



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

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category	: Small Zised Project/Programme
Country/ies	: Indonesia
Title of Project/Programme	: 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
Type of Implementing Entity	: National Implementing Entity
Implementing Entity	: Kemitraan (Partnership)
Executing Entity/ies	: KAPASITAS (Konsorsium Aksi Peduli Masa Depan Danau Tempe)

Amount of Financing Requested: \$996,633 (in U.S Dollars Equivalent)

Project / Programme Background and Context.

1. General Context

1. The Indonesian Government has determined 15 national priority lakes based on the 1st and 2nd



Figure 1. Tempe Lake

Conferences on National Lakes Indonesia held in 2009 and 2011, respectively. Lake Tempe is one of the priority lakes, as stated in Presidential Regulation No. 60 of 2021 regarding Saving National Priority Lakes. Lake Tempe is a flood-prone lake originating from the Asia-Australia Plate Basin. It is located among the Bila, Walanae, and Cenranae Rivers, South Sulawesi province, which is in the ecosystem of the Bila Walanae limestone area. Lake Tempe consists of 13 Districts and 4 Regencies, namely Enrekang, Sidenreng Rappang, Soppeng, and Wajo. The Lake Tempe area is 47,800 ha in the rainy season, and the water level is 10 m above sea level (asl). The current condition of Lake Tempe has a part of bodies or pools of water which always vary according to the season. The Environment and Forestry Ministry

of Indonesia (2019) stated that Lake Tempe only has an area of approximately 10,000 ha in the dry season with a water depth of 0.5 to 1 m, while around 28,000 to 43,000 ha was in the dry season with an average water level range from 6.0 to 9.0 m asl.

2. Lake Tempe is one of the largest lakes in the province of South Sulawesi, where 70% of the lake area is in Wajo, and the rest is in Sidenreng Rappang and Soppeng. In addition, the Bila River is one of the largest rivers that brings water into Lake Tempe through 7 Districts and 51 Villages spread across the catchment area of Lake Tempe (The Environment and Forestry Ministry of Indonesia, 2018). Wajo consists of 4 districts (Tempe, Sabbangparu, Tanasitolo, and Belawa), while Soppeng consists of two sub-districts (Marioriawa and Donri-Donri). Sidrap has four sub-districts (Pangcalautan, Pancarijang, Pitu Riawa, and Pitu Riase), while Enrekang has three sub-districts (Maiwa, Baraka, and Enrekang).

3. Lake Tempe has a 283,899.84-ha catchment area. Twenty-three rivers form two catchment areas as Lake Tempe intakes the Bila River, which flows from the northern part with a catchment area of 1,368 km². While the Walanae River flows into the Cenranae river from the southern part with a catchment area of 3,190 km², based on the management system for the Bila Walanae watershed (Figure 2).

4. Apart from flowing water into Lake Tempe during the rainy season, the Cenranae River is also a lake outlet to the east of Bone Bay, with a length of 70 km. Rainfall in the lake area is 1,400-1,800 mm per year and 1,400-4,000 mm per year in the Bila and Walanae catchment areas, respectively. Lake Tempe has quite a significant natural resource potential, consisting of the physical and biological environment. The physical environment that is the main attraction is the vast expanse of the lake connecting the three districts and the water resources for irrigation as well as raw water for the Regional Drinking Water Company (PDAM) of Wajo Regency. Lake Tempe is home to 17 species of fish, including freshwater shrimp, which have significant economic value for the local community. However, the population is currently decreasing and starting to be threatened with extinction due to overfishing and habitat destruction.

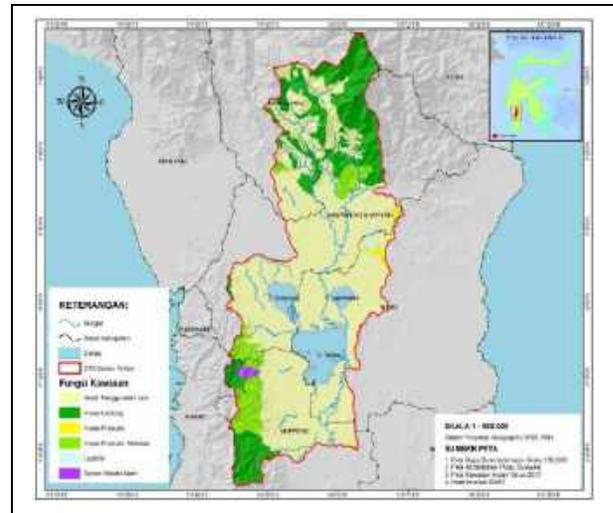


Figure 2. Map of the Bila Walanae Catchment Area Tempe Lake

2. Socio Economic Context

5. Lake Tempe is one of 15 major lakes in Indonesia, located in South Sulawesi province. The available population data showed that the area of the four regencies around the Lake Tempe catchment area ecosystem is 1,165,684 inhabitants of 573,520 men and 592,164 women. The number of inhabitants in Wajo, Soppeng, Sidenreng Rappang, and Enrekang are 379,396, 235,574, 323,194, and 227,520, respectively ¹. The community is very dependent on and utilizes the ecosystem in the Lake Tempe catchment area for their daily basis.

6. The main livelihood of the people in the Lake Tempe catchment area is agricultural cultivation, especially rice fields with an irrigation system that originates directly from the main Bila Walanae River, which flows into Lake Tempe. Plantations for Palawija, cocoa, and coconut plantations are also the local community's livelihood. Meanwhile, forestry activities include forest protection and security, agroforestry, reforestation, and afforestation. Social Forestry is also implemented by the community called the Community Forestry (HKM) scheme and the development of Community Forests managed by the Forest Farmers Group, with the main product being Non-Timber Forest Products (NTFP) such as candlenut, cashew, and honey. Meanwhile, the timber forest products (TFP) are teak (*Tectona grandis*).

7. Sericulture business is a non-timber forestry business through mulberry cultivation, caring silkworm, and sericulture weaving industries. These businesses were a hereditary effort being carried out by women and youth as part of the local wisdom and community culture in the catchment area of Tempe Lake, particularly in Soppeng, Sidenreng Rappang, and Wajo regencies. These efforts peaked between the 1980s and early 2000s, making South Sulawesi province the largest sericulture producer in Indonesia ².

8. Fish farming business in the Lake Tempe area is only carried out conventionally, passed down from generation to generation, and becomes a local wisdom culture ³. Examples of local wisdom are *Maccera Tappareng*, *Maccoa Tappareng*, *Makoti*, and *Hak Ongko*. This local wisdom is one of the tourism business potentials that can be packaged in the form of the annual Lake Tempe Festival. In addition, the economic potential is quite promising, namely the production of water hyacinth (*Eichhornia crassipes*),

¹ BPSSULSEL, 'Badan Pusat Statistik Provinsi Sulawesi Selatan', 2021 <<https://sulsel.bps.go.id/indicator/12/83/2/jumlah-penduduk.html>> [accessed 16 June 2022].

² Andi Sadapotto and others, *Laporan Kajian Rantai Nilai Komoditas Sutra Sulawesi Selatan* (Bappelitbangda Provinsi Sulawesi Selatan, 2021).

³ Rustam Pace and others, *Gerakan Penyelamatan Danau Tempe (GERMANDA)*, Kementerian Lingkungan Hidup Republik Indonesia, 2014.

which can be used as handicrafts, animal feed, fish feed, compost or organic fertilizer, and biogas.

