not apply to project implementation. The two ESP Principles and justifications for their exclusion are described below.

a. Standard 8: Pollution Prevention and Resource Efficiency: the project does not build factories, changes the landscape by means of land clearing which can cause pollution and environmental damage.

b. Standard 9: :Displacement and Resettlement : The project does not carry out forced displacement or resettlement of rural communities around the forest.

~~200.~~120. Based on an analysis of 15 principles under the Adaptation Fund´s Social and Environmental Policy, this project is highly feasible economically, socially, and environmentally. This will generate multiple socio-economic and environmental benefits without significant negative risks.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

~~201.~~121. Project approaches, actions, modes of organization and implementation will apply the general principle of subsidiarity that encourages the decision-making process to be as close as possible to action at various levels: (i) geographic, project targets especially the most "local" geographic scale (village, commune, province) and its relation to regional and national scales; (ii) institutional; (iii) project management (delegating project implementation to direct users where possible, central and local government entity support (iv) knowledge management, by strengthening local capacities and knowledge sharing, and cross-sectoral coordination and transfer. Complete project management arrangements will be drawn up at the time of writing a complete proposal.

B. Describe the steps of financial and project/programme risk management.

~~202.~~122. Management of project financial management, and policies to avoid the occurrence of financial risks will be prepared at the time of writing a complete proposal

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

~~203.~~123. Preliminary environmental and social assessments are carried out as part of the project design to ensure existing environmental and social standards applicable to the target beneficiary communities are taken into account in the context of the AF Principles. Implementation and instruments to be used to monitor social and environmental impacts will be developed at the stage of writing a full project proposal. The instruments consist of: (1) an environmental and social management plan will be prepared and implemented during the project implementation phase. (2) the assessment will identify environmental and social risks in the target community. Procedures will then be put in place to manage these risks effectively. This procedure, which will be linked to environmental and social policies in Indonesia, will be in line with the Adaptation Fund's gender policy.

D. Describe monitoring and evaluation arrangements and provide a budgeted M&E plan, consistent with the ESP and Gender Policy of the Adaptation Fund.

~~204.~~124. Project Monitoring and Evaluation (M&E) and Knowledge management will be under the oversight of the Project Management Unit (PMU), led by a full-time M&E officer. The M&E system should: (i) generate, organize and disseminate information needed for the strategic management of the Project, (ii) document results and lessons learned for internal use and for public dissemination of achievements and (iii) respond to the information needs of the Adaptation Fund, IE and Government regarding Project activities, direct results and impacts.

~~205.~~125. Monitoring and evaluation manual that will describe a simple and effective system for collecting, processing, analyzing and disseminating data will be prepared in the first year of the Project. A computerized database will be developed which will enable the creation of the dashboards used in this project.

~~206.~~126. System will regularly be fed from data collected in the field by the Field Project Coordinator. The monitoring and evaluation system will be combined with a Geospatial Information System (GIS) which will enable spatial-temporal mapping and analysis. Training will be organized to strengthen the capacity of the various stakeholders involved in the monitoring and evaluation system

~~207.~~127. Geospatial Information System (GIS) based monitoring and evaluation instruments and supporting tools will be developed at the time of writing the full proposal

B. Include a results framework for the project proposal, including milestones, targets and indicators, including one or more core outcome indicators of the Adaptation Fund Results Framework, and in compliance with the Gender Policy of the Adaptation Fund.

Tabel : Alignment of Proposed Project Objectives/Outcomes with Adaptation Fund Results Framework

