

## ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Small-sized Project Concept

Country/Region: Indonesia/Asia & Pacific

Project Title: Collaboration for the Conservation of Cimandiri Watershed Landscapes through the Potential of Silvopasture and

Community Agroforestry

Thematic Focal Area: Rural development

Implementing Entity: Kemitraan (Partnership for Governance Reform)

Executing Entities: Consortium for Sukabumi Climate Adaptation, Sajogyo Institute, Absolute Indonesia, Forest Watch Indonesia,

and IFM Fund

AF Project ID: AF00000305

IE Project ID: Requested Financing from Adaptation Fund (US Dollars): 960,225

Reviewer and contact person: Micol Ullmann Auger Co-reviewer(s): Ulrich Apel

**IE Contact Person:** 

#### Technical Summary

The project "Collaboration for the Conservation of Cimandiri Watershed Landscapes through the Potential of Silvopasture and Community Agroforestry" aims to improve the adaptation of farming communities that depend on forest areas as water catchments, vulnerable to the impacts of climate change and natural disasters, through the management of the Cimandiri Asri Watershed (Sustainable Cimandiri Management). This will be done through the three components below:

Component 1: Increasing the adaptive capacity of the community for economic resilience (USD 210,000);

Component 2: Collective Adaptation Actions related to ecosystem restoration (USD 310,925);

Component 3: Policy advocacy (USD 280,000).

Requested financing overview:

Project/Programme Execution Cost: USD 84,075 Total Project/Programme Cost: USD 885,000

Implementing Fee: USD 75,225 Financing Requested: USD 960,225

	The proposal includes a request for a project formulation grant of USD 50,000.
	The initial technical review raises some issues, such as the need for more details regarding the consultative process and vulnerable groups, potential overlap or complementarity with other initiatives, and financial sustainability, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.
Date:	August 19, 2022

Review Criteria	Questions	Comments	Response
	Is the country party to the Kyoto Protocol?	Yes.	
Country Eligibility	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	Yes.  Indonesia is particularly vulnerable to the adverse effects of climate change, with increased variability in rainfall and rising temperatures causing floods, landslides, and droughts which threaten lives, agricultural productivity, and food security.	
	Has the designated government authority for the Adaptation Fund endorsed the project/programme?	Yes. As per the Endorsement letter dated August 5, 2022.	
Project Eligibility	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	No. The proposal is 57 pages, including its annexes.  CAR1: Please reduce proposal length to no more than 50 pages, including the annexes.	CAR1 The document already reduces to 48 pages including it's annexes
	Does the project / programme support concrete adaptation actions	Yes.	

to assist the country in addressing	The proposed concept provides a	
adaptive capacity to the adverse	clear rationale for the proposed	
effects of climate change and build in	activities, which are focused on	
climate resilience?	improving the adaptive capacities	
	and economic resilience of	
	vulnerable farming communities,	
	women's and youth groups, through	
	climate-smart agricultural and	
	landscape management and	
	ecosystem restoration, as well as	
	through policy advocacy to support	
	the development of Regional Action	
	Plans related to Climate Change	
	Adaptation (RAD-API) and the	
	Follow-Up Plan (RTL) document for	
	replication. Additionally, the project	
	plans for the establishment of a	
	collaborative Watershed-based and	
	community-based protection system	
	for living space and livelihoods, with	
	outputs to achieve these outcomes,	
	including the development of a cross-	
	sector collaborative forum	
	(Watershed Forum/Committee) and	
	Information system for knowledge	
	sharing.	
	, and the second	
	The background and context section	
	illustrates how the planned project	
	activities can respond to the likely	
	climate scenarios.	
1 Describe project / programmes a reside		CD1 9 CD2 Added in Dest II
4. Does the project / programme provide	Yes, but more information is needed.	CR1 & CR3 Added in Part II,
economic, social and environmental	needed.	Section B, Page 26, Paragraph 61
benefits, particularly to vulnerable		OI
communities, including gender	The project will be implemented in 15	
considerations, while avoiding or	villages, five sub-districts, Sukabumi	

mitigating negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Fund? regency, and the West Java province. The targets of this program are groups of vulnerable farmers and women who depend on the land and/or forest areas for their livelihoods. Population sizes are included on page 21.

**CR2** added in Part II, Section B, Pages 26-27, Paragraph 62-63

**Priority** groups include local communities most vulnerable to climate change; forest farmers' groups who have carried out activities or implemented agroforestry systems and horticultural farmers who have implemented conventional farming systems, women's and youth groups, and marginalized groups, including people with disabilities and low social class. Indirect beneficiaries of the planned ecological restoration are communities in the upstream and middle of the Cimandiri Watershed.

The outlines proposal the environmental, economic and social benefits of the project. With regard to the proposal social benefits, highlights the need to include vulnerable communities, including gender considerations, and inequality in access and participation of these groups is flagged as a potential risk; however, there is no mention of consultations with vulnerable groups. women's groups or with groups with

disabilities, nor are quantified targets included in the project components.

Also, the proposal commits to using the GEDSI approach in order to benefit at least 50% of women's groups in each target village, but no data is provided on the number of women's groups present.

CR1: Please provide quantified data regarding the number of women's and youth groups, people with disabilities, and other marginalized community members in order to measure the expected impact and benefits targeted specifically to these priority groups.

CR2: Please provide more details regarding the "legal guarantees for business management carried out in forest areas" mentioned on page 31, as well as the "grants for financial assistance to farmers groups, including through revolving fund schemes", as mentioned on page 24 and how they will be applied in the project activities.

**CR3:** Please quantify estimated benefits whenever possible.

Please also see **CAR3** under the consultations process.

	CAR3: Please carry out stakeholder	
	mapping and identify and involve all	
	relevant stakeholders of the project in	
	a consultations process, with special	
	attention to vulnerable, marginalized,	
	and indigenous groups in the target	
	area, where relevant.	
5. Is the project / programme cost	Yes, but more information is	CR4 Added in Part II Section C
effective?	needed.	page 28, paragraph 69
	The proposal highlights that the	1 29 27 29 27
	project's planned ecological	
	restoration activities will reduce the	
	incidence of flooding and landslides,	
	preventing economic losses and	
	saving lives. The increased capacity	
	of communities in sustainable	
	landscape management and climate-	
	smart agricultural practices will	
	improve resilience to climate shocks	
	and strengthen local economies, the	
	information systems and	
	collaboration frameworks will enable	
	cross-sector management and	
	communication, and the project's	
	alignment with national and sub-	
	0	
	national strategies and climate	
	change adaptation targets will secure	
	institutional support including	
	program sustainability sourced from	
	local, provincial and central	
	government program budgets.	
	I law and a stante and a stante and a	
	However, a clarification is needed	
	regarding the mentioned sourcing of	
	government program budgets.	

	CR4: Please provide more details regarding how the project will receive funds from local, provincial, and central government program budgets and whether this will occur during the life of the project and/or after project completion.	ODE Added in Part II. Ocation D
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?	The project is consistent with national and sub-national sustainable development strategies, plans, and other relevant instruments including: Indonesia's Updated NDC which provides direction on the adaptation element with 18 key programs to increase economic, social, ecosystem and landscape resilience; Ditjen PPI's Strategic Plan particularly within the Disaster and Climate Change Resilience Program encourages provincial and regency governments to prioritize the preparation of vulnerability data, local adaptation strategy, and extension of climate village; as well as other relevant regulations.  CR5: Please clarify how the project is aligned with and contributes to implementing Indonesia's National Adaptation Plan (RAN-API).	CR5 Added in Part II, Section D, page 28, Parapraph 70, Number 7
7. Does the project / programme meet the relevant national technical standards, where applicable, in	Yes.  The planned conservation partnership between the communities	

	compliance with the Environmental and Social Policy of the Fund?	and the Mount Halimun Salak National Park must comply with the Regulation of the Director General of Natural Resources and Ecosystem Conservation  Number P.6/KSDAE/SET/Kum.1/6/2018  concerning Technical Guidelines for Conservation Partnerships in Nature Reserves and Conservation Areas.	
8.	. Is there duplication of project / programme with other funding sources?	Unclear.  The proposal mentions several ongoing initiatives on page 20-21 being carried out by Absolute Indonesia and its partners to empower communities in the northern area of the Cimandiri watershed, especially those within the Mount Halimun Salak National Park (TNGHS) area to carry out restoration, increase capacity and carry out maintenance activities and community business development.  The village-level information portal for knowledge sharing contemplated under component 3 can serve as an effective coordination mechanism to exchange information between development partners, avoid overlap, and support synergies between relevant initiatives.  CAR2: Please provide a list of all relevant potentially overlapping	CAR2 Added in Part II, Section F, page 29, Paragraph 73  CR6 added in Part I, Section 1A-6, Page 16, Paragraph 44

projects / programmes, including those carried out through the Cooperation Agreement between Absolute Indonesia and the Mount Halimun Salak National Park Office Number: PKS.2141/T.14/TU/KUM.3/12/2020 001/ABS/ PKSand Number: TNGHS/XII/2020 concerning Cooperation in Strengthening the Functions of Mount Halimun Salak National Park through Community Empowerment Activities (2020 2025), coordination with SIBERALAM (Natural Resources Information System) for the information portal, and other Adaptation Fund watershed restoration projects, wherever relevant. CR6: Please outline any lessons learned from past or ongoing initiatives, including from previous capacity building and agroforestry activities with the 14 farmers groups mentioned in the proposal and explain how these would be integrated in the design of the proposal. CR7 & CR9 Revised in Part II. 9. Does the project / programme have a Yes. Section G, Page 29, Paragraph learning and knowledge management component to capture and feedback 75-78 Component includes the lessons? development of knowledge CR8 Added in Part II, Section F, management tools including modules dedicated climate change Page 29, Paragraph 74 to adaptation data and economic

resilience made available to the public, and a village-level information portal for knowledge sharing. This system will also support the provision of data for the SIBERALAM (Natural Resources Information System) which is currently under development by the Regional Secretariat of Sukabumi Regency, to assist stakeholders in program development and replication.

It would be useful to understand how the information modules will be disseminated. Will they be featured on the information portal or in training workshops?

CR7: Please provide more details on how "strengthening synergies for farmer groups and the Government, institutional strengthening of the role of Framer groups in coordinating agricultural land management, and on business planning for Farmer's groups and the community by adopting creative ideas for management marketing" and mentioned in Section G Knowledge Management on page 32 will be undertaken and disseminated.

**CR8:** Please clarify whether the provision of data to the Siberalam Natural Resources Information System is part of the project activities,

	or whether the Siberalam Natural Resources Information System will simply be hosted/linked to the information portal/database planned under component 3.  CR9: Please clarify how the planned information modules will be disseminated. Will they be featured on the information portal or in training workshops?	
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?	Partially.  An initial consultation and series of discussions have been carried out with regional and local governments, the Head of the Gunung Halimun National Park Office, and farmers groups, but there is no mention of consultations with vulnerable groups, including groups with disabilities and marginalized groups. Additionally, no attendance lists or summaries of feedback for already consulted groups are included.  Please note that stakeholder mapping and a comprehensive, gender-responsive consultative process, involving all relevant stakeholders of the project/programme, including vulnerable groups and accounting for	,

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		gender considerations must be	
		carried out at concept stage.	
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		CAR3: Please carry out stakeholder	
		mapping and identify and involve all	
		relevant stakeholders of the project in	
		a consultations process, with special	
		attention to vulnerable, marginalized,	
		and indigenous groups in the target	
		area, where relevant.	
		CAR4: Please include a report	
		documenting the consultative	
		•	
		process to include a) the gender-	
		disaggregated list of stakeholders	
		already consulted (names, titles role	
		ascription, date of consultation), b) a	
		description of the consultation	
		techniques (tailored specifically per	
		target group), c) the key consultation	
		findings (in particular suggestions	
		and concerns raised), with special	
		attention to vulnerable, marginalized,	
		and indigenous groups in the target	
		area, where relevant.	
44.1	In the manuscript flow of the CCC.	•	
	Is the requested financing justified on	Yes.	
t	the basis of full cost of adaptation		
r	reasoning?	As outlined on page 31.	
	Is the project / program aligned with	Yes.	
	AF's results framework?		
F	AL 2 LESUITS HATHEMOLK!		
		The proposed project would	
		contribute to the Fund's outcomes 1,	
		2, 3, 5, and 7.	
		The proposal does not yet include a	
		The proposal does not yet include a	
		results framework or specify	

project/pro	framework.  Please note proposal management with the hele sustainability provincial a program but the proposal activities car forest farme including chapter of the proposal agroforestry limitations.	al references a series of ried out together with 14 ers groups on page 21, hallenges carrying out techniques "due to in providing seeds, e budget for a series of	CR10 & CR 11 revised in Part II, Section J, Pages 35-36, Paragraph 88-92
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	<b>CR10:</b> Please elaborate how this issue will be addressed in the project and after completion to ensure continued adaptive capacity of the farmer communities.	
	<b>CR11:</b> Please also include more details on how the project will ensure social sustainability and inclusion.	
	Please also refer to <b>CR4</b> and <b>CR7</b> to clarify how the project will ensure financial sustainability of the actions	
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?	Partially.  As outlined in Section K, on page 35 and in the checklist of environmental and social principles.  However, the proposal does not state the category in which the screening process has classified the project/programme. (Category A, B or C).  CR12: Please state the category in which the screening process has classified the project/programme. (Category A, B or C). Please also ensure that these categories reflect AF ESP and not the IE policy.	CR12 Revised in Part II Section K, pages 37-39, in the Table 4. Environmental and Social Impact and Risk CAR5 alrady revised

		CAR5: Please note that section K has been included twice, on pages 35 and again on page 52. Please amend accordingly.	
Resource Availability	Is the requested project / programme funding within the cap of the country?	Yes.	
	Is the Implementing Entity     Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	Yes.	
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	Yes.	
Eligibility of IE	Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	Yes. Kemitraan is an accredited National Implementing Entity.	
	Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
Implementation	2. Are there measures for financial and project/programme risk management?	n/a at concept stage	
Arrangements	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	
	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 sexdisaggregated 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

#### Annex 5 to OPG Amended in October 2017



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#### 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

### Annex 5 to OPG Amended in October 2017

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# PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

#### PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category: Small Sized Project/Programme

Country/ies : Indonesia

Title of Project/Programme : Collaboration for the Conservation of Cimandiri Watershed

Landscapes through the Potential of Silvopasture and Community Agroforestry

Type of Implementing Entity: National Implementing Entity

Implementing Entity : KEMITRAAN

Kemitraan untuk Pembaruan Tata Pemerintahan

Executing Entity/ies : Consortium for Sukabumi Climate Adapation

Sajogyo Institute
 Absolute Indonesia
 Forest Watch Indonesia

4. IFM Fund

Amount of Financing Requested: \$ 960,225 (in U.S Dollars Equivalent)

#### 1.A. Project / Programme Background and Context:

#### 1) Indonesia's Climate Change

1. In Indonesia, there has been an increase in the average annual temperature around 0.3oC, a decrease in rainfall by 2% - 3%, changes in rainfall patterns, and changes in the rainy season, where the rainy season increases in the south of Indonesia and decreases in the north (Hulme and Sheard, 2003). 1999; Boer and Faqih, 2004). Annual rainfall in some parts of Indonesia has fallen and is projected to continue to decline during the dry season and can cause prolonged drought, while in other areas, it is projected that rainfall will increase, but the incidence of rain will decrease so that it can cause high rainfall intensity and can cause fleeding. (Case et al., 2007). The region of Indonesia is also affected by the El Nino Southern Oscillation (ENSO) cycle (ibid), which is projected to occur more frequently (Tsonis et al., 2005).

Shifts in rainfall patterns due to rising temperatures cause changes in the frequency of floods or droughts, water availability, and seasonal water discharge fluctuations (Kovats et al., 2014; Vormoor et al., 2015; Bates et al., 2017). These changes adversely affect the agricultural, energy, transport, and social sectors, which depend on water resources. According to research notes in the Journal of Geophysical Research, Atmospheres (Russo S, Dosio A, et al.)<sub>T</sub> Indonesia will experience more than three times the extreme heatwave conditions between 2020 and 2052. Then between 2068 and 2100, an intense heat wave will occur every two vears.

- 2. Climate change that triggers droughts, floods, and landslides is also affected by decreased environmental carrying capacity due to increased pressure on land (Rejekiningrum, 2014). So far, the national development pattern shows changes in land use that result in the loss of land/forest cover, thereby reducing the carrying capacity of the environment, which in turn increases the occurrence of floods and droughts, accompanied by follow-up disasters such as landslides, and various health problems (Pawitan, 2014).
- 3. The climate change phenomenon has caused crop failure, crop failure, and even puso (Saefudin et al.). Based on data obtained from the results of monitoring conducted by the Ministry of Agriculture of the Republic of Indonesia during the period from 2000 to 2009, drought and flooding tended to increase, with the average number of agricultural land affected by drought covering an area of 303,641 hectares with puso land reaching 58,489 hectares or equivalent to 767,589 tons of dry grain. Mill (GKG). Meanwhile, the flood-affected area was 271,381 hectares with 79,846 hectares of puso, equivalent to 774,106 tons of GKG. Then, between 2000 and 2009, there were an average of 332 significant floods per year in Indonesia, which caused an average of 271,381 hectares of rice fields and other agricultural lands to be inundated.