9. Management of the ecosystem of the catchment area of Lake Tempe has so far failed to show maximum results. On several indicators, such as alternatives can be strengthened and developed, community institutions that are not functioning correctly, especially traditional institutions, and, more importantly, the lack of local community involvement in efforts to achieve integrated management of Lake Tempe. For example, the results of the institutional evaluation for Social Forestry located around Lake Tempe until now have not been felt to be strong enough to optimize the management of Social Forestry. In addition, forest and land restoration activities are still sub-optimal for some areas of the Lake Tempe drainage basin. The 2019-2022 report of forest and land rehabilitation and mangrove planting programs only covered an area of 25 ha for the Wajo Regency. To overcome the problems is required a Strategic Plan through the Regulation of the Minister of Environment and Forestry No. P 16/MENLHK/SETJEN/SET.1/8/2020 Regarding the Strategic Plan of the Ministry of Environment and Forestry for 2020-2024, stating that intensive collaboration between experts/academics, environmental and forest activists, non-governmental organizations (NGOs), and regional/government agencies are needed to realize national development.

3. Environmental Context and Climate Change Impact.

10. Climate change impacts many areas of life, including destroying marine ecosystems, forests, coral reefs, and biodiversity loss. For local people, climate change affects increased flooding, health problems, lack of clean water, damage to infrastructure, loss of livelihoods, loss of income, disruption, and economic losses. Climate change in Indonesia is evident from several projections. For instance, the air temperature tends to rise 1.5 °C, but lower than the global temperature rise of 2 °C, the dry season will be drier and longer, but the rainy season and the transitional season will be wet, and the sea surface temperature experienced an average Rise of 0.25 °C/decade, sea level rose 0.6–1.2 cm/year, seawater salinity increased 0.3–0.2 PSU/decade, wave height increased below 1 m, but in reality, it could reach over 1.5 m ⁴.

11. The Lake Tempe ecosystem is one of the ecosystems directly affected by climate change, which relates to many parameters around the lake area. Climate change forecasts for Lake Tempe showed the trend of changes in the value of the minimum air temperature was -0.5 - 1 ° C and the maximum air temperature change was -0.3 - 1 ° C, and future changes in precipitation were range from 15% - 45% % which tends to be the same throughout The Lake Tempe ⁵. An increase in monthly rainfall and an increase in the number of rainy days in August-November may increase the duration of flood events in the area around the Lake Tempe catchment area.

12. Changes in precipitation using the output of the climate model compiled by Worldclim. The amount of precipitation in the vicinity of lake Tempe is 1,400–1,800 mm/year and in the Bila and Walanae watershed area is 1,400–4,000 mm/year. Based on Figure 5, the highest average precipitation is from April to June, with the highest peak in May, while the lowest average monthly rainfall is from August to October, with the highest peak in September. The scale of the disaster based on risk from climate

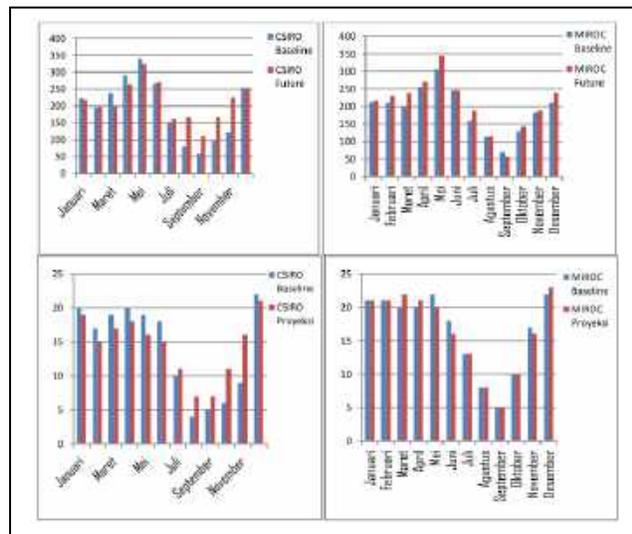


Figure 3. Graph of monthly (top) and daily (bottom) precipitation changes in CSIRO (left) and MIROC (right) models using Wordclim climate model output.

⁴ Rizaldi Boer and others, *Indonesia Third National Communication Under UNFCCC* (Direktorat General for Climate Change, Ministry of Environment and Forestry, 2017).

⁵ KLHK, *Roadmap Nationally Determined Contribution (NDC) Adaptasi Perubahan Iklim* (Jakarta (ID): Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia, 2020), IV.

change shows that the river basin of Lake Tempe is vulnerable to climate change, with all villages in this area being moderately vulnerable and the drought risk being at high-low, low-to-medium, and medium-risk levels (Figure 4).

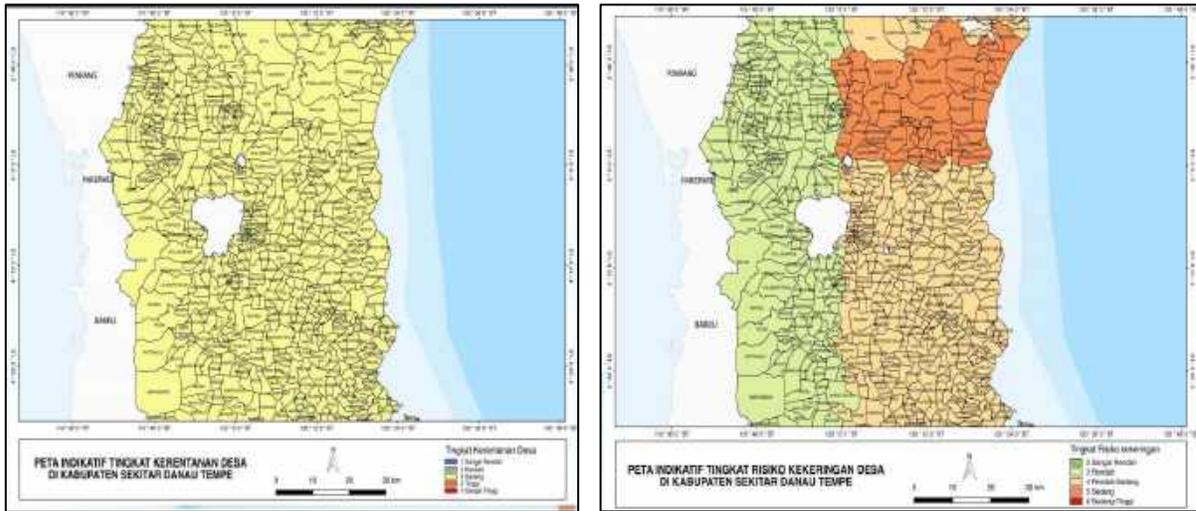


Figure 4. Indicative map of village vulnerability levels in the Lake Tempe and Indicative map of drought rates in villages in the Catchment area of Lake Tempe