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator(s)
Overall Objective: to increase the resilience and adaptive capacity of individuals and communities, especially smallholders to climate change through technical assistance for smart agriculture cultivation and livelihood diversification based on environmental service potential.			
Objective-1. Strengthening local food security from the impacts of climate change through the transfer of knowledge, data and information agrometerological as well as mentoring 'smart agriculture for rural smallholders around the forest;	• Resilience of community livelihoods, especially smallholders to climate change, is built based on agro-meteorological data and information • Readiness of local governments and communities in reducing the climate impact of the food-agriculture sector through adaptation strategies and measures	Outcome 1: ~~Reducing exposure~~Exposure related to climate hazards and threats is reduced by increasing the collective knowledge and ~~collective~~ awareness of ~~communities and local governments,~~the community in developing adaptation strategies and ~~adaptation measures~~actions based on ~~agrometeorological~~agro-meteorological data and information.	1.1. Availability of climate information and agro-meteorological data to be disseminated to smallholders and stakeholders in a timely manner 1.2. Percentage of target population that knows the estimated adverse impacts of climate change, and the appropriate responses 1.3. There are community-based policies, strategies and adaptation measures developed by the local government
		Outcome-2. ~~Increasing the~~Increased productivity and effectiveness of land use patterns through Good Agriculture Practices to reduce land degradation and ~~the~~ecosystem vulnerability ~~of ecosystems~~ to climate change.	2.1. Presentation of smallholders who have land use planning. 2.2. Presentation of smallholders implementing Good Agriculture Practice
		Outcome-3: : ~~Increase the skills of smallholders in developing the~~Increased productivity of ~~community~~ rural smallholders food ~~supply chains~~ agriculture around the forest	3.1. Number smallholders who can increase the productivity of food agriculture by 50% per ha per planting season (from baseline data) through smart agriculture cultivation. 3.2. Number rural smallholders around the forest whose income has increased from the food-agriculture sub-sector (at least 50% of their income has increased compared to before the project intervention) 3.3. Total cadre farmers who have the capacity to disseminate smart agriculture knowledge
Objective-2. Improving the livelihoods of small farmers, especially women and young farmers through the management of diversified food products and ecosystem services (NTFPs, ~~agrotourism~~ecotourism, etc.);	• Number of households with more than 1 source of income after the end of the project • Number of women and young people who have independent sources of income • Number of joint business units formed and able to manage online and offline diversification of food products and ecosystem services (NTFPs, agrotourism, etc.) ~~by utilizing digital marketing~~	Outcome-4. ~~Increasing~~Increased livelihoods, especially for women and young people through the ~~management~~processing of diversified food products and environmental services (NTFs, ecotourism and other potential ecosystem services identified at each site) supported by joint business units ~~(Koperasi, MSMEs) based on markerpleace/digital marketing~~	4.1. Percentage of women and young people who have more secure access to livelihood assets 4.2. Number of diversified processed food products and environmental services produced as a source of livelihood for women and young people 4.3. Joint Business Units (Koperasi, MSMEs) formed with strong management in product marketing through digital marketing.
Objective-3. Restore degraded agricultural land to strengthen the resilience of community livelihoods and ecosystem services to climate impacts, and be supported by sustainable management regulations ~~(perdes)~~	• area of degraded agricultural land that was restored with agroforestry and managed productively at the end of the project • Number of smallholders benefiting from agroforestry restoration	Outcome-5 ~~Reduction of~~ 1,200 ha of degraded agricultural land in 8 project location villages ~~for restoration~~restored to restore and ~~protection of~~protect ecosystem services around the forest	5.1. Number of smallholders who benefit from restoration of degraded land. 5.2. Number and types of agroforestry plants developed and managed productively 5.3. Land area and forest ecosystem area protected by regulation (perdes)
Objectives-4: Increasing the capacity of community-based climate	• establishing community-based climate adaptation forums at district level	Outcome-6. ~~Improvement~~Formation of ~~district-level community-based~~Local Institutions in monitoring and managing climate	6.1. Number of members of local institutional forums formed to support community-based sustainable climate adaptation

adaptation forums, developing project learning models through documentation, recording, reporting and publication	• documentation, recording, reporting and publication of the project learning process	adaptation ~~forums in monitoring, documenting~~ learning ~~outcomes and reporting activities.~~	6.2. Number of KM products produced and published 6.3. Number and frequency of monitoring and reporting

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

Alignment of Project Objectives/Outcomes with Adaptation Fund Results Framework

Any project or programme funded through the Adaptation Fund (AF) must align with the Fund's results framework and directly contribute to the Fund's overall objective and outcomes outlined. Not every project/programme outcome will align directly with the Fund's framework but at least one outcome and output indicator from the Adaptation Fund's Strategic Results Framework must be included at the project design stage.

There is currently, no place within the project document where an explicit link to the AF's results framework is delineated. As such, the secretariat is requesting project proponents to fill out the table below to directly link, where relevant, project objectives and outcomes to the Fund level outcome and outputs.