The climate-related natural disasters that hit Indonesia have caused an average annual loss of US\$45 million between 2000-2019 (Ellyvon Pranita et al.) and are likely to grow substantially. Economists predict that in the scenario of too high emissions and climate change, Indonesia's GDP growth could reach a peak of 8,800 US Dellars per capita in 2100. This is contrary to the scenario of no climate change, Indonesia's per capita income will increase to 38,500 US Dellars in 2100. Various experts also state that climate change is expected to increase the economic damage caused by river flooding by up to 91 percent by 2030.

The results of the risk assessment conducted by BNPB classified Indonesia's hydrometeorological disasters into floods, droughts, landslides, and extreme weather. Areas at high risk of flooding are the northern part of the island of Java, especially the provinces of West Java, Central Java, and East Java. From 2000 to 2030, an average rise in sea level will increase the risk of coastal flooding or tidal flooding by 19-37 percent

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#### 2) Watershed Based Landscape Management

4. Watersheds are described as hydrologic units that are living quarters or platforms of the environmental-based economic activities (Common and Stagl,2005; Miller and Spoolman,2015, Reddy et al.,2017). The approach applied in the concept of watersheds emphasizes the place-based conservation mechanisms to achieve certain socio-economic and ecological objectives (Dixon,1992; Abell et al., 2007), including the mechanism that ensures the ecological functions and the biodiversity representation at lowland areas.

The study of Yi et al. (2018) argues that by the continuing decline of biodiversity services and local and global ecosystems, it is important to understand how biodiversity and various ecosystem services interact with each other and how land-use transformation—can change the interactions over time. In the context of watersheds, protecting ecosystems is also a way to secure strategic water source areas. The areas can be seen as a pool of shared resources, which may be best controlled through joint management between public and private stakeholders (Carlsson and Berkes, 2005). Unlocking the full potential of strategic water resources ultimately requires the management of upland areas, as well as the severely affected lowland (downstream) areas (Pittock et al., 2015).

The declining capacity of soil absorption is defined as one of the disrupting factors—of—the environmental carrying capacity, both in the aspect of upstream-downstream watershed interaction and sustainability (Bellfieldet al., 2015, Euler et al., 2018, Kindu et al., 2018). The low-level of formal protection in strategic water resource areas is very concerning that it is very important for water supply. Challenges on the protected water source areas and its impacts indicate the value generated for the community both in its surroundings and environment as a whole (Cumming, 2016; Watson et al., 2014).

According to the description, it can be concluded that the term of environmental-based watersheds illustrates a place, a platform, or a hydrological cycle space occupied by living (including human beings) and non-living creatures which are correlated and mutually influenced, either among the creatures themselves or between the creatures and their surroundings, which is not limited by the political or government administrative constraints.<sup>1</sup>

- <u>5.</u> The concept of watershed management was first introduced in 2000 BC<sup>2</sup>. Watershed management is a continuous process, along with the management of natural resources and human life dynamic<sup>3</sup>, and problems in managing watersheds seem endless<sup>4</sup>. Along with population growth, various watershed problems arise because of changing needs of human life. Consequently, watershed management, which is concerned with soil and water resources, also integrates the dynamic development of social, economic, and environmental issues.<sup>5</sup>
- 6. The declining capacity of soil absorption is defined as one of the disrupting factors of the environmental carrying capacity, both in the aspect of upstream-downstream watershed interaction and sustainability (Bellfieldet al., 2015, Euler et al., 2018, Kindu et al., 2018). Challenges on the protected water source areas and its impacts indicate the value generated for the community both in its surroundings and environment as a whole (Cumming, 2016; Watson et al., 2014). Sustainable management of water resources is a serious challenge.

<sup>&</sup>lt;sup>1</sup> The Indonesian Journal of Development PlanningVolume III No. 2 – August 2019

<sup>&</sup>lt;sup>2</sup> Wang, G.; Mang, S.; Liu, S.; Zhang, Z.; Wang, L.; Innes, J.L. Integrated watershed management: Evolution, development and emerging trends. J. For. Res. 2016, 27, 967–994

<sup>&</sup>lt;sup>3</sup> Sheng, T.C. Watershed management field manual. Watershed survey and planning. In FAO Conservation Guide; Food and Agriculture Organization of The United Nations: Rome, Italy, 1990.

<sup>&</sup>lt;sup>4</sup> Paimin; Pramono, I.B.; Purwanto; Indrawati, D.R. Sistem Perencanaan Pengelolaan Daerah Aliran Sungai; Pusat Penelitian dan Pengembangan Konservasi dan Rehabilitasi: Bogor, Indonesia, 2012.

<sup>&</sup>lt;sup>5</sup> Sheng, T.C. Watershed management field manual. Watershed survey and planning. In FAO Conservation Guide; Food and Agriculture Organization of The United Nations: Rome, Italy, 1990.

especially in areas that have a great potential to experience hydrological disasters and increase the population's water needs (Hassan et al. 2017).

- 7. The management of water resources can not be separated from the watersheds management unit as they are part of the hydrological cycle. Watersheds, a component of the water resources landscape, have been damaged followed by the degradation of environmental quality. Indicators which can be addressed as a result of watershed destruction in Indonesia include (1) an increasing rate of erosion and sedimentation due to the land use transformation from forestry to agriculture, plantations, and settlements at upstreams; (2) the conspicuous fluctuation of river flow in the rainy season and dry season, and (3) the declining quality and quantity of surface water and groundwater. Various interventions have been undertaken to manage the damages, such as policy instruments, budget allocation, and institutional innovations, however, they do not exhibit any optimum results as expected.
- 8. In Indonesia the ministerial-level government organizations are responsible for formulating a national development plan, as well as coordinating and integrating sectoral development plans, including watershed management. Government Regulation No. 37/2012 requires the Ministry of Forestry to conduct interprovincial watershed management planning, establish a watershed information center in each province, establish a watershed observer forum, and monitor and evaluate watershed performance. Based on the mandate of Law No. 17/2019, the Ministry of Public Works and Housing is responsible for developing management strategies for utilizing water resources, managing rivers, and controlling the destructive power of river water, managing irrigation and dams, swamps and lakes, and providing groundwater and raw water. Based on Law No. 23/2014 concerning regional government, provincial governments are mandated to manage watersheds in their administrative areas. In fact, in the previous version of the regional government law, Law No. 22/1999, the watershed management mandate extended to the district and municipal levels<sup>8</sup>, which is in line with the mandate according to Law No. 37/2014 concerning mechanical soil and water conservation.

The Indonesian government established four ministries regarding government institutions and delegated watershed management to the provincial and district government [Table 1]

Level of Government	Authorized Institution			
I. State Government	Ministry of Environment and Forestry (Law No. 41/1999 on Forestry and Law No. 32/2009 on Environment)	ministry of Home Affair (Law No. 23/2014 on Regional Government)	Ministry of Public Work (Law No. 17/2019 on Water Resources)	Ministry of National Development Planning (Law No. 25/2004 on National development planning system)
Directorate General (Echelon I) Directorate	Watershed Management and Protected Forest	Fostering Regional Development	Water Resources 1. Directorate of Water	Deputy for Maritime Affairs and Natural Resources

<sup>&</sup>lt;sup>6</sup> Jaringan Dokumentasi dan Informasi Hukum Kementerian Lingkungan Hidup dan Kehutanan. Available online: https://jdih.menlhk.co.id

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<sup>&</sup>lt;sup>7</sup> Jaringan Dokumentasi dan Informasi Hukum Kementerian Pekerjaan Umum dan Perumahan Rakyat. Available online: https://jdih.pu.go.id

<sup>&</sup>lt;sup>8</sup> Raharjo, S.A.S.; Purwanto; Haryanti, N. Pengelolaan daerah aliran Sungai Bribin pasca implementasi Undang-Undang Nomor 23 Tahun 2014 Tentang Pemerintah Daerah. J. Penelit. Ekosist. Dipterokarpa 2020, 6, 33–40

(Echelon II)	1. Watershed Planning, Monitoring, and Evaluation 2. Soil and Water Conservation 3. Inland Water Damage Control		Resources Management System and Strategy 2. Directorate of Rivers and Beaches 3. Directorate of Irrigation and Swamp 4. Directorate of Dams and Lakes 5. Directorate of Groundwater and Raw Water 6. Directorate of Operations and Maintenance 7. Directorate of Water Resources Engineering	Directorate of Forestry and Water Resources Conservation
Technical Implementation Unit (Echelon III)	Watershed Management and Protected Forest Institutes (34 institution for 34 priority watersheds)			
II. Local Government A. Province		1. Forest Services 2. Environment Services 3. Water Resources	River Basin Institute Provincial Planning Agency	Provincial Planning Agency
B.District/Municip ality		1. Environment Services 2. Irrigation Services		District Planning Agency

<sup>9.</sup> In -terms of terminology, watershed management is a human's attempt To regulate the interrelation between natural resources and human beings along with their activities, in order to realize preservation and the balance of ecosystems along with the increasing utilization of natural resources by humans in a sustainable way (Article 1 paragraph 2 of Indonesian Government Regulation No . 37 Year 2012 on Watershed Management).

<sup>10.</sup> Watershed management, which is part of regional development in Indonesia, is actually facing various problems such as the absence of integration among sectors, agencies, and regions. Asides from that, community participation has not been optimal yet so that the watershed sustainability is more worrisome. The most visible impact of poor watershed

management is illustrated by the condition of water resources in some areas in Indonesia (Bappenas, 2015).



Figure 1. Fact of Water Resources in Indonesia Source: Bappenas, 2015

- 11. According to the framework of Watershed Management in Indonesia issued by the Ministry of Forestry Republic of Indonesia in 2009, watershed management fundamentally is a management or optimization of rational land use for various interests and other environmentally friendly practices so that it can be assessed by ultimate indicators of quantity, quality, and continuity of river flow at watershed outlets.
- 12. The results of research conducted by Mairi et al. (2014) show that the most appropriate form of the institution to be applied in integrated watershed management was a combination of polycentric and Monocentric. It required collaborative work such as the DAS/LK-PDAS forum (Institution of Watershed Management Coordination) at Provincial level whose members are the head of each agency in the region/OPD/ Sectoral Organization of Local Officials. This institution was non-structural and directly responsible to the Governor as the policy authority. The AS/LK-PDAS Forum served as a forum for communication, consultation, and coordination among stakeholders in order to help the Governor formulate a watershed management policy across the districts. In 2013, the forum came into force as part of the government-recognized watershed management by the issuance of Minister of Forestry Regulation Permenhut P.61 / Menhut-II/ 2013 on the Watershed Management Coordination Forum. In the Renstra Document of Directorate General of Watershed Control and Protected Forest KLHK 2015-2019, 1 national-level Watershed Management Coordination Forum, 3 inter-provincial Watersheds Forum, 40 watershed forums with governor's approval, 51 Watersheds Forum with regents/majors approval, and 14 watersheds forum with initiation of Non-Governmental Organizations/NGOs have been created. Nevertheless, considering the watershed-related budgeting is still dominated by the state budget, the role of BPDAS-HL and BWS is very important to realize the implementation of watershed management. The synergy of institutions, regulation and policy is the key implementation supported by input generated from watersheds forum which its capacity as a "think tank" is very important for more independent watershed management.

Land cover and land use are critical components of water quality. Both point and nonpoint pollution sources from land use are pivotal issues to monitor watershed management and planning. Different contaminant sources run into nearby water bodies. For instance, ground

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and surface water aggravate water quality itself. Much research has been conducted to investigate the correlation between the effect of land use and water quality.

In comparison, 82% identified agricultural land use, 77% forest land use and 44% other land uses. The correlation revealed that the related activity of agriculture and forest had a more significant impact on water quality due to their physical and chemical water quality indicators. At the same time, urban development activities are more affected due to changes in hydrological processes, such as runoff and erosion. Using satellite images from 2007 until 2017, Tahiru et al. found the impact of land use and land cover changes on water quality parameters, such as turbidity, ammonia, and total coliform counts.9 Remote sensing and statistical analysis were employed to divide three 'effluents' of built-up areas, agriculture areas, and open space. 10 These groups significantly correlated to declining water quality, including Total Suspended Solids (TSS), Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand (COD), E. coli, and several metals. Another interesting finding was that of E. coli and sediment parameters in changing land use land cover using water quality index and modeling water discharge. 11 Over eight years, E. coli data was collected, and Landsat data between 2001 and 2018 was used and showed a negative correlation between E. coli loading and expanded land use land cover. In addition, the higher the water discharge, the more sediment loading is possible in the sub-basin.

Rainwater on the earth's surface falls in various land cover conditions, be it urban, rural, forest, rice fields, different soil types and different topography. Different land conditions will distinguish the amount of water that will experience infiltration into the soil, evaporation, stored in tree crowns and basins, or become direct flow. These conditions indicate that the physical and meteorological components have an influence on the availability of water (hydrological conditions) in a watershed (Anna et al. 2016).

Water availability will be greatly influenced by watershed conditions. Sustainable management of water resources is a serious challenge, especially in areas that have a great potential to experience hydrological disasters and increase the population's water needs (Hassan et al. 2017).

The management of water resources can not be separated from the watersheds management unit as they are part of the hydrological cycle. Watersheds, a component of the water resources landscape, have been damaged followed by the degradation of environmental quality. Indicators which can be addressed as a result of watershed destruction in Indonesia include (1) an increasing rate of erosion and sedimentation due to the land use transformation from forestry to agriculture, plantations, and settlements at upstreams; (2) the conspicuous fluctuation of river flow in the rainy season and dry season, and (3) the declining quality and quantity of surface water and groundwater. Various interventions have been undertaken to manage the damages, such as policy instruments, budget allocation, and institutional innovations, however, they do not exhibit any optimum results as expected.

#### 3) Land-Based Regional Development in West Java

13. The province of West Java (Jabar) has natural conditions with a complex geological structure with mountainous areas in the middle and south and lowlands in the north. It has a forest area with the function of conservation forest, protection forest, and production forest whose proportion reaches 22.10% of the area of West Java; rainfall ranges from 2000-4000 mm/yr with a high level of rainfall intensity; has 40 watersheds (DAS) with a surface water

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<sup>&</sup>lt;sup>9</sup> Tahiru, A.A.; Doke, D.A.; Baatuuwie, B.N. Effect of Land Use and Land Cover Changes on Water Quality in the Nawuni Catchment of the White Volta Basin, Northern Region, Ghana. Appl. Water Sci. 2020. 10, 198.

<sup>&</sup>lt;sup>10</sup> Hua, A.K. Land Use Land Cover Changes in Detection of Water Quality: A Study Based on Remote Sensing and Multivariate Statistics. J. Environ. Public Health 2017, 2017, 7515130. [CrossRef] [PubMed]

<sup>11</sup> James, T. Changes in Land Use Land Cover (LULC), Surface Water Quality and Modelling Surface Discharge in Beaver Creek Watershed, Northeast Tennessee and Southwest Virginia; East Tennessee State University: East Tennessee, TN, USA, 2020

discharge of 81 billion m3/year and groundwater 150 million m3/year (RPJMD 2013-2018: II-1).

- 14. Based on RAD-GRK portrait data (Bappenas, 2012), West Java Province RAD-GRK emissions come from 3 (three) fields, namely: 1] Agriculture and Forestry, 2] Energy, Transportation, and Industry, and 3] Waste Management. The Land and Energy sector is the most significant contributor to GHG emissions in West Java (Bappenas, 2012), with 51% of GHG emissions coming from the land-based sector, while 47% comes from energy-based contributors, and the remaining 2% comes from waste management.
- 15. As a province with economic potential in the agricultural sector, West Java has around 912 thousand hectares of rice fields and produced approximately 9.5 million tons of rice in 2018; the potential economic loss from the agricultural sector is predicted to reach 12 Trillion Rupiah in 2020-2024. The economic loss happened because, in 2020, natural disasters will be dominated by floods and landslides, which are 50%. Thus, West Java has the highest potential economic loss in the agricultural sector compared to 33 other provinces.[1] This is reinforced by a recent study published in the Journal of Agricultural Meteorology, which states that air temperature significantly influences rice harvests in West Java. At the same time, West Java contributes about half of Indonesia's rice production.
- 16. The agricultural sector is one of the seven leading sectors as a marker of the most advanced development of West Java in Indonesia in 2025 with a more intensive agricultural and marine management mission[2]. In its development, this sector is undoubtedly greatly influenced by the availability of land and other facilities and infrastructure, including climatic conditions and environmental carrying capacity. Ecological problems in West Java Province are marked by the excess of the carrying capacity and capacity of the environment, including the degradation of the quantity of water caused by excessive use of groundwater, the reduction, and the criticality of the catchment area (DAS) as a catchment area. And the reduced function of rivers as water resources due to pollution and sedimentation.

A Watershed is a land area that is an integral part of the river, and its tributaries accommodate, store and drain water that comes from rainfall to lakes or the sea naturally. Changes in physical soil conditions due to land cover changes affect the watershed water system, so there is a good correlation between the flood area and land use changes from forest to vacant land (Appolonie et al., 2016). The ratio of dry and rainy season discharge in the watershed has decreased along with the decrease in forest area due to changes in land cover to agricultural land and other uses; a decrease in the ratio of dry and rainy season discharge indicates water scarcity in the dry season and excess water in the rainy season. The conversion of forest land to agricultural land caused by human activities has led to land damage reported by Huang et al. (2015) which has increased sediment yields at the watershed scale due to erosion.