13. In addition, the ecosystem changes due to climate change and the geomorphology of the catchment of Lake Tempe. The morphological units of Lake Tempe consist of three groups: flat landscape unit dominant about 50%, eastward, scattered around Lake Tempe, and along the main river that empties into Lake Tempe. The undulating to hilly terrain unit occupies about 40% in the west and south. The steep hilly terrain unit occupies about 10% of the western and northern portions of the Lake Tempe drainage basin. The land use pattern in the Lake Tempe drainage basin is 283,899.84 ha, dominated by dryland agriculture mixed with shrubs covering 85,294.03 ha or 30.04%, paddy fields covering 60,542.86 ha or 21.33%, dry land agriculture covering an area of 37,629.17 ha or 13.25%, shrubs 33,728.92 ha or 11.88%, primary dry forest 31,398.08 ha or 11.06%. The rest is secondary dry forest, swamp scrub, forest plants, settlements, grasslands/savannas, open land, and bodies of water ⁶.
14. Climate change leading to increased precipitation is one of the problems in Lake Tempe, causing flooding, soil erosion, and silting/sedimentation around the lake. The sub-optimal functioning of the water system where land-use patterns are dominated by dry farming without applying the principles of soil- and water protection. Furthermore, the land use pattern dominated by primary forest and shrubs has the potential to trigger additional critical areas, flooding, and sedimentation. The number of wild plants (weeds) such as water hyacinth covering the lake's surface impacts silting and reducing the beauty and aesthetics of the lake. The common *Eichornia crassipes* is a floating aquatic plant with thick leaves and hollow stems that reproduce very quickly, so it is considered a plant that can damage the marine environment.
15. One of the effects of sedimentation is the decrease in the area of Lake Tempe over the decades. Figure 5 shows the area has shrunk over the past 20 years to just over 15,000 hectares. In 1981, 1989, and 2000, it decreased to 8,213.44 ha, 17,611.87 ha, and 15,945.13 ha, respectively. In 2015, the remaining was only 8,240.76 ha. The decrease in the area of the lake has reached 1.48 km² per year, and experts predicted that Lake Tempe will disappear in the dry season in 2093 ⁶. The effective area of Lake Tempe is shrinking based on the study results of spatial analysis and field surveys. The interviews with the lake management work unit stated that the shrinkage is caused by high erosion in the upstream area, which causes a massive flow of sediment into the lake every rainy season.

⁶ KLHK, Rencana Pengelolaan Danau Tempe, Direktorat Pengendalian Kerusakan Perairan Darat, 2019.

⁶ KLHK.

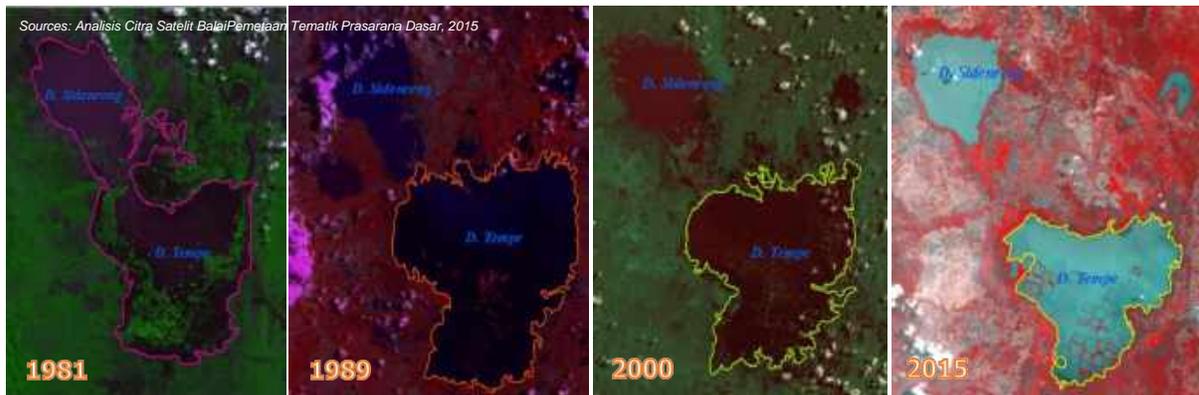


Figure 5. Decrease in the Lake Tempe area

4. Project Context.

16. Through this project intervention, the Lake Tempe Catchment area community will be able to increase resilience to the impacts of climate change, both social and economic, through institutional empowerment of community groups through the involvement of farmer groups, government agencies, and NGOs. This project proposal focuses on improving and developing ecosystems by improving forest and land cover in the Lake Tempe Catchment Area, thereby increasing forest nutrition, creating new jobs, or diversifying income. This project can contribute to efforts to reduce greenhouse gas (GRK) emissions, community capacity through the Integrated Climate Village (Proklim) program, waste management, and the formation of the Lake and Climate Change Care Group. Established Tempe Lake Forum (FDT), Strengthened Forest Farmer Groups (KTH), Established District Social Forestry Working Groups, Strengthened Social Forestry Group (KPS), and Social Forestry Business Group (KUPS) upon approval/approval of Social Forestry Concessions, and Strengthened Farmer Groups and Business Groups of Sericulture. This proposal is a strategic and earnest attempt to address vulnerability to climate change, which has significant and lasting impacts, particularly in the Lake Tempe drainage basin. The exposure to climate change is high, especially in the area around the lake, which is directly affected by the lake water overflow in the rainy season, making the people in the Lake Tempe drainage basin vulnerable to the impact.

17. Increasing precipitation, temperatures, and changes in land cover and land-use patterns have resulted in higher intensities of landslides and flooding in the catchment area. Furthermore, the uncontrolled conversion of forest areas in the upstream area leads to a critical area and high disaster potential. Communities in the Lake Tempe Cacthment area, mainly working as lower-middle-class farmers, have suffered severe losses from climate change. In addition, it becomes increasingly difficult for local governments to solve these problems when human resource capacities are not yet sufficient. The damage to natural resources will be more severe, triggering a slowdown in economic levels and regional development.

Project / Programme Objectives:

18. The primary goal of this program is to increase ecosystem resilience and community resilience to climate change impacts in the Lake Tempe Catchment Area with the following activity components:

1. **Strengthening post-rehabilitation forest management for the development of social forestry schemes, forest protection and security which has implications for improving the forest management system, improving the environment and community income.**
2. **Improved social forestry management after approval to strengthen adaptation capacity to climate change.**
3. **Improving the sericulture management system in a participatory manner through a cooperative pattern of parties to support policies and restore the glory of South Sulawesi's sericulture business to improve the lives of people affected by climate change.**

- 4. Strengthen intersectoral strategies and climate change resilience for ecosystem resilience of the Lake Tempe catchment area.**
- 5. Management of knowledge and learning of the stakeholders to ensure the sustainability of climate change adaptation efforts in an integrated manner for the resilience of the ecosystem Lake Tempe catchment area.**

19. The following is the Project Theory of Change and alignment of project objectives with the Adaptation Fund Results Framework at the yield level, shown in Figure 6.

- 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
1. Deforestation, degradation of forest and land in the Catchment area's Lake Tempe, and high rainfall that caused flooding and landslides as well as sedimentation.
 2. Limited capacity to manage the results of post-approval forest rehabilitation, social forestry and natural silk as one of the efforts to create a sustain new source of livelihood in a sustainable manner.
 3. Limited capacity of the government from provincial, district, village and community level to reduce the risk of climate change which has an impact on the resilience of social, economic and environmental damage.
 4. Lack of integration and collaboration of the stakeholder in the management of the Lake Tempe catchment area to strengthen the resilience of the community and ecosystem.