Project Objective(s)[11]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Output	Grant Amount (USD)
Objective-1. Strengthening local food security from the impacts of climate change through the transfer of knowledge, data and information agrometerological as well as mentoring 'smart agriculture for rural smallholders around the forest;	• Resilience of community livelihoods, especially smallholders to climate change, is built based on agro-meteorological data and information • Readiness of local governments and communities in reducing the climate impact of the food-agriculture sector through adaptation strategies and measures	Outcome 1: Reducing exposure related to climate hazards and threats by increasing knowledge, and collective awareness of communities and local governments, developing strategies and adaptation measures based on agrometeorological data and information.	1.1. Availability of climate information and agro-meteorological data to be disseminated to smallholders and stakeholders in a timely manner 1.2. Percentage of target population that knows the estimated adverse impacts of climate change, and the appropriate responses 1.3. There are community-based policies, strategies and adaptation measures developed by the local government	~~Output 1.1 Local governments and communities, especially smallholders, receive climate information based on agro-meteorological data to be able to make decisions to reduce the vulnerability of the food agriculture sub-sector to climate impacts.~~Output 1.1: Formation of Local Institutions in monitoring and managing climate adaptation learning.	**20.,000**
				Output 1.2. ~~village government together with the community, develop strategies and~~ The formulation of climate adaptation ~~measures~~strategies and steps by smallholders and village policy makers in order to reduce the risk of climate exposure in the food ~~agriculture sub~~ sector	**16.,900**
		Outcome-2. Increasing the ~~productivity and~~ effectiveness of land use patterns ~~through Good Agriculture Practices~~ to reduce ~~land~~ degradation and ~~the vulnerability of~~	2.1. Presentation of smallholders who have land use planning. 2.2. Presentation of smallholders implementing Good Agriculture Practice	Output-2.1 ~~Smallholders can make land~~Land use planning ~~for food agriculture~~is made by smallholders	**15.,000**

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

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		ecosystems to climate change.perubahan iklimdeforestation that impact on community and ecosystem vulnerabilities		Output 2.2.- Implementation of Good Agriculture practices in land management are implemented byAgricultural Practices at the smallholders level	**30.,700**
		Outcome-3: ; Increase the skills of smallholders in developingIncreasing the productivity of community food supply chains agriculture through the practice of climate smart agriculture	3.1. Number smallholders who can increase the productivity of food agriculture by 50% per ha per planting season (from baseline data) through smart agriculture cultivation. 3.2. Number rural smallholders around the forest whose income has increased from the food-agriculture sub-sector (at least 50% of their income has increased compared to before the project intervention) 3.3. Total cadre farmers who have the capacity to disseminate smart agriculture knowledge	Output- 3.1. Farmers acquire smart agriculture technical knowledge and skills to reduce the riskcan choose types of crop failure due tofood crops that are climate impactsresistant	**150.,000**
				Output- 3.2 smallholders can increase theIncreased productivity of farmers' food crops at least 30% from the baseline	**30.,000**
				Output- 3.3. There are 120 " Implementation of smart agriculture" cadre farmers available learning through a climate adaptation forums	**40.,000**
Objective-2. Improving the livelihoods of small farmers, especially women and young farmers through the management of diversified food products and ecosystem services (NTFPs, agrotourismecotourism, etc.);	• Number of households with more than 1 source of income after the end of the project • Number of women and young people who have independent sources of income • Number of joint business units formed and able to manage online and offline diversification of food products and ecosystem services (NTFPs, agrotourism, etc.) by utilizing digital marketingand other potential product)	Outcome-4. Increasing livelihoods, especially for women and young people through the management of diversified food products and environmental services supported by joint business units (Koperasi, MSMEs) based on markerpleace/digital marketing.like cooperative	4.1. Percentage of women and young people who have more secure access to livelihood assets 4.2. Number of diversified processed food products and environmental services produced as a source of livelihood for women and young people 4.3. Joint Business Units (Koperasi, MSMEs) formed with strong management in product marketing through digital marketing.	Output- 4.1. smallholders in 8 project locations develop The development of livelihood, diversification of based on local food productsingredients and potential environmental services (NTFPs, agrotourism, etc.)NTFs, ecotorurim, and other local potentials)	**97.,000.**
				Output-4.2. Women and young people in the target villages have a.A new source of income is obtained from the processingmanagement of diversifiedprocessed food products and environmental services for women's groups and young people in the village who have a source of income	**60.,000**
				4.3. Establishment ofEstablished Joint Business units (Koperasi, UMKM) for marketing processed food products and ecosystem services through digital marketingexample: Cooperatives	**18.,000**
Objective-3. Restore degraded agricultural land to strengthen the resilience of community livelihoods and ecosystem services to climate impacts, and be supported by sustainable	• area of degraded agricultural land that was restored with agroforestry and managed productively at the end of the project • Number of smallholders benefiting from agroforestry restoration- • Learning Products resulting from project management	Outcome-5 Reduction of 1,200 ha of degraded agricultural land in 8 project location villages for restoration and protection of ecosystem services around the forest.	5.1. Number of smallholders who benefit from restoration of degraded land.- 5.2. Number and types of agroforestry plants developed and managed productively 5.1. Land area and forest ecosystem area protected by regulation- (perdes)	Output-5.1.Critical critical agricultural land of 1,200 ha based on smallholder ownership in 8 villages was restored to fertility, planted with agroforestry, and managed productively.	**185.,600**
				Output-5.2. Availability of village regulations (Perdes) to protect agricultural land and ecosystem services that support resilience to climate impacts	**65.,000**