- 17. Based on data from the Ministry of Environment and Forestry, the increase in greenhouse gas emissions in West Java Province is caused by increased land conversion, agricultural and livestock activities that are not environmentally friendly. Excessive use of fossil energy, unmanaged domestic waste is projected until 2030—reaching 135,212,417 tons of eC02 if there is no climate change adaptation and mitigation action. Various events/disasters caused by factors that cause climate change (drivers of climate change) that occurred in West Java have submerged and damaged agricultural land, settlements, community facilities, and infrastructure. From 2012 to 2021, the Regional Disaster Management Agency (BPBD) recorded floods in West Java, reaching 1,954 incidents and 5,662 landslides.
- 18. To improve balance in economic growth and increase environmental carrying capacity, the Government has issued Presidential Regulation 87 of 2021 concerning Acceleration of Development of the REBANA and Southern West Java Regions (including Sukabumi Regency). The Presidential Regulation, among others, regulates sustainable development, namely:
- 1) Ensuring sustainable production and consumption patterns;
- 2) Take urgent action to address climate change and its impacts;

- 3) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, stop desertification, restore land degradation, and stop biodiversity loss;
- 4) Strengthening inclusive and peaceful societies for sustainable development, providing access to justice for all, and building effective, accountable, and inclusive institutions at all levels.

Meanwhile, to ensure the management of community businesses carried out in forest areas, the government has regulated forestry partnerships within conservation areas in the form of conservation partnerships (kemitraan kenservasi), as contained in Article 204 of Government Regulation (PP) Number 23, 2021. The government has also strengthened this guarantee through the regulation of Article 110 B PP Number 24, 2021 which explains about the exception of the imposition of sanctions for people who have managed conservation land/forest, the area of which is under 5 hectares and the management period is more than 5 years. The technical arrangements for the partnership have been regulated through Minister of Environment and Forestry Regulation Number 9, 2021 concerning Social Forestry Management, one of which regulates forestry partnerships through conservation partnership schemes and Regulation of the Director General of Natural Resources and Ecosystem Conservation (Perdirjen KSDAE) Number 6, 2018 concerning Guidelines Conservation Partnership in Nature Reserve Areas and Nature Conservation Areas.

As an effort to ensure the sustainability of the business carried out by farmers, the Ministry of Finance through the Government Investment Center (Pusat Investasi Pemerintah/PIP) which is a Public Service Agency (Badan Layanan Umum) in the form of an ultra micro financing program, which was launched as a complement to the people's business credit program. In addition, the Ministry of Finance has also built the Indonesian Environment Agency (Environmental Fund Management Agency/BPDLH) which is currently operating in support of sustainable forest management issues, as well as community empowerment. These programs can be accessed by farmers who are ready and have capacity to manage the business. Thus, the project proposed to the Adaptation Fund will target institutional and business strengthening, as well as improving land governance, so that farmers are able and able to cooperate with financial institutions and other relevant parties.

The benefits that will be obtained by the community/farmers from the implementation of this program are estimated as follows:

- Community who do not have private land for agricultural activities, and they depend on the National Park area (upstream Cimandiri Watershed), who are members of 14 Forest Farmer Groups (Kelompek Tani Hutan/KTH), 1,217 Heads of Families (KK), 1,899 people, consisting of 2,594 men and 2,305 women.
- Community who own less than 0.5 hectares of land in the middle and downstream areas of Cimandiri Watershed who depend on farming activities for their livelihood
- Vulnerable communities and farm laborers, as many as 1,641 people or 5 percent of the total Heads of Families (KK) in 15 villages
- People who have an average income below the Regional Minimum Wage (UMR) of Sukabumi District, as many as 2,858 people spread over 15 villages
- Women who do not have income and access to the economy, as many as 1,033 people or 2 percent of the total number of women spread over 15 villages
- 15 groups (Family Welfare Development/PKK), namely apparatus or women who are at village government representing of women, and 15 representatives of youth groups and women in 5 sub-districts
- 3 Farmer groups in Simpenan sub district, through climate smart farming practices as an effort to improve water catchment areas in the central area of the Cimandiri watershed.
- 150 representatives from 15 villages will become the Adaptive Task Force whose membership comes from the youth groups, women and representatives of the village government.
- 300 people from village, sub-district and district government representatives, as well

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representatives from youth and women groups who will be involved in cross sectoral forums related to climate change adaptation.

Communities in 11 sub districts that are traversed by rivers and tributaries of Cimandiri-River as beneficiaries of information systems related to climate change, which will be a reference in determining planting and harvesting calendars.

District, Sub-districts and Village Governments, will benefit from the preparation of the Regional Action Plan-Climate Change Adaptation (RAD-API) and the Follow-Up Plan (RTL) document and replication, so that there will be mutual benefits between the government and the community in climate change adaptation, through the Cimandiri watershed program and community economic strengthen, as well as financing the planned adaptation actions, including sustainability programs from local, provincial and central government.

#### 4)3) Sukabumi Climate Change Condition

19. Sukabumi Regency has an area of 4,128 km², is the largest regency in West Java, and the second largest in Java and Bali.

From the Inarisk page of the National Disaster Management Agency, it was found that all areas in Sukabumi Regency have a high risk of being exposed to disasters. Disasters related to climate change that may occur and have a significant impact are floods, flash floods, landslides, and droughts. The four potential hazards are associated with the hydrological system. Hydrological extremes (floods and hydrological droughts) are natural hazards that are not confined to specific regions but occur worldwide and, therefore, impact many people.



Figure 2. Map of potential hazards in Sukabumi district

Drought is a complex natural hazard that impacts ecosystems and society in many ways. Many of these impacts are associated with hydrological drought (drought in rivers, lakes, and groundwater). Drought propagation is dependent on climate. In general, hydrological droughts develop differently in relatively constant climates as compared with climates with strong seasonality 12.

There is persuasive evidence that the cost of extreme weather events, with flooding as a major contributor, have been exhibiting a significant upward trend. The number of reported hydrological events (floods and landslides) worldwide associated with major losses has considerably increased in the last three decades<sup>13</sup>.

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<sup>&</sup>lt;sup>12</sup> WIREs Water 2015. doi: 10.1002/wat2.1085

<sup>&</sup>lt;sup>13</sup>-Kundzewicz, Z.W., et all., 2013. Flood risk and climate change: global and regional perspectives. Hydrological Science Journal, 59 (1), 1-28.

lenis Bencana	Luas Bahaya (Ha)	Jiwa Terpapar	Fisik (Rp. Miliyar)	Ekonomi (Rp. Miliyar)	Lingkungan (Ha)
Gempabumi	395,169	2,648,436	21,173,233	12,020,572	0
Tsunami	6,710	66,647	540,017	156,659	5
Banjir	17,739	250,153	1,075,213	343,218	4
Banjir Bandang	17,344	215,936	1,350,717	435,754	23
Tanah Longsor	263,490	661,043	5,951,384	10,205,798	996
Letusan Gunungapi	3,007	338	22,075	6,724	2,330
Kebakaran Hutan & Lahan	170,291	0	0	4,539,300	2,468
Kekeringan	414,568	2,653,601	0	11,303,197	14,729
Cuaca Ekstrim	77,725	1,510,862	10,923,879	1,112,596	0
Gelombang Ekstrim dan Abrasi	10,494	101,082	403,237	226,516	4
COVID 19	38,705	1,478,047	0	0	0
Likuefaksi	5,986	68,709	168,769	97,462	3

Figure 3. Table of types of potential hazards in Sukabumi Regency

20. The occurrence of floods, droughts, and landslides is closely related to the agricultural sector, especially in the Sukabumi Regency, where most people depend on income from the agricultural sector. Direct impacts of floods on crops and livestock can cause losses and reduce farm yields. Flood disasters can disrupt transportation networks and access to farms, food markets, and consumption points. Floods can cause financial loss to producers, suppliers, and consumers of food production, which could reduce individuals' capacity to afford food in communities.

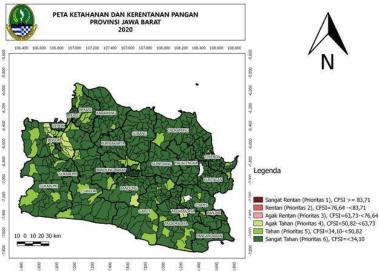


Figure 4. Sukabumi Regency Food Security Map

21. Almost every sub-district in the Sukabumi Regency's food security and vulnerability map of West Java Province has a very resistant status. This means that food security in Sukabumi Regency can be classified as high. However, floods, landslides, and droughts influenced by changes in the hydrological cycle due to climate change significantly threaten food security in Sukabumi Regency. From disaster data obtained from BNPB, landslides occurred quite frequently from 2017 to 2021. Over the past five years, 115 landslides occurred, followed by 11 floods and two droughts.

22. The climate of the Sukabumi Regency, located at 6°43"-7°29" south of the equator,

belongs to the tropical zone characterized by moderate air humidity, high rainfall, and moderate wind speed (Climate Type B1 Oldeman). The air circulation pattern mainly determines the distribution of temporary rainfall; from May to October, the dry east monsoon wind blows, and from November to March, the wet west monsoon wind blows. In the southern part of Sukabumi, the west monsoon usually blows earlier, at the end of September.

23. Hydrological conditions in the Sukabumi Regency area are influenced by the presence of groundwater with the appearance of springs originating from valleys/foothills, and surface water consists of rivers and tributaries that form 6 (six) watersheds. The Cimandiri watershed, the Cileutah watershed, the Cikarang watershed, the Cikaso watershed, the Cibuni watershed, and the Cibareno watershed. The Cimandiri watershed is the widest in Sukabumi Regency and the fourth largest in West Java, 201,431 ha, stretching from Padalarang to the Halimun - Salak Mountain Conservation Area and Mount Gede Pangrango in its upstream, stretching to the southwest until it empties into the Ratu Harbor Bay. The Cimandiri watershed has tributaries or sub-watersheds, namely Cicatih, Cipelang, Citarik, Cibodas, and Cidadap.

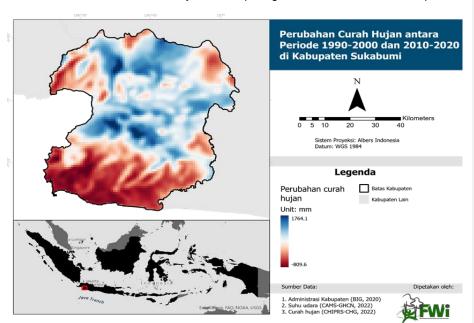


Figure 5. Rainfall map for 1990-2020 in Sukabumi Regency

24. Data processed by FWI related to rainfall between 1990-2000 and 2010-2020 shows a very high anomaly of the highest and lowest rainfall in the Sukabumi Regency. The average normal rainfall in Sukabumi Regency is 278.88 mm. However, the data shows that the highest rainfall in Sukabumi Regency is 1764.1 mm, and the lowest is minus 809.6 mm. This indicates that during the rainy season, rain can be very high, and during the dry season, very dry.

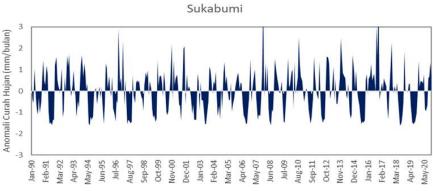


Figure 6. Anomalies of rainfall in Sukabumi Regency

25. Rainfall data from 1990 to 2020 shows that rainfall anomalies often occur. The reasonably high anomaly occurred in May 2008 and February 2017. These times were when the monster was very high. But based graph, from 1990 to 2020, there has always been an anomaly in rainfall in Sukabumi Regency.

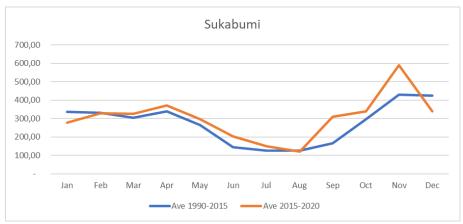


Figure 7. Patterns of wet and dry months in Sukabumi District

26. The spatial distribution of rainfall is mainly determined by the altitude of the location and geographical conditions. The highest rainfall (> 3500 mm per year), was recorded in northern Sukabumi, around the slopes of Mount Gede Pangrango and Mount Halimun-Salak, Ciemas District, east of Teluk Pelabuhan Ratu. Sukabumi has an average rainfall ranging from 3000-4000 mm/year at the foot of the volcano in the north and the south. Areas located north and south of the Cimandiri River have the lowest average annual rainfall ranging from 2000–3000 mm/year. Based on the Koppen classification system, Sukabumi Regency belongs to the Af climate type. Sukabumi Regency has the lowest air temperature of 23.6°C, with the coldest month temperature of more than 18°C in February, July, August, and December. The seasonal pattern follows a monsoonal pattern with an average rainfall of 64 mm in the driest month and 4074 mm/year.

27. The rainfall variability can cause several problems, such as floods and droughts. The variability of rain in recent years has significantly impacted the community (Sudarma and As-

syakur, 2018). In 2015 the El Nino event caused a drought which had an impact on decreasing rice productivity (Salman, 2016). Furthermore, a lack occurred at the end of 2019 due to the Dipole Mode phenomenon, whose effect was almost similar to the 1997 and 2015 El Ninos (Lu and Ren, 2020).

28. Pribadi (2012) stated that the combined phenomenon of El Nino (La Nina) and Dipole Mode affects the back and forth and the length of the dry season. El Nino causes drought, and La Nina causes increased rainfall in the region. The results of Apriyana and Kailaku's (2015) research suggest that rainfall variability affects the dynamics of backward planting time by 2-6 basics in monsoon areas and does not affect planting time in tropical regions. The rainfall variability in Indonesia causes shifts in the rainy and dry seasons (Aldrian, 2016);

The rainfall variability in Indonesia causes shifts in the rainy and dry seasons (Aldrian, 2016); this increases the risk of crop failure due to increased flooding and drought events (King et al., 2016; Rochdiani et al., 2017). The rainfall anomaly in recent years has significantly impacted rice production due to a decrease in planted area, harvested area, and yields (Surmaini & Runtunuwu, 2011).

29. Based on data on changes in rainfall in Sukabumi, Agriculture is highly vulnerable to the impacts of climate change with an indication of high hazard levels in the decline of rice production due to rising temperatures and changes in rainfall patterns.

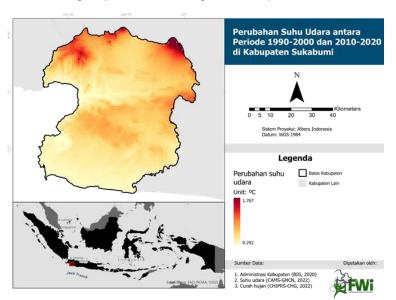


Figure 8. Changes in air temperature in Sukabumi Kabupaten

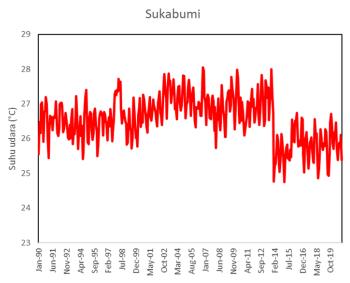


Figure 9. Anomalies of air temperature in Sukabumi Regency

30. The trend of air temperature in Sukabumi based on CAMS-GHCN data shows a relatively significant increase. From 1990 to 2020, the rise in air temperature in Sukabumi was caught at 1,767 °C. This means that the average temperature increase in <u>SukabumiAru</u> every decade can reach 1.7 °C. The temperature change data processed by FWI shows that the temperature comparison between 1990-2000 and 2010-2020 offers a temperature anomaly in the +-1.7 °C range. The increase/decrease in temperature can affect the balance of ecosystems, agricultural productivity, fishing potential, and the biodiversity that lives in Sukabumi.

#### 5)4) Cimandiri Watershed Management Conditions

31. Cimandiri watershed is located in the north and south of Sukabumi Regency. Along the Cimandiri River, there are five irrigation areas supporting rice/paddy farming, with an area of 1,910 ha. This amount does not include irrigation, clean water, and PDAM, which are sourced from the Cimandiri tributary. The Citarik River, upstream in the Kabandungan District, Mount Halimun Salakm National Park (TNGHS), has become a tourist/rafting destination and has spawned local athletes who won the General Champion in the 2022 World Rafting Championship in Bosnia in 2022 and several athletes in other championships. Meanwhile, the flow of the Cicatih River, one of which is located in the Kalapanunggal sub-district (TNGHS), is one of the water sources for the Ubrug PLTA, one of which uses electricity for the energy needs of the Jakarta railway (KRL cross Jatinegara-Tanjung Priok).

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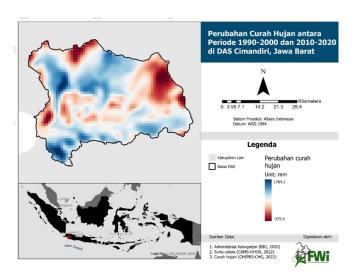


Figure 10. Analysis of changes in rainfall compared to 2 decades

32. Forest Watch Indonesia (FWI) published data on rainfall analysis in the Cimandiri watershed, comparing 1990-2000 with 2010-2020. The highest increase in rainfall in the Cimandiri watershed is around 1,764 mm per year, with the lowest reduction in the rain up to -375 mm. The average normal rainfall in the Cimandiri watershed is xx mm per year. This means a significant increase in the addition of precipitation in the Cimandiri watershed area. Climate change can indeed cause changes in rainfall patterns. The tendency of rainfall intensity that is higher than average rainfall will cause floods and landslides 14.