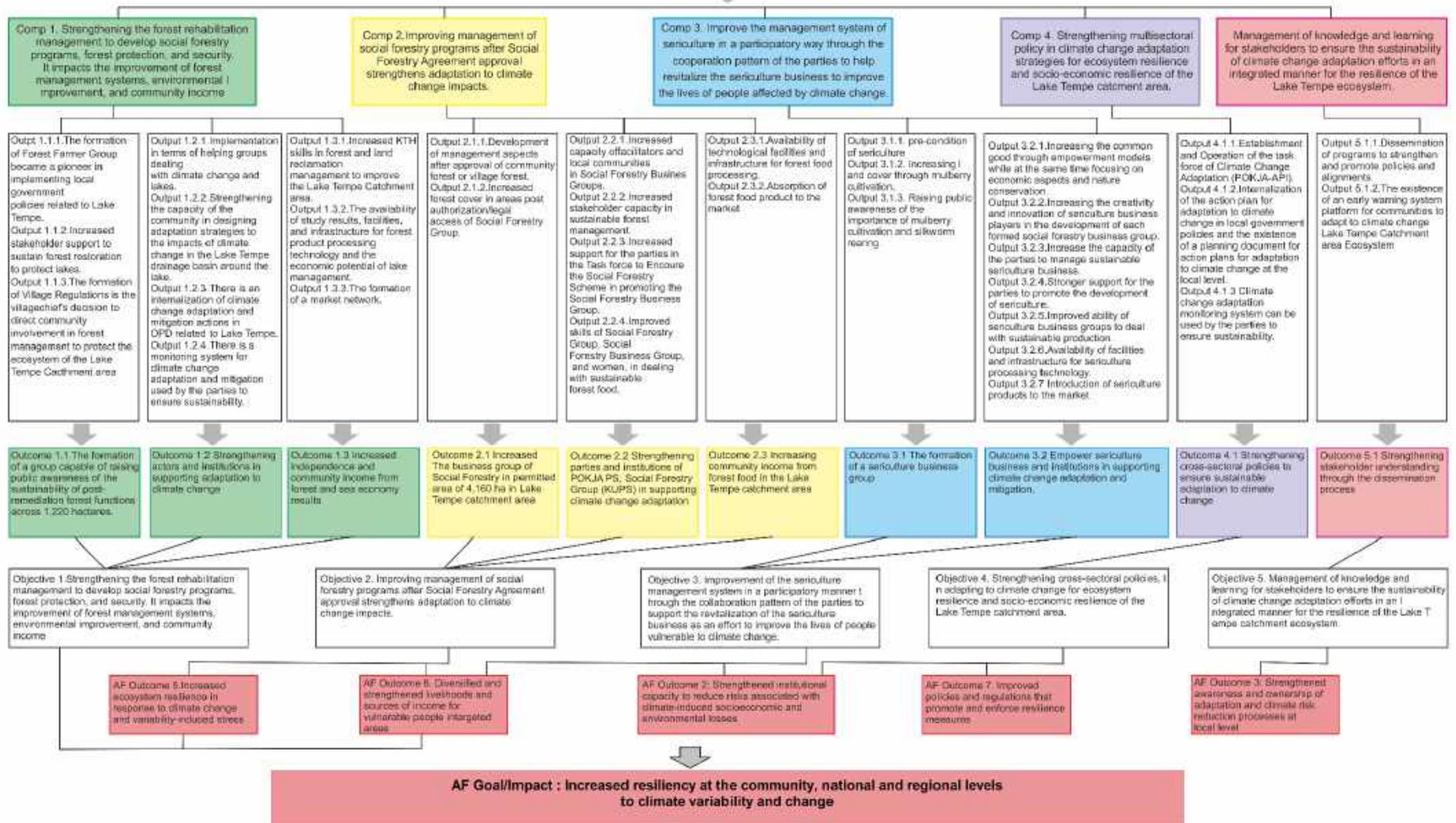


Figure 6. Theory of Change (TOC)

Project / Programme Components and Financing:

Table 1. Activity Fund budget

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Strengthening post-rehabilitation forest management for the development of social forestry schemes, forest protection and security which has implications for improving the forest management system, improving the environment and community income.	1.1.1. The formation of the Forest Farmers Group (KTH) is a pioneer in realizing local government policies related to Lake Tempe.	1.1. A group was formed that was able to increase community awareness of the sustainability of forest functions after rehabilitation covering an area of 1,220 ha.	\$250,093
	1.1.2. Increasing support from parties in maintaining forest rehabilitation in efforts to protect the lake.		
	1.1.3. The establishment of a Village Regulation (PERDES) was decided by the village head which became a guideline for community participation in forest management as an effort to protect the catchment ecosystem of the Lake Tempe area.		
1. Strengthening post-rehabilitation forest management for the development of social forestry schemes, forest protection and security which has implications for improving the forest management system, improving the environment and community income.	1.2.1. The implementation of mentoring groups concerned about climate change and lakes.	1.2. Strengthening of stakeholders to supporting climate change adaptation	
	1.2.2. Increase the capacity of the community in forming adaptation strategies to the impacts of climate change in the catchment area of Lake Tempe.		
	1.2.3. There is an internalization of climate change mitigation adaptation and mitigation actions in Local Government Organizations (OPD) related to Lake Tempe.		
	1.2.4. There is a climate change adaptation and mitigation monitoring system that can be used by the parties to ensure sustainability.		
1. Strengthening post-rehabilitation forest management for the development of social forestry schemes, forest protection and security which has implications for improving the forest management system, improving the environment and community income.	1.3.1. Increased knowledge and skills of Forest Farmer Groups (KTH) in forest and land rehabilitation management to improve the catchment area of Lake Tempe.	1.3. Increased independence and community income from forestry, and lake business results	
	1.3.2. Availability of study results, facilities and infrastructure for processing forest products and the economic potential of lake management.		
	1.3.3. The formation of a market network.		
2. Improvement of Social Forestry Management after approval to strengthen adaptation capacity to climate change.	2.1.1. The development of management aspects after the approval of Community Forests (HKM) or Village Forests (HD).	2.1. The increase in the Social Forestry Business Group (KUPS) in the 4,160 ha Social Forestry Group (PPP) approval area in the catchment area of Lake Tempe.	\$255,333
	2.1.2. Increased forest land cover in areas after approval/legal access.		
	2.2.1. Increased capacity of local companions and communities in Social Forestry Groups (KUPS).	2.2. Strengthening support for climate change adaptation from	