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management regulations ~~(perdes)~~					
~~–~~Objectives-4: Increasing the capacity of community-based climate adaptation forums, developing project learning models through documentation, recording, reporting and publication	• establishing community-based climate adaptation forums at district level • documentation, recording, reporting and publication of the project learning process	Outcome-6. Outcome-6. Improvement of ~~district-level community-based~~Local Institutions in monitoring and managing climate adaptation ~~forums in monitoring, documenting~~ learning ~~outcomes and reporting activities.~~.	6.1. Number of members of local institutional forums formed to support community-based sustainable climate adaptation 6.2. Number of KM products produced and published- 6.3. Number and frequency of monitoring and reporting	~~Output~~ 6.1. A climate adaptation forum was formed for food security at the District level	**19.,000**
				~~Output~~ 6.2. ~~Learning outcomes are recorded, documented~~Documented and published ~~in~~learning outcomes through Mainstream media, MSM, Website, social media and public expose (seminar)	**43.,500**
				~~Output~~ 6.3. project results are monitored, evaluated and reported regularly	**25.,000**
Project/Programme Execution cost					**85.,626**
Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)					**76.,613**

Note :

Funding for social, environmental and gender studies, as well as ESMS monitoring amounting to USD40,000 is sourced from the Implementing Entity's contribution

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

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

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

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:

ADAPTATION FUND

Letter of Endorsement by Government

JAMBI PROVINCE GOVERNMENT
FOOD CROPS DEPARTMENT,
HORTICULTURE AND LIVESTOCK
Jl. Lingkar Barat 1 No Rm 12, Mayang Mangurai, Kec. Kota Baru, Kota Jambi, Jambi 36361

Jambi, 12 July 2022

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

Subject: Endorsement for [Strengthening the food security of smallholders from climate impacts through Good Agriculture Practice/Climate Resilience Agriculture (GAP/CRA) and increasing the value of degraded land and forest ecosystem services in Indonesia]

In my capacity as designated authority for the Adaptation Fund in Indonesia, I confirm that the above regional project/programme proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the region.

Accordingly, I am pleased to endorse the above project/programme proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by [implementing entity] and executed by Indonesia.

Sincerely,

Khairul Aerori, SP., M.Si.
Head of Division

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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***

Implementing Entity Certification. Include the name and signature of the Implementing Entity Coordinator and the date of signing. Also include the project/program contact name, telephone and email addre

I certify that this proposal has been prepared in accordance with the guidelines provided by the Adaptation Fund Agency, and the applicable National Development and Adaptation Plan (Indonesia) and with the approval of the Adaptation Fund Agency, commit to implement the project/program in accordance with Environmental and Social Policy and Gender Policy of the Adaptation Fund and with the understanding that the Implementing Entity will be fully responsible (legally and financially) for the implementation of this project/program.

Name & Signature Implementing Entity Coordinator Hambali	
Date: *(Sept,2, 2022)*	Tel. and email: +62 81314707650
Project Contact Person : Siti Hariati Yuwani, SP, MSc.	
Tel. And Email: kawani.hisa@gmail.com and shariatiyuwani@mitraaksi.or. Phone : +62 823-7237-9985	

[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.

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Annex 1. Endorsement Letter

MINISTRY OF ENVIRONMENT AND FORESTRY
DIRECTORATE GENERAL OF CLIMATE CHANGE
Manggala Wanabakti Building Block VII 12th Floor, Jalan Gatot Subroto – Senayan, Jakarta 10270
Phone +62 21 5730144 Fax. : +62 21 5720194
Website : http ://ditjenppi.menlhk.go.id email : tusetditppi@gmail.com;

Our Ref. : S. 282/PPI/API/PPI.0/8/2022 Jakarta, 5 August 2022
Attachments :
Subject : **Letter of endorsement**

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

Dear Board Member,

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

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

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

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

Sincerely Yours,

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

Copy to:
Kemitraan (Partnership Governance Reform in Indonesia)

Project Formulation Grant (PFG)

Submission Date: **February 7, 2023**

Adaptation Fund Project ID:
Country/ies: **Indonesia**
Title of Project/Programme: **Increasing the resilience of smallholders from climate impacts through Smart Agriculture based on Livelihood Diversification in Indonesia.**
Type of IE (NIE/MIE): **NIE**
Implementing Entity: **Kemitraan – The Partnership for Governance Reform**

Executing Entity/ies: **MITRA AKSI**

A. Project Preparation Timeframe

Start date of PFG	**1 September 2023**
Completion date of PFG	**31 August 2024**

B. Proposed Project Preparation Activities ($)

Describe the PFG activities and justifications:

List of Proposed Project Preparation Activities	Output of the PFG Activities	USD Amount
Data collection for baseline and analysis for each component	Collected data required to set up the basis for argument formulation and programme justification in the proposal	$ 13.793
Travel meetings required for data collection and consultation	Confirmation of assumptions and situation on the ground before programme document finalized	$ 12.931
Expert hiring for proposal writing	Assist Kemitraan in writing and use of collected baseline data to justify programme and enhance the proposal	$ 19.655
Focus Group Discussion with Multistakeholders	To receive feedback and input on the Goal, Objective, Outcome and Output of the proposal which to be submitted to AF, so as to ensure it is in line with the national programmes and strategies of climate change adaptation	$ 3.621
Total Project Formulation Grant		$ 50.000

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Laode M. Syarif, KEMITRAAN		February 7, 2023	Dewi Rizki	+6221-22780580	dewi.rizki@kemitraan.or.id

Gender Logframe Analysys (LFA)

Outcomen, Output and Activities	Indicators and Target	Timeline	Responsibility	Cost (USD)
Outcome-1. mainstreaming of project/program planning processes, especially from the aspect of women and vulnerable groups' participation in achieving equity in every decision-making process on the benefits and impacts of Smart Agriculture projects/programs				
Output 1.1.: Women and marginalized groups have equal opportunities in the planning process of Smart Agriculture programs	# xxx of women and marginalized groups are present and actively participate in the planning process of the Smart Agriculture program	At the time of planning the smart agriculture program	Program Manager and Team Facilitator	**10.000**
Act. 1.1.1. Smart Agriculture planning workshop in each village	# implementation of 1 smart agriculture program planning workshop in each village with the presence of at least 30% female farmers and marginal groups from the total invited participants			
Outcome-2 : mainstreaming and ensuring that women and vulnerable groups play an active role in achieving equality in every decision-making process, accessing and benefiting from smart agriculture programs				
Output-2.1. Women and vulnerable groups can get out of stereotypes, restrictions on space, injustice in the structure of society in the development process	# there is a collective consciousness and values that respect the equal rights of every individual regardless of gender social status	in every mentoring activity, training, etc	Program Manager and Team Facilitator	integrated into project activity budgets and costs
Act.2.1.1. Awareness of gender equality, equal rights and obligations of each individual to life and resources for survival.	# gender-just social order, which respects the human rights of individuals and groups in society	in every mentoring activity, training, etc		
Output-2.2. Women and vulnerable groups have the same space and opportunities in Control, Participation, Awareness, Access, and Welfare of smart agriculture program investments	# xxx women and vulnerable groups who are active and benefit from smart agriculture projects	in every mentoring activity, training, etc	Program Manager and Team Facilitator	integrated into project activity budgets and costs
Act.2.2.1. Facilitating women and vulnerable groups in training leadership's	# There are at least 5 to 10 women and vulnerable groups occupying key positions in farmer groups or in community organizations.	in cadre training activities, mapping training, etc	Team Facilitator Program	integrated into project activity budgets and costs
Act.2.2.2. Facilitating women and vulnerable groups in smart agriculture cultivation activities	# at least 80% of women and vulnerable groups who are active and make decisions in every smart agriculture assistance activity	in every program activities	Program Manager and Team Facilitator	integrated into project activity budgets and costs
Act.2.2.3. Facilitating women and vulnerable groups in developing diversified livelihoods through optimizing the potential of local resource	# There are at least 2 or 3 new sources of livelihood for women and vulnerable groups to reduce climate impacts	2nd year program	Program Manager and Team Facilitator	integrated into project activity budgets and costs
Act.2.2.4. Increasing the capacity of women and vulnerable groups in entrepreneurship	# At least at the end of the project there will be 20 women and vulnerable groups who have food processing products and NTPF businesses.			
Act.2.2.5. Facilitating women and vulnerable groups in monitoring and evaluating program impacts, especially in reducing the risk of climate impacts	# there are representatives of 10 women and vulnerable groups in each monitoring and evaluation of project impacts in each location	quarterly, midterm and final project	Program Manager and Team Facilitator	integrated into project activity budgets and costs
Output-2.3. Women and vulnerable groups have the confidence to contribute to the management of natural resources, especially the agricultural sector so that they are resilient to climate impacts	# build confidence to appear as a facilitator, resource person in the community	sharing program learning	Team Facilitator	N/A
Act.2.3.1. Providing space and opportunities for women and vulnerable groups as facilitators, resource persons in learning sharing activities	# at the end of the project there are at least 5 to 10 people from women and marginal groups who can become facilitators, resource persons for smart agriculture in the community	during the project and after the project ends	Team Facilitator	N/A

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Social and Environmental Screening Template

The template prepared by EI (Mitra Aksi Foundation) is a Social and Environmental Screening Report as an attachment to the Adaptation Fund Project Proposal Preparation Document.