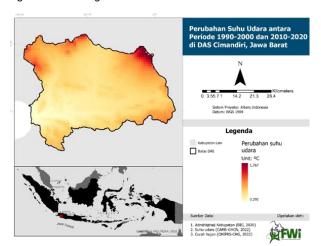
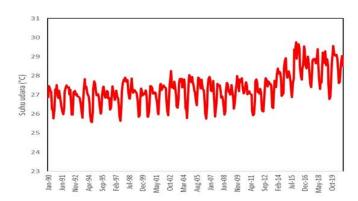


Figure 11. Comparison of changes in air temperature between decades in the Cimandiri watershed area

<sup>&</sup>lt;sup>14</sup> Meiviana, A., D.R. Sulistiowati, dan M.H. Soejachmoen. 2004. Bumi Makin Panas. Ancaman Perubahan Iklim di Indonesia. Kementerian Lingkungan Hidup Republik Indonesia dan Yayasan Pelangi Indonesia. Jakarta. 65 Hlm.



Grafik 12. Anomali suhu di Wilayah DAS Cimandiri

33. The increase in temperature is the impact of global climate change. FWI analysis in the Cimandiri watershed area shows a change in temperature between the decades 1990-2000 and 2010-2020, with the highest increase of up to 1.7 oC and the lowest increase of 0.29 oC. The highest increase was seen in the northern part of the Cimandiri watershed area, and the lowest increase was in the central and southern regions. This increase can also be seen in graph 12, where there was a significant increase in temperature after 2015, when the average temperature was around 29 °C.

34. Differences in temperature and rainfall can affect the pattern of wet and dry months if there is a decrease in rainfall and an increase in temperature. In the Cimandiri watershed ecosystem, the possibility of excessive rainfall during the rainy season and a lack of rain during the dry season can result in reduced watershed water flow, which will result in community agricultural activities.

#### 6)5) Conservation and Rehabilitation of Critical Lands as an Adaptation Step

Implementing natural resource conservation in climate change adaptation is still a big agenda and challenge today. The implementation is rooted in the problem of the 'conservationist' paradigm, which is still positivistic-developmentalism in which natural resources (especially forests) must be neutral from all human interests. This conservationist paradigm causes land grabbing wrapped in a 'green program' (green grabbing) (Cahyono et al., 2017; Sajogyo Institute, 2021).

The Sajogyo Institute highlights the problem of this paradigm by offering (and criticizing) the implementation of Ecotourism which is based on 4 (four) pillars: (1) a vehicle for education and tourist experience to raise awareness of the environment and the people who live in it, (2) minimize the impact negative (destructive) to the environmental and cultural character of the area visited, (3) active community participation in both management and implementation, and (4) providing economic benefits, especially local communities.

The results of the Sajogyo Institute research report (2017) in three locations show that the implementation of Ecotourism is still problematic. In particular, excluding local communities from the management and implementation of Ecotourism, the economic benefits that tend to enrich local elites and wealthy people outside the village, and the destructive effects that occur due to the exclusion of local communities from livelihoods that are used as ecotourism 'based' tourism objects.

This is in contrast to the case of the Rhepang Muaif Bird Watching Ecotourism Forest, Nimbokrang District, Jayapura Regency, Papua. Alex Waisimon, who has traveled abroad,

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has inspired and encouraged the people of his hometown to take action to form a movement to protect forests, conserve endemic birds of paradise, as well as improve people's welfare.

Rhepang Muaif's Bird Watching ecotourism movement is an example of an alternative form of movement in dealing with the increasingly severe destruction of Papua's forests. The massive number of large companies entering Papua to plant industrial plants and strategic global commodities such as palm oil threatens the Papuan people, Papuan endemic animals, and forests as a source of livelihood and customary identity.

#### **Critical Land Rehabilitation**

- 35. Rehabilitation of critical land is one of the primary forms of adaptation in improving and restoring the condition of land threatened with damage and causing disasters and socioecological crises to its original state and improving. Usually, these lands are damaged due to deforestation, and other extractive activities carried out by humans cause harmful and destructive effects. Thus, the critical land can threaten the survival and cycle of living space of living things as a whole.
- 36. Critical land rehabilitation in Indonesia has many of the best examples, such as the central government program through the rehabilitation of the Citarum River (through the Citarum Harum project), community-based critical land restoration in the former Timah Mining Land in Juru Seberang Village, Belitung, and restoration of critical land in Wanagama Forest. by the Gadjah Mada University campus (the experimental interest for the Faculty of Forestry resulted in the restoration of critical land, attracting tourists and becoming a source of livelihood for the community).
- 37. In its journey, the Sajogyo Institute, in its research in 2009, found one of the best practices for recovering critical land carried out by the Kajarkajar Local Farmers Organization (OTL) in Neglasari Village Tasikmalaya Regency. OTL occupied land for Perhutani land area of 310 hectares. The condition of the occupied land has been criticized because it is already in an arid state due to the harvest of Perhutani trees, which the company no longer replants. Of the land area, only 125 hectares were redistributed to OTL member farmers as the Cultivated Zone. The rest of the land is divided into Conservation Zone, Group Garden Zone, Settlement Zone, and Cemetery Zone.
- 38. Interestingly, OTL is mapping and trying to restore arid-occupied lands. Realizing that the land is in a critical condition and will cause ecological disasters (floods, droughts, and landslides) that affect farming work, OTL has created a Conservation Zone. OTL planted trees in the Conservation Zone with Picung, Dadap, and Waru species.

\_After the Conservation Zone had been created, the water supply for irrigating rice fields in the Garapan Zone was abundant. The conservation zone has provided a water source for farming and basic needs for the community in Neglasari Village and its surroundings.

#### 7)6) Potential of Agroforestry & AgroSilvopasture

- 39. Food products from forests, especially those included in the palawija group (seven food crops), have been cultivated and produced by communities around the forest for a long time in the context of forest management that has been carried out so far. But so far, it is not known precisely how much is produced. This is due, among other things, to the weakness of data collection and recording of the resulting production.
- <u>40.</u> Looking at the land/forest as a community agricultural cultivation area in the Cimandiri watershed area, it is necessary to have a method to restore the function of an open conservation area so that it is similar to the function of a natural forest. The agroforestry

system, through mixed cropping patterns that can provide ecological and economic functions, is believed to be able to restore the function of natural forests. The selection of plant species that have environmental value is intended as a land restoration activity. In contrast, the types of plants with economic value aim to increase people's income, apart from the kinds of plants that have been cultivated (intensification), including the development of silvopasture that can integrate agricultural cultivation activities with animal husbandry. In the end, there will be sustainability in environmentally friendly agricultural patterns through using natural fertilizers from livestock activities. In addition, the diversity of plant species selected to be planted in this agroforestry cropping pattern will balance the ecosystem (Hayati et al., 2009). Thus, agroforestry can have a direct ecological and economic impact on protected areas and conservation of water catchment areas, and the community's economy.

41. Currently, there are several activities carried out by Absolute Indonesia and its partners to empower communities in the northern area of the Cimandiri watershed, especially those within the Mount Halimun Salak National Park (TNGHS) area to carry out restoration, increase capacity and carry out maintenance activities. Community business development. This effort was carried out together with the TNGHS Center through a Cooperation Agreement between Absolute Indonesia and the Mount Halimun Salak National Park Office Number: PKS.2141/T.14/TU/KUM.3/12/2020 and Number: 001/ABS/ PKS-TNGHS/XII/2020 concerning Cooperation in Strengthening the Functions of Mount Halimun Salak National Park through Community Empowerment Activities (conservation partnerships), for five years (2020 – 2025). The cooperation is carried out in an area of 1,801.95 ha spread across Kabandungan District (Cipeuteuy Village, Cihamerang, Mekarjaya, Cianaga, Kabandungan) and Kalapanunggal District (Pulosari Village and GunungMount Endut).

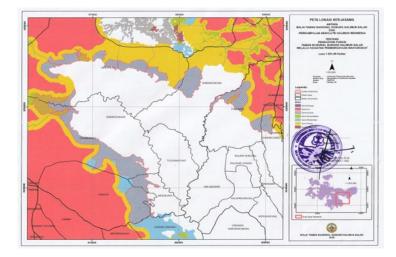


Figure 13. Map of the location of the conservation partnership cooperation

42. From 2020 to 2021, assistance has been carried out on 14 Forest Farmer Groups (KTH) with 1,217 family members and 4,899 direct beneficiaries in locations covering an area of 878.34 ha in Cipeuteuy, Mekarjaya, Cianaga, and Pulosari villages. A series of activities have been carried out together with the 14 KTHs, including capacity building and cultivation techniques through the agroforestry system. However, farmer groups have not entirely carried out agricultural practices through agroforestry techniques in the field. This is because there are still limitations in providing seeds, including the budget for a series of facilitation processes.

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43. Agricultural development through agroforestry techniques that have been running is the type of coffee. This effort was also developed by involving the youth community and microfinance institutions (cooperatives) by constructing a coffee learning house https://absoluteindonesia.id/2019/03/03/rumah-learning-kopi-cipeuteuy/, which so far has been successful. Manage the coffee business from upstream to downstream, including its marketing

https://www.tokopedia.com/absolutecoffeehttps://www.tokopedia.com/absolutecoffee.

44. There is better lessons learned from the implementation of activities on building 14 Forest Farmer Groups (KTH), including: 1] KTH gains certainty access to area management within national park through a conservation partnership program with Taman Nasional Gunung Halimun Salak (BTNGHS), with certainty legal access to the managed area can minimize conflicts between communities with BTNGHS; 2] The strong social relationship between supporting organizations and farmers who are currently members of 14 KTHs, has a significant effect on the achievement of project implementation; 3] KTH has succeeded in increasing knowledge about coffee cultivation; 4] KTH has market certainty for coffee products through cooperation with Absolute Coffee; 5] Strong efforts are needed to facilitate KTH in building mutual understanding and agreement on conservation partnerships with the TNGHS Office; 6] The limited number of people involved in capacity building, which only 2 people from each KTH and with a short duration of implementation, cause resulting in slow and ineffective knowledge transfer; 7] Land restoration/rehabilitation efforts through planting tree species with ecological and economic value (fruit trees) cannot be carried out comprehensively due to the limited number of certified (bibit unggul) seeds; 8] Planting fruit trees that are not certified will have the potential to fail to harvest, thus encouraging farmers to re-cut the planted trees.

45. For the southern area of the Cimandiri watershed, forest management is carried out through Community Forest Management (PHBM), which began in 2005 with the legal basis of Perum Perhutani Board of Directors Decree No. 136/Kpts/Dir/2001 concerning PHBM Guidelines, Sukabumi Regency Regulation No. 13 of 2003 regarding PHBM, and Sukabumi Regent Decree No. 407 of 2004. Based on this legal basis, the Forest Village Community Institution (LMDH) was formed from 2005 - 2008. These LMDH-LMDH accommodate forest communities in the context of their participation in forest management with Perhutani. In this PHBM program, various activities are carried out and involve the community; one of these activities is the intercropping system activity. In this intercropping system activity, the community can plant food crops between plant stands, where the results are expected to be used to meet their daily food consumption needs.

In practice, PHBM tends to be less effective in maintaining ecological functions because Perum Perhutani has various legging systems, one of which is clear-cutting, even though there is a policy that prohibits legging of trees/trees on a slope of 40 degrees. However, in the field, violations of this policy are still found. In addition, LMDH does not have the certainty to plant tree species with long term economic value, such as fruit trees or other types. This has resulted in uncertainty in the sustainability of forest management, thus the need for a new concept in the Perhutani cutting system, one of which is through the thinning cutting system and the development of a long-term tree species intercropping system that can provide economic value to the community.

## Program Targets and Locations

<u>46.</u> This project will be implemented in 15 villages, five sub-districts, Sukabumi regency, and the West Java province. The targets of this program are groups of vulnerable farmers and women who depend on the land and/or forest areas for their livelihoods.

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Table 1. Population in 15 Villages and Its Potential Hazard

			Male	Female	Populati	Hazard
<u>No</u>	Sub-District	<u>Village</u>	<u>iviale</u>	<u>i emale</u>	on on	Potential (Inarisk)
1	Simpenan	<u>Cidadap</u>	7.822	7.636	15.458	<u>High</u>
2	Simpenan	<u>Cibuntu</u>	2.387	2.339	4.726	
<u>3</u>	<u>Simpenan</u>	<u>Mekarasih</u>	2.779	2.779	5.558	
<u>4</u>	Geger Bitung	Ciengang	2.018	2.006	4.024	<u>High</u>
<u>5</u>	Geger Bitung	<u>Sukamanah</u>	1.774	1.770	3.544	
<u>6</u>	Geger Bitung	Caringin	3.619	3.652	7.271	
<u>7</u>	Kalapa Nunggal	<u>Pulosari</u>	4.825	4.623	9.448	<u>High</u>
<u>8</u>	Kalapa Nunggal	Gunung Endut	<u>4.471</u>	<u>3.984</u>	<u>8.455</u>	
<u>9</u>	Cikidang	Gunung Malang	2.151	2.127	4.278	<u>High</u>
<u>10</u>	Kabandungan	<u>Mekarjaya</u>	<u>1.834</u>	1.979	3.813	<u>High</u>
<u>11</u>	Kabandungan	Tugu Bandung			<u>9.818</u>	
<u>12</u>	<u>Kabandungan</u>	<u>Kabandungan</u>	4.278	4.152	<u>8.43<mark>07</mark></u>	
<u>13</u>	<u>Kabandungan</u>	<u>Cipeuteuy</u>	<u>3.911</u>	3.664	<u>7.575</u>	
<u>14</u>	<u>Kabandungan</u>	Cihamerang	<u>3.967</u>	<u>3.549</u>	7 <del>6</del> .5169 47	
<u>15</u>	Kabandungan	<u>Cianaga</u>	3.230	3.121	6.251	
Jumla	ih Total				80.376 <del>7</del> 1.946	

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			Populati on	Hazard Potential	
No	Sub-District	Village		(Inarisk)	Formatted: Font: (Default) Arial
4	Simpenan	Cidadap	<del>-15.458</del>		Formatted: Font: (Default) Arial
2	Simpenan	Cibuntu	4.726		Formatted: Font: (Default) Arial
3	Simpenan	Mekarasih	<del>-5.558</del>	- <del>High</del>	Formatted: Font: (Default) Arial
4	Geger Bitung	Ciengang	4.024		Formatted: Font: (Default) Arial
5	Geger Bitung	Sukamanah	3.544	1 Bala	Formatted: Font: (Default) Arial
6	Geger Bitung	Caringin	<del>7.271</del>	High	Formatted: Font: (Default) Arial
7	Kalapa Nunggal	Pulosari	9.448		Formatted: Font: (Default) Arial
8	Kalapa Nunggal	Gunung Endut	8.455	-High	Formatted: Font: (Default) Arial
9	Cikidang	Gunung Malang	4.278	High	Formatted: Font: (Default) Arial
10	Kabandungan	Mekarjaya	3.813	Tilgii	
			9.818		Formatted: Font: (Default) Arial
,11	Kabandungan	Tugu Bandung	8.437		Formatted: Font: (Default) Arial
<del>12</del>	Kabandungan	Kabandungan	7.575		Formatted: Font: (Default) Arial
,13	Kabandungan	Cipeuteuy	6.947	-High	Formatted: Font: (Default) Arial
44	Kabandungan	Cihamerang	6.251		Formatted: Font: (Default) Arial
<del>15</del>	Kabandungan	Cianaga	71.946		Formatted: Font: (Default) Arial
	Juml	ah Total			Formatted: Font: (Default) Arial

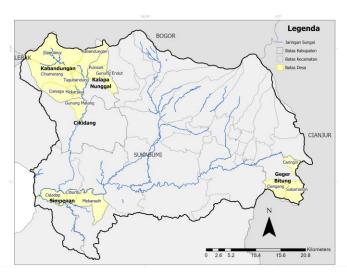


Figure 14. Program Location Map



Figure 15. Landscapes of Cipeuteuy Village in Kabandungan Sub-district

### 1.B. Project / Programme Objectives:

- 47. This project aims to improve the adaptation of farming communities that depend on forest areas as water catchments, vulnerable to the impacts of climate change and natural disasters, through the management of the Cimandiri Asri Watershed (Sustainable Cimandiri Management). This project mainstreams capacity building of farming communities to implement climate change adaptation and supports and guarantees regulatory/policy principles based on the pillars of sustainable development. This project will be implemented through 3 critical components, namely:
- 1) Increasing the adaptive capacity of farming communities in dealing with climate change for economic resilience through climate-smart agricultural management so that they can increase carrying capacity and maintain a balance of economic and ecological functions of the land
- 2) Collective Adaptation Actions related to ecosystem restoration that all stakeholders can carry out with interest in the sustainability of the Cimandiri Watershed
- 3) Policy Advocacy to support and ensure the guarantee of fair and sustainable Cimandiri watershed management for natural and sustainable elements for future generations

### 1.C. Project / Programme Components and Financing:

- 48. In accordance with the main objectives as described above, the formulation of project components, expected concrete outputs, expected outcomes consider as well the direction of Adaptation Fund in Indonesia that described in part 1.A above. The directions include:
  - 1. The adaptation element of Indonesia Updated NDC which describe the 18 key programs to increase economic, social, ecosystem and landscape resilience;
  - The implementation of presidential regulation on Carbon Economy Value which
    prioritize 6 (six) adaptation fields and instruct the identification of impacts and actions,
    baseline and targets, planning implementation monitoring and evaluation, and
    implementation at provincial and regency level involving stakeholders engagement;
  - 3. The implementation of Ditjen PPI's Strategic Plan particularly the Disaster and Climate Change Resilience Program which prioritizes vulnerability data, local adaptation strategy, and extension of climate village.
  - 4. Regulation about watershed
  - 5. Regulation about land rehabilitation and conservation
- 49. The direction highlights as well the community-based business development aims to increase the income of villagers and the economic capacity of communities which significantly raise the adaptive capacity of vulnerable communities. Part of grants will be managed as financial assistance for farmers groups to initiate or scale up their businesses, including through revolving fund schemes.