	<p>2.2.2. Increased capacity of parties in sustainable forest management.</p> <p>2.2.3. Increased support of stakeholders in the Social Forestry Working Group (POKJA-PS) to Encourage Social Forestry Schemes and Social Forestry Business Groups (KUPS).</p>	<p>stakeholders, namely the Social Forestry Working Group (POKJA-PS), and the Social Forestry Group (KPS).</p>	
	<p>2.3.1 Availability of forest food processing technology facilities and infrastructure.</p> <p>2.3.2 Absorption of forest food products into the market.</p>	<p>2.3. Increasing people's income from forest food in the catchment area of Lake Tempe.</p>	
<p>3. Improving the sericulture management system in a participatory manner through a cooperative pattern of parties to support policies and restore the glory of South Sulawesi's sericulture business to improve the lives of people affected by climate change.</p>	<p>3.1.1. Pre-conditions Sericulture</p> <p>3.1.2. Increased land cover through mulberry plant budidaya.</p> <p>3.1.3. Increased public awareness of the importance of mulberry plant cultivation and silkworm rearing.</p> <p>3.1.4. Increase the creativity and innovation of Sericulture business actors in developing each KUPA formed.</p>	<p>3.1. The formation of the Sericulture business group.</p>	<p>\$182,647</p>
	<p>3.2.1. Increased capacity of the parties in the management of sustainable Sericulture business.</p> <p>3.2.2. Increased support of the parties in encouraging the development of Sericulture.</p> <p>3.2.3. Increasing knowledge and skills of the Sericulture Business Group (KUPA) in managing sustainable production.</p> <p>3.2.4. Availability of facilities and infrastructure for sericulture processing technology.</p> <p>3.2.5. Absorption of sericulture products into the market</p>	<p>3.2. Strengthening the role of sericulture business, stakeholders and institutions as well as increasing income in supporting climate change adaptation and mitigation.</p>	
<p>4. Strengthen intersectoral strategies and climate change resilience for ecosystem resilience of the Lake Tempe catchment area.</p>	<p>4.1.1. The establishment and running of the Climate Change Adaptation Working Group Team (POKJA-API).</p> <p>4.1.2. The internalization of the Climate Change Adaptation Action plan to local government policies, as well as the existence of a regional adaptation action plan planning document.</p> <p>4.1.3. There is a Climate Change Adaptation monitoring system that can be used by the parties to ensure sustainability.</p>	<p>4.1. Strengthening cross-sectoral policies to ensure the sustainability of climate change adaptation.</p>	<p>\$90,447</p>
<p>5. Management of knowledge and learning of the stakeholders to ensure the sustainability of climate change adaptation efforts in an integrated manner for the</p>	<p>5.1.1. Dissemination of programs to strengthen and encourage policies and alignments.</p> <p>5.1.2. The existence of an early warning system platform for Community Climate Change Adaptation Ecosystem catchment area of Lake Tempe.</p>	<p>5.1. Strengthening understanding of stakeholders through dissemination processes.</p>	<p>\$68,047</p>

resilience of the ecosystem Lake Tempe catchment area.			
6. Project/Programme Execution cost			\$71,989
7. Total Project/Programme Cost			\$918,556
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			\$78,077
Amount of Financing Requested			\$996,633

Projected Calendar:

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

Table 2. Projected date calendar of proposed project programme

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

PART II: PROJECT / PROGRAMME JUSTIFICATION

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

20. Based on the previous conditions, this consortium requires a multistakeholder participation approach in encouraging climate change adaptation in the Lake Tempe catchment area community, particularly through integrated forest and natural silk management to adapt to climate change. This programme will refer to the five main components of the programme below.

Component 1. Strengthening post-rehabilitation forest management for the development of social forestry schemes, forest protection and security which has implications for improving the forest management system, improving the environment and community income.

21. The Regulation of the Ministry of Environment and Forestry No. P.16/MENLHK/SETJEN/SET.1/8/2020 on the Strategic Plan of the Ministry of Environment and Forestry stated that corrective action through the implementation of low-carbon development and resilience to climate change through recovery, Forest and land rehabilitation and reducing the rate of deforestation can be an early strategy for sustainable development⁷. Forest and Land Restoration is one of the national programs for restoring critical areas within forest areas and outside forest areas, the implementation of which in Catchment area areas includes reservoirs/dams/dams, priority lakes, priority Catchment areas and disaster-prone areas, and certain ecosystems coasts /marine areas and borders.

22. Forest and land rehabilitation activities in the catchment area of Lake Tempe, which is a priority lake, have been carried out in 2019 through self-management patterns and contractual patterns based on a technical design prepared one year before the implementation of activities. Rehabilitation activities in forest areas are called reforestation, while activities outside forest areas are called afforestation. Reforestation is carried out by applying an Intensive pattern to areas with open land or bush conditions where there are no community agricultural activities. On the other hand, rehabilitation activities can also be carried out with an agroforestry pattern in forest areas with open land cover conditions, shrubs, mixed gardens and there are already community agricultural activities. Plant types are widely used in rehabilitation activities, namely types of timber or types of plants that produce non-timber forest products (HHBK), as well as seeds of hedges or interplants The main purpose is the function of protection

⁷ MENLHK, *RENCANA STRATEGIS KEMENTERIAN LINGKUNGAN HIDUP DAN KEHUTANAN TAHUN 2020-2024* (Indonesia, 2020).

(ecology) and socio-economic functions in a sustainable manner so that through the pattern of Social Forestry (SF), forest rehabilitation can be carried out according to the conditions of the local community. Therefore, for its sustainability, it is necessary to involve the community since preconditioning, planning, implementation and maintenance, as well as post-forest rehabilitation activities in a participatory manner through the Forest Farmer Group (KTH) that has been formed and the Forest Police Partner Group in Forest Protection and Security.

23. Preconditioning, implementation, and post-rehabilitation maintenance are required in carrying out forest rehabilitation activities, which will be directed to the scheme of Social Forestry. Its implementation requires the support of strong human resources and community institutions. The parties' understanding is needed to ensure the continuity of reforestation and afforestation management. It is also very important to strengthen community institutions formed as partners for the Forestry Ranger in the context of forest protection and security. Including the results of forest rehabilitation activities. Forest rehabilitation activities carried out include: preconditioning the community around the project site; facilitating the formation of Forest Farmers Groups; institutional strengthening; and Assistance in implementing the provision of seedlings for nurseries and technical guidance on planting and maintenance for the first and second year (post-project).
24. Given the importance of sustainable forest management after rehabilitation, efforts to facilitate the development of Forest Farmer Groups (KTH) into Social Forestry Groups (PPP) are considered necessary as efforts to manage forest rehabilitation products to obtain approval for social forestry schemes, follow-up plant maintenance, nurseries, counseling on forest protection and security and prevention of collaborative forest and land fire management. This activity is expected to provide benefits to environmental improvements in this case the microclimate and reduction of erosion and sedimentation, as well as improving the community's economy through social forestry efforts (long-term)

Component 2. Improved social forestry management after approval to strengthen adaptation capacity to climate change.

25. The improvement of social forestry agreement in this component is highlighted in efforts to facilitate the approval of social forestry management in the area of post-rehabilitation activities of agroforestry patterns in the Lake Tempe catchment area of 1,500 hectares spread over Sidenreng Rappang and Soppeng districts. The main thing that will be done is the facilitation of post-permission/permission activities in Social Forestry Groups (KPS) and the establishment of Social Forestry Business Groups (KUPS), thereby improving the KUPS classification into Blue, Silver, gold, and platinum classes. The class improvement and strengthening of KPS capacity in institutional management, regional management, and enterprise management according to the stages of institutional group development of KUPS and improving its classification. This facilitation is based on Minister of Environment and Forestry Regulation No. 9 of 2021 on Social Forest Management and South Sulawesi Governor Decree No. 1576/7 of 2021 on Roadmap of South Sulawesi Social Forestry Development ⁸.
26. Empowering forest farmer groups, women's groups, and other vulnerable groups in the management of forest food products to be developed in project intervention villages. Through various mentoring activities, training, workshops, and comparative studies, empowerment activities are carried out. This activity will involve all members of the educated target group. After the establishment of KPS and KUPS, through the involvement of women and other vulnerable groups, field facilitators will collaborate and provide routine support by transforming knowledge and changing the mindset of the target community about the project goals.
27. Forest security encompasses all activities and efforts undertaken by forest officials with the support of relevant authorities and the community related to securing forests and forest products in a planned and ongoing manner based on the principle of efficiency and effectiveness. The implementation of community-based forest area security is based on the knowledge carried out by the forest police to create safe and orderly conditions and involves the affected community. The KPS is a community group around the forest that can assist the forest police in implementing forest protection under the coordination, guidance, and oversight of the Inspectorate. The KPS may be able to become a

⁸ SK ROADMAP PERHUTANAN SOSIAL PROVINSI SULAWESI SELATAN TAHUN 2021-2025 (Indonesia).

representative of the community around the forest to be a working partner with stakeholders, e.g., Forest Ranger, whose function is to participate in forest security patrol activities as well as socialization and consultation. Local community involvement needs to be encouraged to be more active by equipping them with knowledge of community-based surveillance techniques.