Project Information

Project/Programme Category	Agriculture
Country/ies	Indonesia
Title of Project/Programme	Increasing the resilience of smallholders from climate impacts through Smart Agriculture and Livelihood Diversification models in Indonesia.
Project Number	N/A
Type of Implementing Entity	Non Goverment Organization
Implementing Entity	Mitra Aksi Foundation
Executing Entity/ies	Partnership, Indonesia
Amount of Financing Requested	

Part A. : Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the Project mainstreams the human-rights based approach ?
Project fully supports the Adaptation Fund's commitment to a human rights-based approach, and supports universal respect for, and observance of, human rights and fundamental freedoms for all, particularly in this project the rights of smallholders and marginalized groups living around forests in Indonesia. The importance of a human rights-based approach in this project, because smallholders and marginalized groups are often neglected in their basic social rights in the development process, especially in the land-based agricultural sector which is very vulnerable to climate impacts. In many cases of natural resource management, the right to access and equality of smallholders and marginalized groups does not receive attention from policy makers. Project will increase the capacity of smallholders and marginalized groups to strengthen resilience to climate impacts. Smart Agriculture which are integrated with community-based forest management and restoration of degraded land in agroforestry so that they can be managed productively and get added value for improving the welfare of smallholders and marginal groups around the forest are the focus of this project.
Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment ?
Project will emphasize the principles of gender equality and women's empowerment. It is important to do this through affirmative action because so far gender equality, especially with regard to women's rights to land and natural resources, is limited by the social and cultural division of roles, and is legitimized by gender biased interpretations of religious teachings. At the policy level, the shift from a customary tenure system to a formalized market-based private ownership system, which resulted in the privatization of natural resources (land and forests) further marginalized the role of women. Through this project, gender equality and women's empowerment are carried out through a special approach, starting from the planning, implementation and monitoring evaluation processes. The project will ensure that women participate in the decision-making process, have equal access and benefits from project investments, and have the ability to exercise control over natural resource management at the family and community levels. Development of livelihood diversification based on local resource potential, such as: honey bee cultivation, freshwater fish cultivation, various types of food ingredients into processed products (cakes, chips, etc.), handicrafts and the development of natural agrotourism potential through the principle of gender equality, including increasing agro-entrepreneurship capacity for women.
Briefly describe in the space below how the Project mainstreams environmental sustainability
Project objective is to strengthen smallholders and vulnerable groups in developing smart agriculture to reduce climate risk, and protect ecosystem services from deforestation and degradation. The main focus of this project will be; (i) increasing the capacity of smallholders and vulnerable groups in reducing climate risk through Smart Agriculture and diversification of livelihoods based on local natural resource potential; and (ii) restore degraded land to be managed by the community in strengthening food security and ecosystem services from climate impacts

QUESTION 3: What is the level of significance of the potential social and environmental risks?
Note: Respond to Questions 4 and 5 below before proceeding to Question 6

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any "Yes" responses). If no risks have been identified in Attachment 1 then note "No Risks Identified" and skip to Question 4 and Select "Low Risk".Questions 5 and 6 not required for Low Risk Projects		Note: Respond to Questions 4 and 5 below before proceeding to Question 6		QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
Risk Description	Impact and	Significance (Low,Modera	Comment	Description of assessment and management