Table 2. Project Components

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
	1.1.1. Collaborative Action Research	1.1. Collaborative	
	1.1.2. Socio- ecological- economy analysis report	adaptation action strategy with the	
	1.1.3. Document adaptation action strategy	community	
Increasing the adaptive capacity of the community for economic resilience	1.2.1. The capacity for adaptability and management of the 14 KTH natural resource area increases  1.2.2. Capacity and technical knowledge	1.2. Increased knowledge, adaptability	210,000
	related to climate-smart agro silvopasture and agroforestry in 14 KTH have increased	and economic resilience of the community	
	1.2.3. Capacity of 14 KTH related to economic institutions		
Collective     Adaptation     Actions related to	2.1.1. Critical land in the Watershed rehabilitated	2.1. Ideal watershed	040.005
Actions related to ecosystem restoration	2.1.2. Community- based climate- smart agro- silvopastoral and agroforestry practices	management (Law 32 of 2009)	310,925

	2.1.3. Climate change adaptive task force		
3. Policy Advocacy	3.1.1. Cross-sector collaborative forum		
	3.1.2. RAD-API	3.1. Establishment of a watershed- based and collaborative	280,000
	3.1.3. Information Systems (SIBERALAM)	community- based protection system for living space and livelihoods	
	3.1.4. RTL document and replication	IIVeili100us	
6. Project/Program	me Execution cost		84,075
7. Total Project/Pro		885,000	
8. Project/Program Implementing Entity (if	75,225		
Amount of Financing	Requested		960,225

# 1.D. Projected Calendar:

Table 3. Projected Calendar,

Milestones	Expected Dates	Expected Duration
Start of Project/Programme Implementation	January, 2023 to November, 2025	23 months
Mid-term Review (if planned)	January, 2025	1 month
Project/Programme Closing	December, 2025	-
Terminal Evaluation	December, 2025	1 month

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### PART II: PROJECT/PROGRAMME JUSTIFICATION

### A. Project Contribution to Increase Resilience

50. Climate change has resulted in increased rainfall and rising temperatures in Sukabumi Regency, this incident is one of the factors causing landslides, floods, and droughts which have an impact on crop and harvest failures on community agricultural land. Climate change has resulted in increased rainfall and rising temperatures in Sukabumi Regency, this incident is one of the factors causing landslides, floods, and droughts which have an impact on crop and harvest failures on community agricultural land. The worst case has even resulted in the destruction and loss of agricultural land and community facilities and infrastructure. This project as a whole aims to improve the adaptation of farming communities that depend on forest areas as water catchments, who are vulnerable to the impacts of climate change and natural disasters, through the management of the Cimandiri Asri Watershed (Sustainable Cimandiri Management), which consists of 3 program components:

Component 1: Increasing the adaptive capacity of farming communities in facing climate change for economic resilience, through climate-smart agricultural management to be able to increase carrying capacity and maintain a balance of economic and ecological functions of the land

51. Capacity building in dealing with climate change will become new knowledge at the level of the farming community, as well as will build collective awareness in adapting to climate change that occurs. Based on data from the Regional Secretariat of Sukabumi Regency, so far the attention of the Regional Government tends to be greater on mitigation actions so that the community does not have the provisions to carry out adaptation actions. This capacity building will reach vulnerable farming communities at the site level, as well as the young generation and women who will directly become the main actors in carrying out research on social, economic, and ecological issues in their respective regions, along with the capacity building materials provided given. This training will also involve the government at the village, sub-district, and related agencies in the district. Analysis of existing social systems and structures is needed, so that this project understands the target based on social stratification/class, gender, age, knowledge capacity as well as certain relevant skills, available social capital, and social/cultural barriers. This process will determine the accuracy in carrying out engagement, which subjects require empowerment and power of attorney. Strengthening the economic of community is necessary, by the social modalities owned by the community. Identifying or reviving the availability of social modalities will guide the operation of economic capital that comes from outside/donors. A collective economy with emphasis on ecological practices has always been a prerequisite for a solidarity economy. This principle will eliminate the potential for individualism in the community. Analysis of existing social systems and structures, so that this project understands the target to be targeted based on social stratification/class, gender, age, knowledge capacity as well as certain relevant skills, social capital, and social/cultural barriers. This process will determine the accuracy in carrying out engagement, which subjects require empowerment and power of attorney. Economic strengthening is necessary by the social modalities owned by the community. Identifying or reviving the available social modalities will guide the operation of economic capital that comes from outside/donors. A collective economy with a strong ecology has always been a prerequisite for a solidarity economy, this principle will eliminate the potential for individualism in the community.

<u>52.</u> The involvement of the parties in the implementation of capacity building will automatically build communication and coordination, as well as mutual understanding and strategy regarding the importance of climate change adaptation actions at the regional level. There are 2

outcomes to ensure these components run, namely outcome 1.1 A collaborative adaptation action strategy with the community, in which the outputs to achieve these outcomes are 1.1.1. Collaborative Action Research; 1.1.2. Socio-ecological analysis report; 1.1.3. Adaptation action strategy document. In addition, the second outcome in this component is 1.2 Increased knowledge, adaptability, and economic resilience of the community, so that the output to achieve this outcome is 1.2.1 The capacity for adaptability and management capacity of the 14 KTH SDA is increased; 1.2.2 Capacity and technical knowledge related to agro silvopasture and climate-smart agroforestry in 14 KTH have increased; 1.2.4 Capacity of 14 KTH related to economic institutions.

### Component 2. Collective Adaptation Actions related to ecosystem restoration

53. This ecosystem restoration action will be carried out on an area of 1,800 hectares managed by KTH, through planting tree species that have economic and ecological value with agroforestry and agro-silvopasture systems, as climate-smart agriculture systems. Agroforestry and silvopasture systems will directly impact towards increasing the economy and ensuring the sustainability of land/forest functions as water catchment areas. Ecosystem restoration will also be carried out on the banks or riparian areas of the river, in the upstream, middle, and downstream areas of Cimandiri Watershed, along 50 km. This planting action will involve various parties from the government, youth and women communities, civil society groups, environmental activists, and the community. To ensure ecosystem restoration can proceed according to plan and ensure sustainability, so will a climate change adaptive task force be formed whose members also come from government elements, youth and women's communities, civil society groups, environmentalists, and society.

<u>54.</u> Outcome to ensure that component 2 implemented is 2.2. Ideal Watershed management (Law 32 of 2009), so that the outputs to achieve this outcome are: 2.1.1 Rehabilitation of critical land in the Watershed; 2.1.2 Community-based climate-smart agro-silvopastoral and agroforestry practices; 2.1.3 Climate change adaptive task force.

## Component 3. Policy Advocacy

55. Policy advocacy will be carried out to encourage the appearance of Regional Action Plans related to Climate Change Adaptation (RAD-API), where currently the District does not yet have such an action plan, even though in 2012 the West Java Provincial Government issued Governor Regulation No. 56 of 2012 concerning Regional Action Plans. Greenhouse Gas Reduction (RAD-GRK) West Java Province. The plan for the preparation of the RAD-API has been previously communicated to the Regional Secretary of Sukabumi Regency, during the consultation event in the preparation of the draft adaptation note for the fund. Technically, the preparation of this action plan will involve a cross-sectoral collaborative forum, which will be formed as a forum for communication, coordination, and sharing of learning together in saving the Cimandiri Watershed, as well as other elements, including from associations or companies as beneficiaries of the existence of the Cimandiri Watershed.

56. To disseminate information about climate change, an information system will be built that will be useful for farmers and the wider community in running businesses (economic development) that are vulnerable to climate change. This information system will also support the provision of data and information SIBERALAM (Natural Resources Information System) which is currently under development by the Regional Secretariat of Sukabumi Regency. The information system that will be developed also <a href="mailto:becomesbecome">becomesbecome</a> a database and learning information (knowledge management), so that it will assist stakeholders in program development and replication. In addition, this activity component will also prepare a joint document related to the follow-up plan, as a technical guide for each side in carrying out the climate change adaptation action plan.

<u>57.</u> Outcome to ensure component 3 are 3.1 Establishment of a collaborative Watershed-based and community-based protection system for living space and livelihoods, with outputs to achieve these outcomes: 3.1.1 Cross-sector collaborative forum; 3.1.2 RAD-API; 3.1.3 Information systems; 3.1.4 RTL document and replication.

### B. Economic, Social and Environmental Benefits

- <u>58.</u> This project will help improve the adaptive capacity of the community, so that sustainable management of the Cimandiri Watershed can be carried out based on a partnership between the National Park and the community. Initiated interventions build on:
  - Socio-economic-ecological integration system, through increasing the adaptive capacity
    of the community. The daily life of the community with village institutions and the
    relationship with the National Park will directly affect the ecological management and
    economic welfare of the community.
  - Socio-ecological approach, by seeing that ecological and social aspects are dialectically related. The processes of conservation and rehabilitation of Watershed areas must begin with social intervention through local institutions.
  - An economic ecology approach, through a system of improving community welfare based on agroforestry and agro silvopasture business, is aimed at forest and land conservation measures in the Cimandiri Watershed.
  - 4. Socio-economic approach, through the formation of collaborative and inclusive groups.
- 59. The main target beneficiaries of this project are communities, local government institutions that have the authority to initiate adaptation actions to climate change, women's groups, disability groups, forest farmer groups, and youth groups. Capacity building in these groups targeted not only to create awareness of the impacts of climate change, but also to increase community knowledge about the benefits of forest and land management in Watershed areas, and how to increase economic resilience without causing damage to the environment. The project aims to involve as many local people as possible, however, the priority groups are:
- 1) Local communities most vulnerable to climate change;
- 2) Groups of forest farmers who have carried out activities or implemented agroforestry systems and horticultural farmers who have implemented conventional farming systems. This group must go through an awareness-raising process first, to help transform conventional farming systems into climate-smart and sustainable ones.
- 3) women groups who play an important role in providing food to the table for her families. In rural remote areas, often this role includes producing and preparing the food, in addition to taking care of their children, husband, and elders. These groups need new innovations to be able support their family in sustainable ways and time-effective at the same time. Women should also be more involved in landscape management, hence their important role in food production. Therefore, a sustainable integrated farming system within the area should be improved and focused with these groups.
- 4) youth groups to be involved in restoration projects, awareness and campaigns, developing sustainable livelihoods, and to make them part of the forest managers themselves. Particularly to engage them in the network of multi stakeholders forums, by considering as well that they are potential future leaders for protecting forest and ecosystem with essential

function in Cimandiri watershed.

- 5) marginalized groups such as people with disabilities and low social class are often forgotten in this process. But in order to enhance the result of this adaptation process, the includement of marginalized groups are crucial.
- 60. As an effort to ensure the sustainability of the business carried out by farmers, the Ministry of Finance through the Government Investment Center (Pusat Investasi Pemerintah/PIP) which is a Public Service Agency (Badan Layanan Umum) in the form of an ultra micro financing program, which was launched as a complement to the people's business credit program. In addition, the Ministry of Finance has also built the Indonesian Environment Agency (Environmental Fund Management Agency/BPDLH) which is currently operating in support of sustainable forest management issues, as well as community empowerment. These programs can be accessed by farmers who are ready and have capacity to manage the business. Thus, the project proposed to the Adaptation Fund will target institutional and business strengthening, as well as improving land governance, so that farmers are able and able to cooperate with financial institutions and other relevant parties.
- 61. The benefits that will be obtained by the community/farmers from the implementation of this program are estimated as follows:
  - Community who do not have private land for agricultural activities, and they depend on the National Park area (upstream Cimandiri Watershed), who are members of 14 Forest Farmer Groups (Kelompok Tani Hutan/KTH), 1,217 Heads of Families (KK), 4,899 people, consisting of 2,594 men and 2,305 women.
  - 2. Community who own less than 0.5 hectares of land in the middle and downstream areas of Cimandiri Watershed who depend on farming activities for their livelihood
  - Vulnerable communities and farm laborers, as many as 1,641 people or 5 percent of the total Heads of Families (KK) in 15 villages
  - 4. People who have an average income below the Regional Minimum Wage (UMR) of Sukabumi District, as many as 2,858 people spread over 15 villages
  - Women who do not have income and access to the economy, as many as 1,033 people or 2 percent of the total number of women spread over 15 villages
  - 6. 15 groups (Family Welfare Development/PKK), namely apparatus or women who are at village government representing of women, and 15 representatives of youth groups and women in 5 sub-districts
  - 7. 3 Farmer groups in Simpenan sub-district, through climate-smart farming practices as an effort to improve water catchment areas in the central area of the Cimandiri watershed.
  - 150 representatives from 15 villages will become the Adaptive Task Force whose membership comes from the youth groups, women and representatives of the village government.
  - 300 people from village, sub-district and district government representatives, as well
    representatives from youth and women groups who will be involved in cross-sectoral
    forums related to climate change adaptation.
  - 10. Communities in 11 sub-districts that are traversed by rivers and tributaries of Cimandiri River as beneficiaries of information systems related to climate change, which will be a reference in determining planting and harvesting calendars.
  - 11. District, Sub-districts and Village Governments, will benefit from the preparation of the Regional Action Plan-Climate Change Adaptation (RAD-API) and the Follow-Up Plan (RTL) document and replication, so that there will be mutual benefits between the government and the community in climate change adaptation, through the Cimandiri watershed program and community economic strengthen, as well as financing the planned adaptation actions, including sustainability programs from local, provincial and central government.

- 62. Meanwhile, to ensure the management of community businesses carried out in forest areas, the government has regulated forestry partnerships within conservation areas in the form of conservation partnerships (kemitraan konservasi), as contained in Article 204 of Government Regulation (PP) Number 23, 2021. The government has also strengthened this guarantee through the regulation of Article 110 B PP Number 24, 2021 which explains about the exception of the imposition of sanctions for people who have managed conservation land/forest, the area of which is under 5 hectares and the management period is more than 5 years.
- 63. The technical arrangements for the partnership have been regulated through Minister of Environment and Forestry Regulation Number 9, 2021 concerning Social Forestry Management, one of which regulates forestry partnerships through conservation partnership schemes and Regulation of the Director General of Natural Resources and Ecosystem Conservation (Perdirjen KSDAE) Number 6, 2018 concerning Guidelines Conservation Partnership in Nature Reserve Areas and Nature Conservation Areas.

Estimated benefits?

### C. Cost Effectiveness

- <u>64.</u> The proposed Adaptation Fund (AF) budget is prepared based on consideration of program the effectiveness and sustainability after project funding ends, based on all project components, outcomes and outputs designed to increase community resilience in the face of climate change at various levels.
- 65. Financing related to Component 1: Increasing the adaptive capacity of farming communities in facing climate change for economic resilience, through climate-smart agricultural management so as to increase carrying capacity and maintain a balance of economic and ecological functions of the land, will provide direct benefits to communities in 15 villages in 5 districts. Direct benefits from increasing knowledge and management of farming through agroforestry and silvopasture systems will be obtained by 1,217 families and 4,899 people living in upstream areas. Benefits related to capacity building in conducting research related to social, economic and ecological issues will be obtained by 15 communities of the younger generation and women located in 5 sub-districts.
- 66. Financing related to Component 2. Collective Adaptation Action related to ecosystem recovery, will provide direct benefits for improving the ecological function of land/forest by planting tree species in an area of 1,800 hectares and providing economic benefits to 1,217 Families and 4,899 people living in the area. upstream, as well as indirect benefits for 31,365 communities in the upstream and middle of the Cimandiri Watershed. The direct benefits of increasing water catchment areas through climate-smart farming practices can be directly felt by communities in 3 villages in Simpenan District. The direct benefits of the ease of coordination and communication related to climate change adaptation will be directly felt by the community in 15 villages, for the involvement of their representatives in the climate change adaptation task force.
- 67. Financing related to Component 3. Policy Advocacy, will provide direct benefits to 1,217 families and 4,899 people for certainty of access to managed land, as well as legal guarantees for business management carried out in forest areas, as water catchment areas for the Cimandiri Watershed. Direct benefits from the establishment of cross-sectoral forums will also be obtained by communities in 5 sub-districts for the involvement of community representatives in the forums, as well as direct benefits from the information contained in the information systems related to climate change adaptation, so that it become one of the considerations for farming communities in determining the seasonal calendar (planting and harvesting).
- 68. The benefits of this information system will also be felt by the community in 11 sub-

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districts along the Cimandiri river. The Village and Sukabumi District Governments will benefit from the preparation of the Climate Change Adaptation-Regional Action Plan (RAD-API) and the Follow-Up Plan (RTL) document, so that mutual benefits will be created between the government and the community in the Cimandiri and Cimandiri Watershed rescue program. Improvement of the community's economy, as well as financing of planned adaptation actions, including program sustainability sourced from local, provincial and central government program budgets.

<u>69.</u> The outputs from this project are in line with government programs<sup>15</sup> (central and regional) in developing a participatory and independent cultured village/village environment (<u>synergism between ecovillage and Kampung Iklim</u>), which has an impact on improving community welfare and watershed quality. This will open up opportunities to build future program collaborations.

### D. Alignment with National and Sub-national Agenda

<u>70.</u> To ensure the project aligned with national and provincial strategies and programs, and consistent with the agenda to increase climate change resilience this project developed by considering several related policies and regulations.