Component 3. *Improving the sericulture management system in a participatory manner through a cooperative pattern of parties to support policies and restore the glory of South Sulawesi's sericulture business to improve the lives of people affected by climate change.*

28. Sericulture is a non-timber forestry business that can recruit workers from planting and growing mulberries, rearing silkworms, processing cocoons into yarn, and weaving industries. Mulberry (*Morus spp.*) is a shrub/shrub whose height can reach 5 - 6 meters. If not pruned, old mulberry trees can reach 20 M in height. Mulberry is also called a conservation plant because it has many functions. One of the advantages is environmental security, such as environmental restoration of degraded land, bioremediation of polluted sites, water conservation, prevention of soil erosion, and air quality improvement with carbon sequestration.
29. Mulberry is a pioneer plant because it does not require particular growing specifications. This plant can grow in soil types that are poor in nutrients or soil pH that varies, from soils that vary with a clay texture with porous properties to sandy barren soils that are poor in nutrients. Strong and deep root system forming a very tangled and dense network with secondary and tertiary roots in all types of soil with roots up to 300 cm long resembling a taproot. With such a root system, mulberry plants can strengthen terraces to prevent flooding, erosion, and landslides. Mulberries are being revived as a species suitable for varied landscapes because they are resistant to flooding, drought, and wind currents. Land rehabilitation efforts with mulberry plants will enable soil carbon recovery, maintenance of groundwater holding capacity, prevent soil erosion during floods, increase soil nutrients, maintain soil microflora, improve air quality and be able to support wind currents. Furthermore, mulberry plants can allow intercropping with other commercial crops, including plantation and forestry crops, thus enabling them to be developed for land rehabilitation and agroforestry ⁹.
30. Mulberry is the main feed for silkworms in the Sericulture business. The natural silk business starts from planting and maintaining mulberry plants, maintaining silkworms, processing cocoons into yarn and weaving industry. Sericulture's business activities have long been carried out and carried out by the community around Lake Tempe, especially in Soppeng, Wajo and Sidenreng Rappang Regencies where it reached its peak in the late 1970s to early 2000s, this condition puts South Sulawesi as a National Silk yarn producer around 70%-80% ².
31. In its implementation, there are problems faced in the development of Sericulture, including the quality of silkworm seeds, the development of farmers in the natural engineering business, weak coordination and the absence of cross-sectoral policies in the development of silk businesses. Therefore, this project will facilitate the strengthening of the Sericulture Business Group (KUPA) starting from upstream through facilitating the procurement of quality seeds obtained from certified silkworm seed producers, procurement of mulberry plant seeds from government-owned seedling gardens in Soppeng Regency, Wajo Regency, Sidenreng Rappang Regency. In its implementation, promoting the Sericulture Business Group through a demonstration of the manufacture mulberry plant and maintenance of plants, a demonstration of the manufacture of Maintenance Young Silkworm Rearing Unit (UPUK), and Late Silkworm Rearing Unit (UPUB) for members of the late silkworm rearing group.
32. In the middle part which includes the process of processing cocoons into silk yarn and weaving will be facilitated repair of existing spun tools and looms and or procurement of new tools as needed. Next is the downstreaming of products by building cooperation between natural silk farmers, processing and weaving industries with the marketing of products to consumers and facilitation for access to capital in order to support the policies of the South Sulawesi Regional Government through the Labeling of Natural Silk Products in South Sulawesi as one of the efforts in the Policy of Restoring the Glory of Natural Silk

⁹ Gulab Khan Rohela and others, 'Mulberry (*Morus Spp.*): An Ideal Plant for Sustainable Development', *Trees, Forests and People*, 2.July (2020), 100011 <<https://doi.org/10.1016/j.tfp.2020.100011>>.

² Sadapotto and others.

in South Sulawesi. For the integration of Sericulture activities from upstream to downstream, the establishment of the Sericulture Coordination Forum (FKPA) or the Sericulture Business Deliberation Agency (BAMUS-Sutera) will be facilitated.

33. Sericulture activities must be integrated in the Village Medium-Term Development Plan (RPJM Desa), and the Regional Medium-Term Development Plan (RPJMD) which are one of the priorities in the Policy of the Ministry of Environment and Forestry, the Ministry of Industry, the Policy of the Provincial Government of South Sulawesi, as well as the Regency Regional Government where there are still plant assets and buildings of the former Sericulture Hall and the PERHUTANI Sericulture Management Unit. In addition, it will be facilitated to improve the quality of human resources of the parties, to build understanding and capacity in the Sericulture business. The series of activities to be carried out will strengthen community adaptation to the impacts of climate change and open new jobs for vulnerable groups, especially women and rural youth, as an effort to strengthen social resilience and sources of livelihood as well as economic resilience. It should be noted that the natural silk business is a labor intensive that is dominated by female and youth labor with education dominated by not finishing elementary school samapai graduated from junior high school, mainly in the maintenance activities of silkworms and the process of processing cocoons into yarn and weaving business.
34. Management Sericulture will begin with increasing the capacity of stakeholders and the community to build an understanding to restore Sericulture's glory. In addition, it is necessary to strengthen institutional silk farmers, making mulberry plants for silkworm rearing. It can also be used as green plants in community lands, which help absorb CO₂, reducing Greenhouse Gas (GHG) emissions and controlling surface runoff and land erosion—reducing flooding in the catchment area and sedimentation of Lake Tempe.

Component 4. *Strengthen intersectoral strategies and climate change resilience for ecosystem resilience of the Lake Tempe catchment area.*

35. In order to ensure the sustainability of adaptation actions due to climate change, it is necessary to have cross-sectoral, cross-OPD policies through provincial and district regional policies by involving parties in the management of the Lake Tempe Catchment area by continuing to adhere to alignment with the central government guidelines, including Regulation of the Minister of Environment and Forestry No. P .33/Menlhk/Setjen/Kum.1/3/2016 on Guidelines for the Preparation of Climate Change Adaptation Measures, in line with the nationally Determined Contribution (NDC) in managing the reduction of greenhouse gas (GRK) warming according to Presidential Decree No. 98 of 2021 as one of the government documents showing the government's commitment and concern to contribute to combating the effects of climate change. The existence of people engaged in agriculture and forestry in general in the Lake Tempe drainage basin is highly vulnerable to disasters caused by climate change. Ecosystem and socioeconomic community resilience through forestry efforts can be a method of adaptation to climate change, which is one of the Sustainable Development Goals/SDGs. Therefore, a policy is needed to consider the parties in formulating the action plan on climate change. This policy integrates with the medium-term development plans of the province and regency (RPJMD) for the village government and in the strategic plan of the regional apparatus organizations (Strategic Planning), work plans of the provincial governments, and work plans of the village governments.