	Probability (1-5)	t, and High)		measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks
Risk-1 : Land ownership of residents around the forest, including smallholders, generally do not have land rights certificates.	I = 2 P = 2	Moderat	Land ownership status is generally carried out with recognition based on an agreement between land owners from generation to generation. Even if it has legality over land ownership status, in general it is still in the form of girik or sporadic issued by the village government. This condition allows for land boundary conflicts when data collection is carried out based on ownership and land area. However, through consultation and validation of the legality of ownership status based on its area and boundaries by involving traditional leaders, possible conflicts can be resolved.	It is necessary to collect data on ownership and land area owned by smallholders. To reduce the risk of land ownership conflicts, it is necessary to conduct consultations, ground checks and verifications by involving traditional leaders, between land owners, village governments and relevant policy makers; such as ATR/BPN, KPH and National Park Management
Risk 2. Tenure Conflict	I = 4 P = 4	High	Several villages that will become project locations are directly adjacent to the buffer zone of national parks, production and protection forests, as well as private plantations), which can trigger conflicts over access to land management between communities (smallholders). This is compounded by the absence of good data on land ownership status that has legal legality in the community	Tenure conflict resolution mediation needs to be done. The Social Forestry scheme with the Conservation/ Community Forest Partnership model is a more equitable management option for areas that have overlapping management and are claimed by communities, companies or national parks
Risk 3: Impact of diversification of community livelihoods and community-based businesses around the forest	I = 2 P = 2	Moderate	Diversification of community livelihoods and forest-based community-based enterprises (eg agrotourism and natural resource-based, NTFPs, etc.) can affect species and habitats if not managed and implemented properly. Likewise, the introduction of climate-adaptive plant species and replanting degraded land with agroforestry plant species whose seeds are imported from outside the area, if not selected through a good quarantine system, will affect local plant species.	Diversification of community livelihoods and community-based businesses around the forest (eg agrotourism and natural resource-based, NTFP, etc.) needs to be regulated and agreed upon through the PFIC mechanism. Strict seed/seedling selection needs to be carried out when bringing in seeds/seedlings from outside for the application of Smart Agriculture and agroforestry practices
Risk 4. Resistance from local elites and farmers in the application of GAP and CRA	I = 2 P = 2	Moderate	The application of the principles of Good Agriculture Practice (GAP) and Smart Agriculture may have an unwanted impact on local elites who have large capital to expand new land clearing in forest areas. In addition, the application of GAP will significantly reduce the use of chemical inputs (fertilizers and pesticides). This can create resistance for local elites who have capital and who have fertilizer and pesticide businesses for smallholders	It is necessary to convince smallholders and local elites of the long-term socio-economic and ecological benefits of reducing climate impacts through the implementation of GAP and Smart Agriculture Demonstrations of models to change the paradigm of smallholders and local elites on the benefits and advantages of GAP / Smart Agriculture are important to do.
Risk 5. local business actors (touke, collectors), resistance.	I = 2 P = 2	Moderate	Impact of increasing the added value of smallholders' agricultural products supported by joint business unit institutions (Koperasi), in order to have a better bargaining position in the business chain in inclusive markets will cause resistance in local business actors (touke, collectors), because they no longer have monopoly rights. on products and prices at the level of smallholders	It is necessary to approach the collectors, toukes and capital owners in the village. The process of building a business chain of agricultural products that is mutually beneficial and can cooperate with smallholders will be carried out. For example, through transparent cooperation contracts in determining the basic price of smallholders' agricultural products.
Risk 6. Restricted access for women and marginalized groups	I = 2 P = 2	Moderate	Local elites and/or influential groups at the local level may have more control over decision-making at the local level and will try to exclude women and marginalized groups. As a result they may not benefit from the initiatives of the project activities	Project implementation ensures that women and vulnerable groups in local communities are involved in the consultation process, decision-making in every project activity, including in monitoring and evaluation. An affirmative action approach will be taken to ensure at least 30% representation of women and vulnerable groups participates in every decision making and in every project activity.
Risk-7 : The implications of the proposed Social Forestry scheme will restrict some communities, including smallholders, from entering forest areas	I = 3 P= 2	Moderate	forest area that has obtained a social forestry permit, can no longer be freely exploited. This will lead to reduced sources of income for people who have been taking wood (illegal logging) or changing the function of the forest as an agricultural area.	To replace sources of income from illegal longing activities and forest conversion for agricultural land expansion, the development of ecosystem services and potential non-timber forest products (NTFP) will be a solution to diversify the livelihoods of communities who have been dependent on forests.
Risk 8. Natural disasters and climate change can affect the implementation and outcomes of project initiatives	I = 3 P= 2	Moderate	Extreme climate change may be encountered during the project, and this will certainly affect the project plans and work schedules in the community.	If an unavoidable disaster and extreme climate event occurs, and the impact will disrupt the project's outputs and outcomes, then with the community's approval, the work plan will be rescheduled.
Risk 9: Indigenous people's cultural identity or traditional knowledge may be	I = 2 P =2	Moderate	The entry of new knowledge through GAP and Smart Agriculture practices, allows shifting conventional knowledge in land-	Project implementers will identify local wisdom and practices that support GAP/Smart Agriculture Local wisdom

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inadvertently impaired during project activities.			based agricultural activities.	will be harmonized with modern knowledge based on scientific data, so that it is expected to produce new knowledge that is more adaptive to climate impacts at the smallholder level.
Risk 10: Involvement of children and women at high risk in agricultural activities.	I = 3 P = 2	Moderate staking	The activities of the land-based agricultural sector may inadvertently involve minors and pregnant women at high risk of doing this work. Of course, this must be reminded through awareness that this action is a violation of international labor standards.	The project implementer will provide awareness to each individual and smallholder family, not to employ underage children and high-risk pregnant women when carrying out agricultural activities. Project implementers will socialize international standards and Indonesian laws and their sanctions, if they employ minors and pregnant women are at high risk of doing work that will endanger their lives.
Risk 11: Impact of the Covid-19 pandemic and endemic diseases (malaria, DHF, etc.).	I = 3 P= 2	Moderate	The COVID19 pandemic with its new variant that has not ended, as well as the potential for outbreaks of other pandemic diseases can cause difficulties when interacting with the public, especially in activities that require face-to-face meetings and field practice	Implementation of health protocols in each project activity will be required. Standard 3: Community Health, Safety and Working Conditions will be a guide in reducing the risk of exposure to endemic diseases; such as Covid-19, malaria, dengue, etc.