- Law Number 16 of 2016 concerning Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change in the context of achieving the NDC target requires the implementation of climate change adaptation through mainstreaming sustainable development (SDGs), especially in areas that have high vulnerability.
- Indonesia Updated NDC provides direction on the adaptation element with 18 key programs to increase economic, social, ecosystem and landscape resilience. This is related to the Regulation of the Minister of Environment and Forestry Number P.07 of 2018 concerning Guidelines for the Study of Vulnerability, Risk, and Impact of Climate Change and Regulation of the Director General (Perdirjen) LHK No. 04 of 2019 concerning Guidelines for Identification of Ecosystem-Based Climate Change Adaptations.
- 3. The Presidential regulation on the Implementation of Carbon Economy Value prioritizes 6 (six) adaptation fields and instructs the identification of impacts and actions, baseline and targets, planning implementation monitoring and evaluation, and implementation at provincial and regency level involving stakeholders engagement.
- 4. Ditjen PPI's Strategic Plan particularly within the Disaster and Climate Change Resilience Program encourages provincial and regency governments to prioritize the preparation of vulnerability data, local adaptation strategy, and extension of climate village.
- Government Regulation of the Republic of Indonesia Number 37 of 2012 concerning Watershed Management, refers to the criteria for Watershed and plans for the preparation of Watershed management plans.
- Law of the Republic of Indonesia Number 7 of 2019 concerning Management of Water Resources, refers to the management of Watersheds which are water resources.

6-7. RAN-API concerning of 3 objectives, namely economic resilience in food security sub-sector, ecosystem resilience, and adequate support system with emphasis on capacity building, development of reliable climate information, as well as research and development

### E. Standard and Regulatory Compliance

71. The conservation partnership relationship between the community and the Mount Halimun Salak National Park must comply with the Regulation of the Director General of Natural Resources and Ecosystem Conservation Number P.6/KSDAE/SET/Kum.1/6/2018 concerning Technical Guidelines for Conservation Partnerships in Nature Reserves and Conservation Areas.

### F. Complementary Funding Sources

72. In component 3 of the program to be implemented in the Cimandiri watershed, the result obtained 3.1. the establishment of collaborative communities and watershed-based living space and livelihood protection system as stated in output to 3.1.2. RAD-API of Sukabumi Regency and 3.1.3. An Information system whose implementation is funded by the Regional government of Sukabumi Regency. The role of this program is only as a provider of data and information on the socio-ecological conditions of the Cimandiri Watershed and recommendations for adaptation actions in accordance with the current conditions in the Cimandiri Watershed.

73. Funding from the Environmental Fund Management Agency (BPDLH) and other funding sources, is used for institutional strengthening activities and building mutual understanding between the Forest Farmers Group and the Gunung Halimun Salak National Park Office (BTNGHS), as well as land mapping as one of the requirements to gain an access, through a conservation partnership agreement. Thus, funding support from the Adaptation Fund will continue or strengthen the activities that have been carried out previously, including increasing group capacity, conducting the agroforestry and silvopasture system, building economic access and resilience to climate change.

74. In addition, the information system that will be built and developed through the Adaptation Fund will consolidate or provide data and information from participatory action research activities, climate smart farming, adaptation action documents and other data generated from the project activities, including information related to eco villages, which is easily accessible and widely used by the public. This information system also will support and provide the data and information, as well as integrate with the natural resource information system (SIBERALAM) which is ongoing build and developed by Sukabumi district government.

## G. Knowledge Management

75. To escalate the resilience of Forest Farmer Groups (KTH) in Sukabumi Regency in facing climate change, it is necessary to provide them with extensive knowledge about climate change adaptation. Thus, the capacity of farmers who are members of KTH could increase which makes them a-more resilient community in facing climate change in the future.

76. To face these challenges, there would be participatory research about the relation of social, ecology, and economy of community in facing climate change. Because it is participatory research, researcher team will work with members of a community to

understand and resolve community problems, to empower community members, and to democratize research.

### 77. Within that research,

it requires a document module containing informations and data related to climate change adaptation and economic resilience would be produced. This module would be used as a tool for farmers to understand various things about climate change related to their activities in agriculture. This module is written using popular language yet still based on scientific data therefore it is easily accepted by the farmers. The module is designed to be accessible for public through the websites of each consortiums, local government websites, and disseminated through training activities. In the future, tThe module would also be distributed through an information system network at the village level-that would be built in the future, as an information sharing tool, and directly integrated with the Natural Resources Information System (SIBERALAM). Thereafter, each disseminations related to community activities would be presented creatively, attractively, and easily accessible through the social mediainformation system network.

78. In addition, it is necessary to strengthen the synergy between KTH and the Regional Government, both in substance and in technical aspects. This is necessary to build a common understanding in accomplishing accomplish land rehabilitation, as well as to escalate technical capacity in land management and the preparation of infrastructure for processing forest and land products. This synergy also requires the support of multi stakeholders multistakeholders, KTH, and also CSO's in a cross-sector collaborative forum.

To increase the resilience of Forest Farmers Groups (KTH) in facing climate change in Sukabumi Regency, it is necessary to provide adaptation knowledge. In addition, knowledge provision is also carried out in order to increase the resilience of KTH in facing economic vulnerabilities. For this reason, it is necessary to increase the capacity of KTH, so that future conditions will become more resilient, resilient, and flexible (resilience) in facing climate change. For faced these challenges, several tools that will be used related to knowledge management include:

- Module documents containing information and data related to climate change adaptation and economic resilience, which are popularly made and scientifically based. This module is presented in full and can be accessed by the public through the website portals of each consertium institution, information system portals at the village level, local government websites, and disseminated through training activities.
- Development of an information system portal at the village level, as a means of sharing information.
- Strengthening synergies for KTH and Regional Governments, in terms of substance and in technical terms.
  - Membangun kesepahaman bersama dalam melakukan rehabilitasi lahan. Peningkatan kapasitas teknis dalam pengelolaan lahan dan sarana prasarana untuk pengelahan produk-produk hasil hutan dan lahan.

3.\_\_\_\_

4. Institutional strengthening of the role of Farmer Groups in coordinating the implementation of agricultural land management.

Diseminasi melalui kanal-kanal informasi yang ada di setiap lembaga, portal sistem informasi yang dikemas dalam bentuk kreatif, mudah diakses, dan

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Portal Sistem Informasi kampung linked to SIBERALAMBusiness planning for KTH and the community, by adopting creative ideas related to management and marketing.

### H. Stakeholders Consultation

Name

- 79. All program designs in the proposed project have gone through a series of discussions and consultations with relevant stakeholders, including:
- 1. The Regional Secretary of Sukabumi Regency and the Head of the Natural Resources Section, the Sukabumi Environmental Service, Expert Staff of the Regent for Development and the Economy, to consult the concept that has been designed and accommodate input regarding the possibility of program implementation and its sustainability. This consultation was held on 7 July 2022. In this discussion process, there is also a representation of women in quantity in order to promote justice and equality. The participants who attended this discussion were 19 people consisting of 16 men and 3 women. The list of Participants who have attended this consultation can be found in this link: are: List of Attendees From Multistakeholder Meeting Consultation

Role

**Title** 

Sukabumi

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<u>0</u>				<del>male</del>
<u>1</u>	Ade Suryaman, SH, MA	The Regional Secretary of Sukabumi Regency	to carry out government, administration, organization, and management as well as provide administrative services to all regional apparatuses.	Male
2	Prasetye AP., M.Si	Head of Natural Resources Division at the Regional Secretariat	assist the Assistant for Economics, Development, and Natural Resources in facilitating policy formulation, coordination of programs and administrative services, control and evaluation of policies in the field of Natural Resources	Male
<u>a</u>	<u>Drs.Andang</u> <u>Koswara</u>	Secretary of the Environmental Service of Sukahumi	assist and be responsible to the head of the Department, in terms of: Provision of general	Male

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	Г	ı	I	<u> </u>
		Regency	administrative services, equipment, staffing, planning, and finance, Preparation of secretariat work plans, Provision and processing of data for the preparation of strategic plans, work plans, and reporting of performance accountability, Coerdination of the preparation of work plans and implementation of the tasks of the Office in an integrated manner, Preparation of budgets and administration, coordinating and consulting with relevant agencies or agencies for smooth execution of tasks	
4	Any mulyani S.Pd.i M.Si	Head of Finance and Planning at the Regional Secretariat	assist the Regional Secretary through the Assistant General Administration in implementing regional policies, as well as monitoring and evaluating the implementation of regional policies in the fields of planning, finance and reporting within the Regional Secretariat.	Female
<u>5</u>	<del>Ir. Sudrajat</del>	Regent's Expert Staff for Social Affairs	provide considerations and assessments in the community sector regarding every policy- making process as well as ideas and ideas on the implementation of regional government functions in accordance with the vision and mission of the Regional Head	<del>Male</del>
<u>6</u>	Ir. Bambang Widyantoro	Regent's Expert Staff for Development	Provide considerations and assessments in the field of Development and	<u>Male</u>

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		and Economics	Economics regarding every policy-making process as well as ideas and ideas on the implementation of regional government functions in accordance with the vision and mission of the Regional Head	
<u>Z</u>	<u>Yayan</u> <u>Sofian</u>	Head of the Food Crops Production Section of the Agriculture Service	carry out the preparation, implementation of policies, and providing technical guidance, as well as monitoring and evaluation in the field of food crops	<del>Male</del>
α <u>δ</u> ]	<del>Tana Indra</del> <del>Permana</del>	Head of Waste Management	assist the Head of Service in formulating and implementing technical policies for the development of waste reduction, utilization, transportation and processing.	<del>Male</del>
(d)	<u>Adi Istiadi</u>	head of the PSDA division of the Public Works Department Sukabumi Regency	carry out regional government affairs in the	Male Male
<del>10</del>	<u>Rasyad</u> <u>Muhara</u>	Head-of Environmental Management environmental service	Prepare work programs, implement, regulate, evaluate and report on the implementation of data and information inventory of natural resources, RPPLH and KLHS, environmental impact studies and environmental maintenance	<del>Male</del>
<u>11</u>	Yudi indriawan.S ,Hut,MSE,M	Head of Cooperation Section at the	carry out some of the tasks of Assistant for Government and People's	<u>Male</u>

	<u>Se</u>	Regional Secretariat of Sukabumi Regency	Welfare in the scope of cooperation.			
<u>,12</u>	Sahril Hidayat	Secretary of the Department Housing & Human Settlements Development	carry out the tasks of decentralization and deconcentration in the housing, residential and land areas in accordance with the laws and regulations.	Male	Formatted: For	nt color: Custom Color(RGB(14,16,26))
<u>13</u>	Imas Latifah	Head of Processing and Marketing Division of Food Crops and Horticulture	Assisting the Regent in carrying out Government Affairs in the field of agriculture, the Food Crops and Horticulture sub-business which is the authority of the Region	<u>Female</u>		
<u>.14</u>	M. Kosar	Ketua Badan Pengurus Absolute Indonesia	Mentoring and facilitation of forest farmer groups	Male	Formatted: For	nt color: Custom Color(RGB(14,16,26))
<u>15</u>	Purnama Wijaya	Badan Pengurus Absolute Indonesia	Mentoring and facilitation of forest farmer groups	Male	Formatted: For	nt color: Custom Color(RGB(14,16,26))
<u>,16</u>	<del>Yudiana</del>	Sekretaris Badan Pengurus Absolute Indonesia	Mentoring and facilitation of forest farmer groups	Male	Formatted: For	nt color: Custom Color(RGB(14,16,26))
<u>47</u>	Maksum Syam	Sajogyo Institute	conducting research, documentation, education, training, and policy advocacy to achieve the ideals of agrarian justice and community assistance	Male	Formatted: For	nt color: Custom Color(RGB(14,16,26))
.18	Isnenti A.	Manager data and information services of Forest Watch Indonesia	conducting research on ecological-socio-economic conditions related to forests, community assistance, and advocacy related to	<u>Female</u>	Formatted: For	nt color: Custom Color(RGB(14,16,26))

			saving Indonesia's forests	
<del>19</del>	<del>Deden P</del>	IFM Fund Staff	facilitate the work of Independent Monitors in conducting monitoring in the forestry sector through a sustainable funding mechanism and institutional capacity building	Male

1. Notes resulting from consultations with the Sekda Sukabumi are ast follows

- The Regional Secretary of Sukabumi Regency supports the proposed activities and supports all efforts to maintain sustainability and empower potential for the community. In addition, this program must involve many stakeholders, one of which is to work together with the provincial government as the party that has the authority related to watershed management.
- The local government has a minimal budget so that programs regarding climate change adaptation cannot be implemented. The support from other parties will help achieve the programs that have been planned by the Sukabumi Regional Government.
- The program implementation process will be hampered because there is no MoU, therefore it is necessary to draw up an MoU as an agreement for the division of roles and functions in implementing the program
- 2.- The Regional Secretary asked the consortium to follow up the consultation by drawing up an MoU (Memorandum of Understanding) between the consortium and the Regent or the relevant local governmentgoverment, if the proposed project has —passed. This is so that each party has clarity regarding their rights and obligations in the context of implementing the designed climate change adaptation actions.
- Conduct an environmental program assessment into what is suitable for a targeted area.
- Based on the results of the consultation, the priority location of the program must be in the Upstream and Downstream of the Cimandiri Watershed by considering the physical condition of the area and the society
- The MoU will regulate the mechanism for requesting cooperation and will also regulate cooperation activities.

The documentation report of the consultative process with the local government can be seen at this link: Documentation Report

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Figure 16. Consultation meeting with Regional Secretary of Sukabumi Regency



Figure 17. Submission of Recommendation Letter from Regional Secretary of Sukabumi Regency to Consortium

Head of the Gunung Halimun Salak National Park Office, to consolidate the suitability of the proposed project submitted to the Adaptation Fund with the Program Implementation Plan (RPP) and Annual Work Plan (RKT), as

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stipulated in the Conservation Partnership Cooperation Agreement, as well as to accommodate/gather input, related to the design of climate change adaptation project.

- The Government of Cipeuteuy Village, Mekarjaya, Cianaga, Kabandungan District and the Government of Pulosari and Gunung Endut Villages, Kalapanunggal District, to explore information about community empowerment programs that need to be improved, especially the empowerment of Forest Farmers Groups. The point of this meeting is: 1] The Village Government agree and support the proposed program to the Adaptation Fund; 2] The programs must be able to follow up on activities that have been carried out previously, by strengthening and continuing all programs that have been planed; 3] Agroforestry programs must use quality and certified fruit trees for satisfactory results; 4] There must be an exchange of knowledge related to the program that has been carried out, including the exchange of information that will be built; 5] Increasing community income through agroforestry and silvopasture must be prepared from the start for marketing; 6] Increasing food security against climate change must be integrated with government programs, as well as encouraging the government to have a road map and action plan related to climate changes.
- 4. 14-Management of the Forest Farmers Group, to get input and ensure that the proposed program is in accordance with the group work plan in each region. List of farmer groups who participated in the meeting can be found in this link: List of Attendees From Consultation Meeting With Forest Farmer Groups.

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Figure 18. Consultation Meeting with Farmer Groups in Kabandungan Sub-district

	<u>N</u> <u>0</u>	<u>Nama</u>	<del>Title</del>	Role	Male/Female
	<u>4</u>	Cecep sanusi	Ketua Tugu Tani		<u>Male</u>
	<u>2</u>	<del>Nawawi</del>	Sekertaris Tugu Tani		<u>Male</u>
	<u>3</u>	<u>Oding</u>	Bendahara Tugu Tani		<u>Male</u>
	<u>4</u>	Asep Tisna Mubarok	Ketua Cahaya Mandiri		<u>Male</u>
j	<u>5</u>	<del>Ojat</del>	Sekertaris Cahaya Mandiri		<u>Male</u>
	<u>6</u>	<u>Baban</u>	Bendahara Cahaya Mandiri		<u>Male</u>
	<u><del>Z</del></u>	<u>Santa</u>	Ketua Naga Tonjong		<u>Male</u>
	<u>8</u>	<del>Wardi</del>	Sekertaris Naga Tonjong		<u>Male</u>
	9	<del>Medi</del>	Bendahara Naga Tonjong		<u>Male</u>
	<u>4</u> <u>0</u>	<u>Awarji</u>	Ketua Datar Tani		<u>Male</u>
	<u>4</u> <u>4</u>	<u>Juandi</u>	Sekertaris Datar Tani		<u>Male</u>
	<u>4</u> <u>2</u>	<u>Abdilah</u>	Bendahara Datar Tani		<u>Male</u>
	<u>4</u> <u>3</u>	<u>Bubun</u>	Ketua Naga Lestari		<u>Male</u>
	<u>1</u> <u>4</u>	<u>Makmun</u>	<u>Sekertaris Naga</u> <u>Lestari</u>		<u>Male</u>
	<u>4</u> <u>5</u>	<u>Oman</u>	Bendahara Naga Lestari		<u>Male</u>
	<u>1</u> 6	<del>Yandi</del>	Ketua Berkah Tani		<u>Male</u>

	<u>1</u> 7	<del>Dedin</del>	Sekertaris Berkah Tani	<u>Male</u>
:	<u>+</u> <u>+</u> 8	<u>Agus</u>	Bendahara Berkah Tani	<u>Male</u>
	<u>1</u> 9	<u>Andi</u>	Ketua Tumaritis	<u>Male</u>
	<u>2</u> 0	<u>Sukma</u>	<u>Sekertaris Tumaritis</u>	<u>Male</u>
	<u>2</u> 1	Aji Saputra	Bendahara Tumaritis	<u>Male</u>
 	<u>2</u> 2	<del>Eko</del>	Ketua Sumber Rezeki	<u>Male</u>
	<del>2</del> 3	<u>Mara</u>	Sekertaris Sumber Rezeki	<u>Male</u>
	<del>2</del> 4	<del>Jajat Sudrajat</del>	Bendahara Sumber Rezeki	<u>Male</u>
	<u>2</u> 5	<u>Oding</u>	Ketua Jaya Berkah	<u>Male</u>
	<u>2</u> 6	<u>lwan</u>	<u>Sekertaris Jaya</u> <u>Berkah</u>	<u>Male</u>
	<del>2</del> 7	Restu	Bendahara Jaya Berkah	<u>Male</u>
	<u>2</u> 8	<u>Kosim</u>	Ketua Sukamanah	<u>Male</u>
	<u>2</u> 9	<u>Dedih</u>	<u>Sekertaris</u> <u>Sukamanah</u>	<u>Male</u>
	<u>3</u> 0	<u>Mulyadi</u>	Bendahara Sukamanah	<u>Male</u>
j :	<u>3</u> 1	<u>Sugiri</u>	Ketua KOPEL	<u>Male</u>
	<del>3</del> 2	<del>Tirta</del>	Sekertaris KOPEL	<u>Male</u>
	<u>3</u> 3	<u>Irwan</u>	Bendahara KOPEL	<u>Male</u>

3 4	<u>Oman</u>	Ketua Jaya Mekar Gede Harepan	<u>Male</u>
<u>3</u> <u>5</u>	<del>Tatang</del>	Sekertaris Jaya Mekar Gede Harepan	<u>Male</u>
<u>3</u> <u>6</u>	Ading	Bendahara Jaya Mekar Gede Harepan	<u>Male</u>
3 <u>7</u>	Emed	Ketua Mekar Mukti	<u>Male</u>
<u>3</u> <u>8</u>	<u>Eman</u>	Sekertaris Mekar Mukti	<u>Male</u>
<u>3</u>	<u>Warta</u>	Bendahara Mekar Mukti	<u>Male</u>
4 9	<u>Anap</u>	Ketua Segar Alam	<u>Male</u>
4 4	<u>Nasa</u>	Sekertaris Segar Alam	<u>Male</u>
4 2	<del>Yadi</del>	Bendahara Segar Alam	<u>Male</u>
	<del>5.</del>		

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### Stakeholder Mapping

80. The listed stakeholders (government (BTNGHS, , corporate, KTH, NGOs media and public), either proponents or opponents are subsequently assessed based on its influence (power) and interest and classified into four groups, i.e. key stakeholder, secondary stakeholder, context setter and crowds. The most common tool used to visualize this, is to place the stakeholders in a matrix with two different axes (see below).