Component 5. *Management of knowledge and learning of the stakeholders to ensure the sustainability of climate change adaptation efforts in an integrated manner for the resilience of the ecosystem Lake Tempe catchment area.*

36. The project components and activities carried out will be published and documented in a piece of knowledge and learning management system, as material to ensure sustainability and adaptation goals to climate change and as a reference for replication elsewhere in the future. It is, therefore, necessary to promote the establishment of task force of social forest, House Gas Emissions from Glass (GRK), and the establishment of lake forums by the state government, as well as to incorporate knowledge about lakes and sericulture into the local curricula of elementary schools at senior high schools in project intervention areas. The documentation and dissemination of climate change adaptation activities also

aim to increase community awareness and capacity to adapt to climate change.

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

a. Social and Economic Benefits.

37. This project will strengthen Forest Farmer Groups from post-forest rehabilitation to a social forestry scheme. The project will also form five social forestry groups with 125 members. It forms 17 Social Forestry Business Groups (KUPS) with 425 members and six Sericulture Business Groups (KUPA) with 150 members expected to receive immediate benefits. The capacity of these groups and members will be training, FGDs, workshops, and field schools. Hence, they can develop themselves to access convenience and group management skills to develop businesses in groups. It strengthens social resilience in dealing with climate change's impacts. It creates new sources of livelihood through social forestry businesses, the development of social forestry business groups, and sericulture businesses from upstream to downstream or post-harvest and marketing that can increase economic resilience. In addition, this project will facilitate the local service organization both in district and village levels to increase capacity in preparing sustainable development plans. And also it related to the 1st goal of without poverty, the 5th goal of gender equality, the 13rd goal of climate change management, and the 15th goal of land ecosystems in the Tempe Lake Catchment Area. It is integrating climate change adaptation and mitigation actions in the District Medium-Term Development Plan (RPJMD) policies and Village Medium-Term Development Plans (RPJM).
38. This project also involves gender mainstreaming in making innovations from plants produced from forests that can be used as a home industry product, including pecans made into hazelnut oil packaged in bottles and has been given its own brand. Water hyacinth which is a weed for the waters of Lake Tempe can be turned into products of high artistic value such as making bags, flower pots, tissue holders, dish mats and used as organic fertilizer. Live dispensary plants can be used as herbal life. Household waste, both organic and inorganic, can be used, for example, organic waste such as vegetable residues, dried fruits and leaves can be used as Liquid Organic Fertilizer (POC), inorganic waste such as plastic can be used as artwork that can be sold to help the family economy.

b. Environmental Benefits

39. These activities will directly impact the quality of natural resources and environmental resilience. Management of forest and land rehabilitation of 1,220 ha, social forestry development, and a sericulture business in the Tempe Lake catchment area will support increased land and forest cover and improve environmental quality. These will help reduce greenhouse gas (GHG) emissions from the Lake Tempe Catchment Area ecosystem. Project interventions will help reduce the rate of conversion of forest land to plantations and agriculture to forest restoration using agroforestry patterns. In addition, forest and land restoration activities in the upper catchment area of Lake Tempe will support climate change adaptation goals by reducing flood and drought risks, reducing water quality, reducing erosion and sedimentation in the Lake Tempe drainage basin, and improving the quality of the lake ecosystem.

c. Gender and Vulnerable Groups Benefits

40. This project will integrate women's active participation as one of the Sustainable Development Goals, namely the 5th goal of Gender Equality in critical activities in the multi-stakeholder planning process, decision-making, to implementation, monitoring and evaluation processes starting from community groups, forums at the village level, to the district level. The involvement of women, including women from indigenous peoples, will be considered the main decision-makers and the front line in communication, mitigation, and adaptation to climate change to the target community and the wider community. Income-earning activities at the village level also involve women directly in selecting the species of plants to cultivate and plant in forest rehabilitation plant enrichment, social forestry from forestry, agricultural and mulberry plant species, seeds, and silkworm eggs to post-harvest and marketing. Additionally, how they decide to create a new source of life with economic value and how to access financing for business continuity in groups, cooperatives, or other community-based creative

businesses.

41. To ensure justice for vulnerable groups at the household and individual levels, this project will carry out identification activities for vulnerable groups in each assisted village, namely women, the elderly and people with disabilities. The identification of households and individuals of vulnerable groups will ensure their involvement in project activities such as creative business activities, yard management, and production of forest food commodities according to their needs and capabilities.
42. Both men and women have needs, abilities, and gender roles in climate change adaptation in the management of the Lake Tempe catchment area. They can participate directly in forest rehabilitation, social forestry, agroforestry, and sericulture business. Their roles are mitigation and adaptation efforts due to climate change which have a considerable impact, especially for women and vulnerable groups. This project will involve 30% of women, youth, and vulnerable groups from 19 villages, starting from planning, implementing, monitoring, and evaluating. Gender roles consist of reproductive, social, and productive activities carried out by men and women. The role of women in reproductive activities is natural, which obliges women to take care of their husbands and families. At the same time, the husbands work in the garden. Adam (2020) stated that a wife's reproductive activities are to serve her husband and care for the children. Women dominate the social role in society because their husbands work in the garden all day, so there is less time to socialize. The productive role of men is more significant in social forestry activities, where women participate in planting, tending, harvesting, and selling crops. The role of men is limited to providing silkworm feed, while women dominate, starting from mulberry rearing, feeding silkworms, cocoon harvesting, spinning, and marketing.
43. This project can empower women and vulnerable groups in the natural silk business. Farmer groups who do not yet have a mulberry garden will be made a demonstration plot as a means of training to improve knowledge and skills in mulberry cultivation, silkworms, cocoon production, and silk thread spinning. Women dominate the natural silk business because, with their maternal instincts, they can care lovingly for silkworms owned by private companies, farmer groups, and individuals.
44. The climate change adaptation through social forestry schemes and sericulture efforts can support food security, socio-economics, and the Lake Tempe ecosystem. This scheme will impact gender mainstreaming, especially for women and vulnerable groups in 19 villages that depend on local natural resources. This project will carry out activities to identify vulnerable groups in each target village, namely women, the elderly, and persons with disabilities, to ensure justice for vulnerable groups at the household and individual levels. Identify the number of households and individual vulnerable groups to ensure their involvement in the planned project activities.