QUESTION 4: What is the overall Project risk categorization?

Select one (see SESP for guidance)		Comments
Low risk		If mitigation measures and International standards and laws guide and are applied appropriately and consistently throughout the project, the project will have a low risk of short to long term impact.
Moderate risk	V	
High risk		

QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?

Check all that apply		Comments
Principle 1 : compliance with the law	Moderate	This project does not violate applicable international laws and standards related to this project.
Principle 2: Human Rights	Moderate	The project has no impact on human rights
Principle 3: Gender Equality and Women's Empowerment	Moderate	The project will build gender equality and equity, including affirmative action for women's empowerment
Principle 4 : Environmental Sustainability	Moderate	This project does not damage the environment and causes pollution impacts and threats to biodiversity
Principle 5 : core labour rights	Low risk	This project does not violate workers' rights, does not employ minors and high-risk pregnant women
Standard 1 : Access and Equity	Moderate	Projects provide access and equity for smallholders, women and vulnerable groups
Standard 2 : Biodiversity Conservation and Natural Resource Management	Moderate	This project will have overall benefits on the sustainability of natural resources and protection of vulnerable ecosystem services from extractive land use practices and the impact of increasing deforestation and land degradation. Through the GAP and CRA approaches, it will strengthen the protection of natural resources and ecosystem services in reducing climate risk and its variability for communities, smallholders, and vulnerable groups around the forest.
Standard 3 : Climate Change Mitigation and Adaptation	Moderate	This project will improve the livelihood resilience of smallholders, women and vulnerable groups from climate impacts. The Smart Agriculture practice, which is integrated with livelihood diversification that has added value in the inclusive market business chain, will strengthen them in dealing with climate impacts.
Standard 4 : Community Health, Safety and Working Conditions	Moderate	The project does not introduce the use of chemical inputs and hazardous and toxic materials that can threaten Community Health, Safety and Working Conditions
Standard 5 :Cultural Heritage	Moderate	The project will avoid damage to cultural sites and archaeological objects that are protected by law
Standard 6 : Protection of HCV and Natural Habitats	Moderate	Project will protect HCV and Natural Habitats
Standard 7 : Indigenous Peoples	Moderate	The rights of indigenous peoples are protected and respected. The principle of FPIC will be carried out at the time of project planning
Standard 8 :Pollution Prevention and Resource Efficiency	Low risk	the project has no pollution impact, and ineffective (wasteful) use of natural resources
Standard 9: :Displacement and Resettlement	Low risk	the project does not involve forced resettlement and resettlement of communities

Final Sign Off

Signature & Name	Date	Description
QA Assessor 1 : Dr.Made Deviani Duaja	May,28,2022	Expert in strategic environmental studies, has 20 years of experience, Senior Lecturer at Jambi University. Responsible for risk identification in Principle 1: compliance with the law' and Principle 2: Human Rights
QA Assessor 2 :	May,28,2022	Expert in the field of climate change, with more than 10 years of experience, Senior responsible for screening on Principle 4: Environmental Sustainability; Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management; and Standard 3: Climate Change Mitigation and Adaptation

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 Rose Andhina, SSi.		
QA Assessor 3 :  Siti Hariati Yuwani,MSc	May,28,2022	Expert in the field of resource management, gender empowerment and work safety standards with more than 6 years of experience. Responsible for screening on Principle 3: Gender Equality and Women's Empowerment; Principle 5: core labor rights; Standard 1: Access and Equity; and Standard 2: Biodiversity Conservation and Natural Resource Management
QA Assessor 4:  Suparlan Siswo Sudarmo.S.Sos	May,28,2022	Suparlan Siswo Sudarmo, has expertise in organic agriculture with more than 25 years of experience. In this screening assessment, the task is to identify risks related to Principle 4: Environmental Sustainability, Standard 2: Biodiversity Conservation and Natural Resource Management; and Standard 3: Climate Change Mitigation and Adaptation
PAC Chair  Prof.DR.Johanes Simatupang	May,28,2022	Has more than 25 years of experience in leading social and environmental studies, working as a lecturer in undergraduate and doctoral programs at the Faculty of Economics, Jambi University

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