Figure 19. Power Mapping of Multi Stakeholders in This Project

- 81. Key stakeholders have moderate to high levels of influence and interest. The appropriate participation strategy for key stakeholders is to involve their participation in all stages of the program, then for the main stakeholders, participation efforts are carried out in the form of sharing information and actively participating in implementing the program. And for secondary stakeholders involved in their participation by supporting the program stages through aspirations or direct activities.
- 82. The stakeholders in quadrant C (Crowd) are the least important but there might be a need to keep them informed, this could be agencies which have indirect relation with the program but their involvement may raise legitimacy, or may use media to promote the program.
- 83. Contest setters are stakeholders that can bring risk so its existence needs to be monitored and well managed. These stakeholders can change to key players for some reason. Good relationships with stakeholders continue to be built. For that, all the information needed must still be given so that they can continue to play an active role in achievement of objectives.

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### I. Justification for Funding

- <u>84.</u> Funding from the Adaptation Fund for this project will be used to increase community resilience at the village level, especially those who are members of forest farmer groups, regarding the impacts of climate change that can occur and affect people's daily lives.
- 85. In *Project Component 1*, it is projected that no planning process will occur without funding from Adaptation Fund. There will be no updated plan document for increasing resilience at the district level. There will be no resources mobilized for capacity building of key stakeholders and strengthening collaborative work between local governments and business actors, community groups, CSOs, academics and other related stakeholders. Along with funding for *Project Component 1*, which will focus on several villages upstream and downstream of Cimandiri Watershed in Sukabumi Regency. Funding from AF in *Project Component 1* will be used for activities that produce climate change adaptation action plans specific to Sukabumi Regency. The process starts with collaborative action research, followed by increasing the parties' capacity, preparing academic papers based on research results, and finally encouraging the formation of economic and adaptation groups.
- 86. In *Project Component 2*, without funding from Adaptation Fund and output from Project Component 1, it is projected that forest and land management with community involvement will run as "business as usual". Threats from human activities (anthropogenic) and the impact of climate change will continue to occur with increasing trends in resource losses, yield reduction, crop failure due, pasture losses, and water and food insecurity. Initiating watershed-based ecosystem management in the Cimandiri watershed through collaborative action with the community will increase community resilience to climate change and economic welfare.
- 87. In *Project Component 3*, without funding from AF, Preparing the RAD API and Information System related to climate change in the Sukabumi Regency will still not run. Funding for the Adaptation Fund will accelerate the processes of preparing both the RAD API Sukabumi Regency and Information System through collaborative multi-stakeholder development and active participation of key beneficiaries.

## J. Sustainability

88. With the commencement of this project, sustainability will be considered, particularly issues of resilience, local ownership, and future strategies for managing expectations. Broadly speaking, these considerations are as follows:

To ensure that sustainability objective, from the beginning this project will create enabling conditions for local community, government, and local organizations to have hands-on experiences, increased awareness, capacity, capability and understanding on how to protect and sustainably utilize the ecosystems upon which their livelihoods depend. A multi-stakeholder platform will be set up with technical working groups reporting back on a regular basis, while at the same time encouraging greater collaboration among stakeholders.

- 89. The programme of social forestry through conservation partnerships (*Mitra Konservasi*) will ensure sustainability of improved forest management and protection of the ecosystem that plays an important role in increasing ecological resilience. The strengthened institutional capacity of community forests including to scale up their businesses, and smart farming systems to implement their long-term management plan which integrate the adaptation actions will sustain their contribution on increasing resilience. In this case the role of community organization to monitor the quality of forest and other ecosystem types will ensure the sustainability of increased resilience.
- 90. Particularly related to the livelihood, the community will also be equipped with business institutions to further maximize their financial income. Market and value chain analysis will be the basis for building long-term cooperation with the private sectors, including to access wider markets. Furthermore, the community will be empowered with the legally binding institution to protect their rights and ownership of any future benefits.
- 91. After the project, more local communities will have awareness and knowledge about climate change and economic resilience, so that they have the ability to maintain agricultural land use and maintain their water management systems. This includes the adaptation action plan that will be produced that ensures financial sustainability for more effective interventions to increase resilience within certain villages of project location. The financial sustainability at community level, will be guaranteed as well by increased revolving fund that gradually widen their beneficiaries.
- 92. This project will also support the development of local institutions to ensure the sustainability of the provision of ecosystem services. Where appropriate, project outputs will institutionalize a holistic watershed management approach that involves the role of communities especially those upstream into Sukabumi Regency planning.

## K. Environmental and Social Impact and Risk

Basically, all kinds of climate change adaptation activities have the potential to pose risks to the surrounding environment and social life of the community. However, this potential risk will continue to be intervened so that it can be minimized or even not occur by, among other things:

### Environmental Risk

93. Through the introduction of agrosilvopasture and agroforestry systems to increase community economic resilience, there is potential for damage to watersheds and

potential livestock and agricultural waste can occur. Based on this possibility, it is necessary to raise awareness and increase community knowledge for the implementation of agrosilvopasture and agroforestry that are not only climate-smart, but also sustainable based, so that they do not have the potential to pollute the watershed. It is important to continue to emphasize the benefits of watershed conservation. The awareness-raising process, by passing from one community to another, must be initiated, so that the awareness-raising process after the program is completed can continue.

### 2. Social Risk:

94. The social risk that may arise from this project is the inequality of community access to land whose management will partner with the National Park. This inequality of access can be caused by only certain figures who are continuously involved in the processes of awareness raising, increasing knowledge, and technical skills related to adaptation. So, the emphasis on a collaborative, inclusive and equal process between each stakeholder needs to be emphasized and evaluated continuously.

95. Another social risk is social jealousy that may arise from other villages that are neighbors of the village, but the implementation of the adaptation program that will run is not implemented. Here, the role of learning documents and follow-up plans (RTL) is very large, so that when the program is successfully implemented, the National Parks, Regional Governments, and Community Groups can jointly initiate collaborative initiatives to replicate success in the villages affected by the program, to other villages in the vicinity.

Table 4. Environmental and Social Impact and Risk

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Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	The activities that have been defined at project preparation phase are aligned with existing laws and normative acts. However, activities in component number 3 is a collaborative production about adaptation strategies that needs to be done.	Impact: The establishment of RAD API at the Sukabumi Regency level, and the formation of an information system that encourages low disaster risk development  Risk Category C: low to almost no risk
Access and Equity		Impact : Equitable access to land management in

<u></u>		
		partnership with National Parks  Risk Category C: The risk of inequality in access due to the non- involvement of women, disabled and other marginalized groups. There needs to be an emphasis on collaborative processes on par with the GEDSI approach.
Marginalized and Vulnerable Groups	In the beginning. this This project needs to assess marginalized marginali sed groups to be included in the collaborative process. An assessment for vulnerable groups needs to be done to prioritize prioritise which village to implement the programme. Intensive communication must be buildbuilt, so their representative can be involved in the programme	Impact : The program will target the most vulnerable groups to the impacts of climate change, and the marginalized groups will be empowered.  Risk Category B:  Medium Low risk
Human Rights	The program will not harm human rights and ensure every right will be respected	Category CX
Gender Equality and Women's Empowerment	An assessment of women's groups is needed and the potential for women's involvement in programs related to increasing economic resilience.	Impact: Through the GEDSI approach, women in the program's target villages will be empowered with adaptation knowledge and have economic independence, with a target objective objective of 50% of women's groups in each target village.

<u> </u>		
Core Labour Rights	No labor rights of local farmer groups will be harmed in the process of implementing the program	Risk <u>Category C</u> : low risk <u>Category C</u> *
Indigenous Peoples	There is no indigenous people in community in the targeted villages	Category CX
Involuntary Resettlement	None of the activities of the project are aimed at displacing communities either voluntarily or by force.	Category CX
Protection of Natural Habitats	Need to do rapid assessment to identify essential ecosystem and existing of natural habitats.	Impact: The project that will take place directly will help protect natural habitats through Watershed protection. The concept of agroforestry and agro silvopastureagrosilvopa sture will also limit the community from land conversion.  Risk Category C: low risk
Conservation of Biological Diversity	The project needs to do assessment to identify the existing of biodiversity*	Impact: The preservation of natural habitats will directly affect the preservation of the wealth of animal biodiversity in the program target locations. In addition, the approach of land rehabilitation programs, agro_silvopasture, and agroforestry will

		increase the number of endemic trees in the location.	
		Risk Category C	Formatted: Font color: Auto
Climate Change	The implementation of project will not increase greenhouse gas emissions significantly and will not worsen the climate change impact in any other way.	All project components and activities will increase local capacity to sustainably adapt to climate change in the long term and climate variability in the short and medium term. The project will not increase greenhouse gas	
	* <u>*</u>	emissions significantly and will not worsen the climate change impact in any other way.	Formatted: Font color: Auto
		Risk Category C	Formatted: Font: 11 pt, Font color: Auto
Pollution Prevention and Resource Efficiency	This project will not added pollutant and will optimize X	This project will not added pollutant and will optimize and conserve the potential natural resources. Risk Category C	Formatted: Left, Border: Top: (No border), Bottom: (No border), Left: (No border), Right: (No border), Between : (No border)
Public Health	The project plan does not have an impact on health. And the implementation of project will follow health protocol. And the implementation will not spread any pandemic (Covid19 and Monkey Pox).	Risk Category C	
Physical and Cultural Heritage		Impact : Physical and cultural heritage will be respected. Any cultural heritage will be enhanced for the sake of ecology and community.	
		Risk Category C	Formatted: Font color: Auto

	Assessment in component 1 will collect local knowledge on physical and cultural heritage in the targeted areas. This will allow analyzing the perceptions on physical and cultural assets that may be highly valuable to the community.			
Lands and Soil Conservation	Through watershed management and practice of Agroforestry and Agrosilvopastoral, lands and soil will be conserved. Critical land will also be rehabilitated. Because the community who will implement the programme, will achieve knowledge about the importance of conserving lands and soil to prevent hazards from climate change. And implementing climatesystem which is ecological friendly.	Impact: Through watershed management and practice of Agreforest and Agrosilvopastoral lands and soil will be conserved. Because the community who wimplement the programme, will achieve knewledge about the importance conserving lands and soil to prevent hazard from climate change.  Risk Category C.	vill of the state	Formatted: Border: Top: (No border), Bottom: (No border), Left: (No border), Right: (No border), Between: (No border)  Formatted: Font color: Auto

PART III: IMPLEMENTATION ARRANGEMENTS

Adequacy of project / programme management arrangements, in compliance with the Gender Policy

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This project will be implemented in 15 villages, five sub-districts, Sukabumi regency, and the West Java province. The targets of this program are groups of vulnerable farmers and women who depend on the land and/or forest areas for their livelihoods.

No.	Sub-District	Village	<u>Male</u>	<u>Female</u>	Popul ation	Hazard Potenti al (Inarisk)
4	Simpenan	Cidadap	<del>7.822</del>	<del>7.636</del>	15.45 8	<del>High</del>
2	<u>Simpenan</u>	Cibuntu	<del>2.387</del>	<del>2.339</del>	4.726	
3	<u>Simpenan</u>	<b>Mekarasih</b>	<del>2.779</del>	<del>2.779</del>	<del>5.558</del>	
4	Geger Bitung	<u>Ciengang</u>	<del>2.018</del>	<del>2.006</del>	4.024	<u>High</u>
5	Geger Bitung	Sukamana h	1.774	<del>1.770</del>	3.544	
6	Geger Bitung	Caringin	<del>3.619</del>	<del>3.652</del>	7.271	
7	<del>Kalapa</del> Nunggal	Pulosari	<u>4.825</u>	<del>4.623</del>	9.448	High
00	<del>Kalapa</del> Nunggal	Gunung Endut	<del>4.471</del>	<del>3.984</del>	<del>8.455</del>	
9	<u>Cikidang</u>	Gunung Malang	<del>2.151</del>	<del>2.127</del>	<del>4.278</del>	High
<del>10</del>	<mark>Kabandunga</mark> n	<u>Mekarjaya</u>	<del>1.834</del>	<del>1.979</del>	<u>3.813</u>	<del>High</del>
11	Kabandunga n	Tugu Bandung	<del>5.046</del>	4.806	<del>9.818</del>	
<del>12</del>	Kabandunga n	Kabandung an	<del>4.278</del>	<del>4.152</del>	8.430 7	
<del>13</del>	Kabandunga n	Cipeuteuy	<del>3.911</del>	<del>3.664</del>	<del>7.575</del>	

14	Kabandunga n	Cihameran g	<u>3.967</u>	<u>3.549</u>	76.51 6947	
<del>15</del>	Kabandunga n	<u>Cianaga</u>	<u>3.230</u>	<u>3.121</u>	<u>6.251</u>	
Jumlah Total					80.37 671.9 46	

No	Sub-District	<del>Village</del>	Populat ion	Hazard Potential (Inarisk)
<u>1</u>	Simpenan	Cidadap	15.458	
2	<u>Simpenan</u>	<u>Cibuntu</u>	4.726	
3	<u>Simpenan</u>	<u>Mekarasih</u>	<del>5.55</del> 8	-High
4	Geger Bitung	<u>Ciengang</u>	4.024	
5	Geger Bitung	<u>Sukamanah</u>	3.544	-High
6	Geger Bitung	Caringin	7.271	
7	Kalapa Nunggal	Pulosari	<del>9.448</del>	
8	Kalapa Nunggal	Gunung Endut	<del>8.455</del>	High
9	Cikidang	Gunung Malang	4.278	High
<u>10</u>	Kabandungan	<u>Mekarjaya</u>	<del>3.813</del>	High
11	Kabandungan	Tugu Bandung	<del>9.818</del>	

<del>12</del>	<u>Kabandungan</u>	Kabandungan	<del>8.437</del>	
<del>13</del>	<u>Kabandungan</u>	Cipeuteuy	<del>7.575</del>	
<u>14</u>	<u>Kabandungan</u>	Cihamerang	6.947	
<del>15</del>	<u>Kabandungan</u>	Cianaga	<del>6.251</del>	
	Jumla	h Total	<del>71.946</del>	

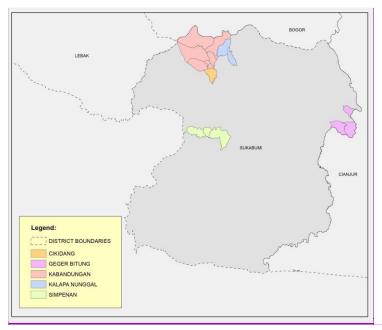


Figure 14. Program Location Map

Analisis Gedsi dan Analisis Kelas sebagai bagian dari research awal dalam penyusunan rencana aksi adaptasi.

Measures for financial and project / programme risk management (anggi)

Commented [6]: Mbak @ia@fwi.or.id minta tolong peta ini diproduksi ulang, dengan mengikutsertakan aliran DAS Cimandiri, supaya kita tahu mana yang hulu dan mana yg hilir~ \_Assigned to Isnenti Apriani\_ Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy and Gender Policy of the Fund

Project/program preparation has identified environmental or social risks, where the proposal should include environmental and social management plans that identify actions necessary to avoid, minimize, or mitigate potential environmental and social risks.

### Vulnerable groups in the project location

Project/program preparation has identified environmental or social risks, where the proposal should include environmental and social management plans that identify actions necessary to avoid, minimize, or mitigate potential environmental and social risks.

Environmental and Social Principles	Description of Risk	Risk Category	Risk Mitigation Strategy
Masyarakat yang tergabung dalam Kelompok Tani Hutan	Kelompok Tani Hutan tidak mendapatka n pengakuan atau keamanan dalam pengelolaan lahan	<del>Medium</del>	Memban gun multistak eholder engagem ent dengan TNGHS Perhutan i, dan Pemerint ah Daerah Kabupat en Sukabu mi

## Grievance Mechanism

In alignment to the Adaptation Fund's Environmental and Social

Safeguards Policy, Forest Watch Indonesia as executing entity has a grievance mechanism in place and will be inform to related stakeholders, available in the target areas, ensuring an accessible, transparent, fair and effective means of communicating concerns during project design and implementation. Project stakeholders affected by the project will be informed of the grievance mechanism for any criticism or complaint of an activity.

This grievance mechanism will allow affected stakeholders to raise concerns and will be given the option to remain anonymous. Modalities for raising grievances will include a postal address to which community members can write in any language, an email address and a confidential telephone number. Consultations and workshops held throughout the project implementation will also serve as a means for stakeholders to raise concerns or suggestions.

These mechanisms consider the special needs of different indigenous groups as well as gender considerations. A hotline and mailbox offer an immediate way for affected stakeholders to express their concerns. The hotline will provide suggestions on how to improve project design and implementation.

In addition to the grievance mechanism set in place by the implementing entity, the address and e-mail address of the Forest Watch Indonesia will also be made public (i.e., social media, participatory workshops, etc.) for anyone to raise concerns regarding the project:

Forest Watch Indonesia

Sempur Kaler Street, Number 62

**Bogor** 

Email pengaduan@fwi.or.id

More Information about grievance mechanism :

https://fwi.or.id/tentang-kami/

Gender Assessment
Placed in separate document

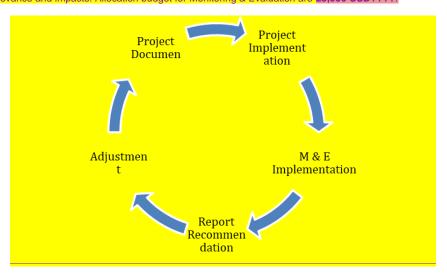
**Monitoring & Evaluation** 

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The monitoring and evaluation activities will provide insights needed regarding the project strategy implementation, effectiveness, and efficiency of the resource's utilization, as well as relevant conditions that will be included in the reporting to guide future planning.

Monitoring and evaluation will be held in the midterm of the project and at the end of the project. Monitoring will be carried to see the achievement in each phase and program outcomes (output, outcome) as planned. Monitoring and evaluation will be conducted in the document review method, field survey, interview, or discussion of the parties. Monitoring is directed to see efficiency, effectiveness, relevance and impacts. Allocation budget for Monitoring & Evaluation are 25,000 USD????



Monitoring and evaluation will operate at project management and implementation (pilot site and management plan) levels:

Project management monitoring: Indicators will be reviewed at an inception workshop at the beginning of the project, and at the mid-term review; throughout the project life, a Project Steering Committee will monitor indicators in the logframe (LF) and milestones in the management form, and any subsequent revisions of them, as a basis for measuring the progress and success of the project and for guiding implementation. The results of this monitoring will be reported in annual reports, which will also contain a discussion of constraints and emerging issues.

Pilot project monitoring: village management plans developed by communities at pilot sites will include targets and indicators for monitoring by the community themselves. Where possible, these will be monitored by the communities themselves (with necessary support from the project in the short term).

Management plan process monitoring (internal quarterly monitoring): detailed planning with local government and/or stakeholders at the beginning of the project will define more precisely the process for development of the management plan. Indicators of progress will be monitored by the relevant implementing body and fed back to a forum of stakeholders established to oversee the process.

Long-term monitoring baselines will be established and capacity built for repeating simple monitoring protocols to allow monitoring over extended time periods. The management plan will contain a provision for the monitoring of key resources, using GIS/satellite imagery and ground surveys for plots monitoring by local institutions after the life of the project (necessary for any future Adaptation Programme).

External evaluation: Project plans and impact will be evaluated mid-term of the project life, when much more detailed information from social-ecological surveys will be available to evaluate how appropriate

and meaningful the proposed activities were planned. Particular attention should be given to the analysis of the response of the stakeholders to the project. At the end a final review mission will assess the final results, sustainability and applicability of project recommendations for follow up and endorsement by local agencies and communities.

In addition, at the end of the project life, a financial audit will be carried out to ensure the responsible use of funds

E. Provide a results framework for the project proposal, including milestones, targets and Indicators.

<u>Outcome</u>	<u>Output</u>	<u>Indicator</u>	<u>Milestone</u>
Component 1, Increasing	the adaptive capacity of t	he community for economic	resilience
1.1 Collaborative adaptation action strategy with the community	1.1.1 Collaborative Action Research		
'	1.1.2 Socio-ecological analysis report	Research Report Document	
	1.1.3 Decument adaptation action strategy	Strategic adaptation planning document	
1.2 Increased knowledge, adaptability and economic resilience of the community	1.2.1 The capacity for adaptability and management of the 14 KTH natural resource area increases		
•	1.2.2 Capacity and technical knowledge related to climate-smart agrosilvepasture and agroforestry in 14		

	KTH have increased		
	1.2.3 Capacity of 14 KTH related to economic institutions		
Component 2. Collective J	Adaptation Actions related	d to ecosystem restoration	
2.1. Ideal watershed management (Law 32 of 2009)	2.1.1 Critical land in the Watershed rehabilitated		
'	2.1.2 Community- based climate-smart agro-silvopastoral and agreforestry practices		
	2.1.3 Climate change adaptive task force		
3. Policy Advocacy			
3.1 Establishment of a watershed-based and collaborative community-based protection system for living space and	3.1.1 Cross-sector collaborative forum		
<mark>livelihoods</mark>	3.1.2. RAD-API		

3.1.3. Information Systems	
3.1.4. RTL document and replication	

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

<u>Outcome</u>	Output	<u>Indicator</u>	Fund Outcome	Fund Indicator	Amount Fund
Component 1.	Increasing the ad	aptive capacity o	f the community	fo <del>r economic res</del>	<del>ilience</del>
1.1 Collaborative adaptation action	1.1.1 Collaborative Action Research				<u>210,000</u>
strategy with the community	1.1.2 Socio- ecological analysis report				
	1.1.3 Document adaptation action strategy				

4.2 Ideal watershed management (Law 32 of 2009)	1.2.1 The capacity for adaptability and management of the 14 KTH natural resource area increases				
	1.2.2 Capacity and technical knowledge related to climate-smart agre silvopasture and agreforestry in 14 KTH have increased				
	1.2.3 Capacity of 14 KTH related to economic institutions				
Component 2.	Collective Adaptatio	n Actions related	<del>I to ecosystem re</del>	storation	
2.1. Increased community economic resilience	2.1.1 Critical land in the Watershed rehabilitated				<u>310,925</u>
•	2.1.2 Community- based climate- smart agro- silvopastoral and agroforestry practices				
	2.1.3 Climate change adaptive task force				

3. Policy Advoc	<del>cacy</del>		
3.1 Establishment of a watershed- based and	3.1.1 Cross- sector collaborative forum		<u>280,000</u>
collaborative community- based protection system for	3.1.2 RAD-API		
living space and livelihoods	3.1.3. Information Systems		
	3.1.4. RTL document and replication		

# 

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

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:

Drs. H. Marwan Hamami, M.M, Regent of Sukabumi District Date: July, 15, 2022



#### **BUPATI SUKABUMI**

Palabuhanratu, /8 Juli 2022 M /8 Dzulhijjah 1443 H

Nomor Sifat Lampiran Penting

LH.01/5235 -SAA/2022

Dukungan Perluasan Program/ Kegiatan Absalute Indonesia.

Kepada

Yth. Ketua Badan Pengurus Absolute Indonesia

di\_

**TEMPAT** 

Memperhatikan Surat Nomor : 006/SK-SPK/ABS/VII/2022 Hal Pemohonan Rekomendasi untuk pelaksanaan pengembangan dan perluasan program/kegiatan bersama masyarakat terhadap pengelolaan lahan/hutan, melalui peningkatan fungsi ekologi kawasan sebagai daerah tangkapan air di wilayah Daerah Aliran Sungai (DAS) Cimandiri, serta serangkaian kegiatan

wilayan Daeran Alirah Sungai (DAS) Cimanoiri, seria serangkalah kegiatan penjengkatan kapasitas dan pengembangan ekonomi masyarakat, kami sangat mengapresiasi kegiatan yang sudah maupun yang akan dilaksanakan.

Selanjutnya, untuk pengembangan dan perluasan program/kegiatan dan kemitraaan yang akan dilaksanan pada prinsipnya kami mendukung selama

- program/kegiatan tersebut:

  1. Selaras dengan Peraturan Daerah Nomor 4 Tahun 2021 tentang RPJMD Kabupaten Sukabumi 2021-2026, dengan Visi: Terwujudnya Kabupaten Sukabumi yang Religius, Maju dan Inovatif menuju Masyarakat Sejahtera Lahir Batin dengan Misi yang terkait yaitu: Meningkatkan produktivitas dan
- daya saing ekonomi berbasis agribisnis dan pariwisata berkelanjutan.
   Meningkatkan partisipasi dan peran serta masyarakat dalam pengeloaan lingkungan hidup sesuai Perda 2 Tahun 2015 tentang Perlindungan dan Pengelolaan Lingkungan Hidup Daerah;
   Tidak bertentangan dan melanggar ketentuan peraturan perundang-
- undangan yang berlaku serta memperhatikan norma dan nilai budaya lokal yang ada; dan
  Melibatkan masyarakat dan stakeholders di setiap obyek/lokasi
- pelaksanaan kegiatan.

Demikian, agar dapat dipergunakan sebagaimana mestinya.

Drs. H. MARWAN HAMAMI, MM

BUPATI SUKABUMI.

Jalan Siliwangi Nomor10 Telepon (0266) 433611-431018 Faksimil (0266) 433614-221017-435006 Website: sukabumikab.go.id.,e-mail: setda@sukabumikab.go.id PALABUHANRATU 43364

# Ahmad Munawir S, Hut, M.Si. Kepala Balai Taman Nasional Gunung Halimun Salak

Date: December, 22, 2020





# PERJANJIAN KERJA SAMA ANTARA BALAI TAMAN NASIONAL GUNUNG HALIMUN SALAK DAN PERKUMPULAN ABSOLUTE HALIMUN INDONESIA

Nomor: PKS.2141/T.14/TU/KUM.3/12/2020 Nomor: 001/ABS/PKS-TNGHS/XII/2020

TENTANG PENGUATAN FUNGSI TAMAN NASIONAL GUNUNG HALIMUN SALAK MELALUI KEGIATAN PEMBERDAYAAN MASYARAKAT

Pada hari ini, Selasa Tanggal Dua Puluh Dua Bulan Desember Tahun Dua Ribu Dua Puluh, bertempat di Loji – Bogor, yang bertanda tangan dibawah ini:

Nama : Ahmad Munawir, S.Hut, M.Si.
Jabatan : Kepala Balai Taman Nasional Gunung Halimun Salak.
Alamat : Jalan Raya Cipanas, Kecamatan Kabandungan, Kabupaten Sukabumi, Provinsi Jawa Barat, Kode Pos 43368.
Berdasarkan : Surat Keputusan Menteri Lingkungan Hidup dan Kehutanan Nomor: SK.25/MENLH/K/SETIEN/PEG.21/1/2020 tanggal 10 Januari 2020 tentang Pengisian dan Mutasi Jabatan Administrasi (Eselon III) Kementerian Lingkungan Hidup dan Kehutanan.

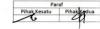
dalam hal ini bertindak untuk dan atas nama Balai Taman Nasional Gunung Halimun Salak (BTNGHS), selanjutnya disebut sebagai PIHAK KESATU.

Nama : Muhama Kosar
Jahatan : Ketua Badan Pengurus Perkumpulan ABSOLUTE HALIMUN INDONESIA (ABSOLUTE INDONESIA)

Alamat : Kp. Cipeuteuy Rt. 007/008, Desa Cipeuteuy, Kecamatan Kabandungan, Kabupaten Sukabumi, Provinsi Jawa Barat, Kode Pos 43368.

Berdasarkan : Surat Keputusan Menteri Hukum dan Hak Asasi Manusia Republik Indonesia Nomor: AHU-0010628.AH 01.07. Tahun 2019 tentang Pengesahan Pendirian Badan Hukum Perkumpulan ABSOLUTE HALIMUN INDONESIA tanggal 8 Oktober 2019.

dalam hal ini bertindak untuk dan atas nama Perkumpulan Absolute Halimun Indonesia (ABSOLUTE INDONESIA), selanjutnya disebut sebagai PIHAK KEDUA.



## **B.** Implementing Entity Certification

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

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (President Decree No. 16/2015; P.13/MENLHK/Setjen/OTL.0/1/2016; P.33/MENLHK/Setjen/Kum.1/3/2016; Indonesia Intended Nationally Determined Contribution/INDC; COP 21; Paris Agreement signed by Government of Indonesia; Book and Map of Information System of Vulnerability Index Data (SIDIK); Permen-KP No. 2 year 2013; Climate Change Adaptation National Action Plan and subject to the approval by the Adaptation Fund Board commit to implementing the Project in compliance with the Environmental, Social Policy and Gender Policy of the Adaptation Fund on the understanding that the Implementing Entity will be fully (legally and

### **Laode Muhamad Syarif**

Executive Director of Partnership for Governance Reform in Indonesia (Kemitraan)

financially) responsible for the implementation of this Project.

Implementing Entity Coordinator

Date: (Month, Day, Year) Tel. and email:

Project Contact Person: Dewi Rizki

Program Director For Sustainable Governance Strategic, Kemitraan

Tel. and Email: +62-21-7279 9566; Dewi.Rizki@kemitraan.or.id

<sup>-</sup> NIE = Kemitraan

<sup>&</sup>lt;sup>6.</sup> 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.

### **Gender Assessment**

Gender Equality	In 2019, the gender inequality index (IKG) in Sukabumi	Importance of selecting	Formatted: Font: (Default) Arial
	Regency was 0.544. Relatively high and above the average IKG Jakarta. The involvement of women in the Sukabumi Regency can be a catalyst in the value of gender inequality.	representatives from appropriate women's groups and ascertaining their preference for internally elected	Formatted: Font: (Default) Arial
	The involvement in parliament, which indicates the level of women's political literacy, is only 14%. There is no 2% increasement in the percentage	spokespeople, who are often not the same as formal leaders in administrative units	Formatted: Font: (Default) Arial
	of involvement between 2020 to 2021.	Ensure the dissemination of key program messages through various women-friendly channels, including radio, social media, word of mouth, banners, and audiovisual materials for the illiterate community.	Formatted: Font: (Default) Arial
		dissemination of messages in plain language, local languages if possible, and with pictures.	Formatted: Font: (Default) Arial
		messages that are disseminated through various media are packaged in a gendersensitive manner	Formatted: Font: (Default) Arial

Policy/Government of	The Indonesian government has initiated many initiatives to address gender inequality.	Integrating gender analysis and gender equality regulation	Formatted: Font: (Default) Arial Formatted: Font: (Default) Arial
Indonesia's (GOI)	Ratify the marriage law to revise the marriage age for women.	into programs and projects to identify	
Law for Gender	Pass the Law on the Crime of Sexual Violence. The initiation is	where specific vulnerabilities to	
Mainstreaming	aimed at gender mainstreaming. The Ministry of Women's	climate change lie, and where	Formatted: Font: (Default) Arial
	Empowerment and Child Protection issues general gender-responsive climate change adaptation guidelines. In the Sukabumi RPJMD 2018-2023, issues related to gender	opportunities for mitigating and adapting to climate change can be found;	Formatted: Font: (Default) Arial
	are included in strategic problems and issues that the Sukabumi Regency Government considers. Includes involving women in development	gender sensitive integrated in the project, conducting a gender analysis on all budget lines and financial instruments for in programs for adaptation, mitigation, technology transfer and capacity building are needed.	Formatted: Font: (Default) Arial



# 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.0/8/2002

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
- 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: August 8, 2022

Adaptation Fund Project ID:

Country/ies: Indonesia

Title of Project/Programme: Collaboration for the Conservation of Cimandiri Watershed

Landscapes through the Potential of Silvopasture and Community Agroforestry.

Type of IE (NIE/MIE): NIE

Implementing Entity: Kemitraan – The Partnership for Governance Reform

Executing Entity/ies: Consortium for Sukabumi Climate Adapation (Sajogyo Institute

**Absolute Indonesia Forest Watch Indonesia IFM Fund)** 

# A. Project Preparation Timeframe

Start date of PFG	1 September 2022
Completion date of PFG	30 November 2022

# **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	\$ 50.000
Grant	

# **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	Signature	Date	Project	Telephone	Email Address
Coordinator,	Olgridia	(Month,	Contact	relephone	Email Address
IE Name		day, year)	Person		
Laode M.	6	08 August	Dewi	+6221-	dewi.rizki@kemitraan.or.id
Syarif,	+	2022	Rizki	22780580	
KEMITRAAN					