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

45. This project promotes and improves adaptability to climate change in the Lake Tempe catchment area, and this project will encourage project pilot enrichment in a forest rehabilitation area of 1,220 ha. This activity will be performed by the Forest Farmers Group (KTH), which will be facilitated to become a Social Forestry Group (KPS) to apply for approval for a social forestry scheme. The project will facilitate group strengthening and submitting approval for Social Forestry (PS) for its implementation. It has improved the post-approval management of 4,160 ha managed by 19 Social Forestry Groups (KPS) and increased the classification of Social Forestry Business Groups (KUPS) of each Social Forestry Group (KPS). Production of 2 ha of mulberry plants equipped with a Small Silkworm Maintenance Unit (UPUK) as a sericulture demonstration plot, two villages each in Soppeng and Wajo Regencies, and one village in Sidenreng-Rappang District. To ensure the integration of climate change adaptation actions in the Tempe Lake catchment area, a common perception of stakeholders is needed to encourage the birth of policies that support climate change adaptation. For the sustainability and replication of the project, it is necessary to manage the knowledge and learning of the parties.
46. The total project implementation plan cost in the Lake Tempe catchment area is \$996,633, affecting 19 villages and 11 sub-districts spread across three districts in the Lake Tempe catchment area. This project will impact increasing the capacity of community resources to as many as 52,982 people. The following is the total budget for each project component:
 - a. Component 1 Strengthening post-rehabilitation forest management for the development of social forestry schemes, protection, and security of forests which have implications for improving forest management

- systems, the environment, and the community income of \$250,093. b. Component 2 Improved post-approval social forestry management to strengthen adaptive capacity to climate change \$255,333.
- b. Component 3 Improving the natural silk management system in a participatory manner through a collaborative pattern of parties to support the revitalization of the sericulture business as an effort to improve the lives of people vulnerable to climate change of \$182,647.
- c. d. Component 4 Strengthening cross-sectoral policies in climate change adaptation for ecosystem and socio-economic resilience of the Lake Tempe catchment of \$90,447.
- d. Component 5 Management of knowledge and learning for stakeholders to ensure the sustainability of climate change adaptation efforts in an integrated manner for the resilience of the Lake Tempe catchment ecosystem of \$68,047.
47. Considering that the project lasted for two years, the effectiveness of the project can only be seen from the results of sericulture activities. It covers 10 ha of mulberry plants in 5 intervention villages that produce cocoons, silk thread, and non-timber forest products from social forestry business groups covering an area of 4160 ha in 19 Social Forestry Business Groups and the results of intercropping of seasonal crops in the forest rehabilitation plant enrichment. The effectiveness of the project will be seen after ten years. Hopely that forestry trees and mulberry plants will provide environmental services resulting from the functioning of forest ecosystems as a result of continued maintenance of forest rehabilitation into a Social Forestry scheme and the development of Social Forestry Business Groups and Sericulture Businesses for diversification of livelihood sources for food security, ecosystems, and socio-economics. Based on the description above, the project we propose has a critical urgency in improving forest governance and sustainable natural silk in the adaptation to climate change because it has better cost-effectiveness.

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

48. This project will follow the international commitment of UNFCCC, which Indonesia signed in 2016 and established Law Number 16 of 2016 concerning the Ratification of the Paris Agreement. In addition, this project will consistently achieve the Sustainable Development Goals (SDGs). This is stipulated in Presidential Regulation Number 59 of 2017 concerning the Implementation of the Achievement of Sustainable Development Goals (SDGs), which includes three critical pillars, namely economic, social and environmental, which must be carried out in an integrated manner. This project will target and contribute to several goals, namely the 1st goal without poverty, the 5th goal of Gender Equality, the 13th goal of Climate Change Management, the 15th goal of the Land Ecosystem, in this case, the tempe lake catchment area, as well as the goal 17 Partnerships To Achieve Goals. In addition, this project is consistent with climate-resilient development as stipulated in Presidential Regulation Number 18 of 2020, where increasing climate resilience is one of the priority sectors affected by climate change, namely the waters and landscape/ecosystem sectors. Through Presidential Decree Number 98 of 2021 concerning Control of Greenhouse Gas Emissions in the 2021 National Development and Climate Resilient Development Guidelines by BAPPENAS/National Development Planning Agency. The implementation of this project will refer to the NDC Climate Change Adaptation Roadmap Document (NDC-API). It regulates social security and new sources of livelihood through increasing Adaptive Capacity, community involvement in disaster planning and preparedness, Economic resilience through Reducing deforestation and forest degradation and utilization of degraded land, and ecosystem resilience through Integrated Management of Catchment Areas in the Development of Social Forestry. Decree of the Minister of Environment and Forestry number SK 168/MENLHK/PKTL/PLA.1/2/2022 concerning Indonesia Forestry and Other Land Use (FOLU) Net Sink 2030 serves as a consistent reference in Project implementation.
49. This project is also consistent with national policy through Government Decree No. 76 of 2008, namely community-based forest rehabilitation activities starting from planning, implementing, and maintaining in the hope that local communities can conserve and enjoy the benefits of forests. This decision is confirmed in the Strategic Plan of the Ministry of Environment and Forestry No. P.16/MENLHK/SETJEN/SET.1/8/2020, which makes forest and land restoration activities one of the priority policies that are expected to contribute to reducing greenhouse gas emissions, which can cause global warming due to climate change.

50. In particular, the Provincial Government of South Sulawesi also issued priority programs and commodities including reforestation and afforestation activities, social forestry, climate change adaptation, mitigation activities, and natural silk business as local wisdom and set it as a regional priority for the 2019-2023 RPJMD. Based on the Governor's Decree, South Sulawesi Governor's Order Number 31 of 2020 concerning Guidelines for the Implementation of Water Catchment Regulation on Water Catchment Management in South Sulawesi, South Sulawesi Governor Regulation of 2018 concerning the Establishment of a Lake Tempe Management Plan mandates several priority activities including collaboration between sectors from upstream to downstream through stakeholder involvement. Decree of the Governor of South Sulawesi No. 1576/VII/YUN 2021 concerning the Social Forestry Roadmap, followed by Governor's Decree No. 723/III/Year 2022 concerning the Task Force for the Acceleration of Social Forestry, is expected to be a support system used in community-based forest land management activities and in accelerating collaborative work on Social Forestry.
51. For the development of sericulture business, Governor's Decree Number 47 of 2021 has been established concerning the Use of Labels on Silk with Typical Motifs of South Sulawesi, which is one of the strategic steps to restore the glory of natural silk as a superior commodity in South Sulawesi. At the district level, to save Tempe Lake, the Wajo Regency Regional Regulation Number 14 of 2016 and the Regent's Regulation on the Natural Silk Industry Roadmap in Wajo Regency are enforced and explicitly stated in the Wajo RPJMD. Soppeng and Sidenreng Rappang Regencies.
52. In the intervention of the Lake Tempe catchment area, the lakeside area will be managed based on the decree of the Director General of Watershed Management and Protected Forest Number: P.4/PDASHL/SET/KUM.1/3/2019 on Lake Damage Control with the main objective of damage management and protection of the lake ecosystem. In addition, forest and land management activities in the Tempe Lake DTA are guided by the Regulation of the Minister of Environment and Forestry No. P.105 / MENLHK / SETJEN / KUM.1 / 12/2018 concerning Procedures for the Implementation of Incentive Support Activities as well as Promotion and control of forest and land rehabilitation activities.
53. The Tempe Lake ecosystem needs to be protected because it has ecosystem services that are very important for the lives of the local community. The Tempe Lake ecosystem has provided services as a source of water, food (fisheries), and water management services. This project will facilitate the pre-approval of social forestry in post-forest rehabilitation areas with agroforestry patterns and strengthen the post-approval/approval of social forestry systems in the catchment area of Lake Tempe.
54. This project will support regional institutions in preparing climate change adaptation action plans, ensuring the sustainability of climate change adaptation measures at the regional level, on Minister of Environment and Forestry Regulation No. 33 of 2016 on guidelines for the preparation of Measures to adapt to climate change by involving various sectors in its planning. In addition, the action of the Climate Village program is guided by the Regulation of the Minister of Environment and Forestry Number 84 of 2016 concerning the Climate Village Program (ProKlim) with the main components of site level adaptation and mitigation. In addition, a team of experts will be recruited to oversee the Project based on their respective capacities, supporting specific research institutes such as the Hasanuddin University Environmental Research and Development Center will also be consortium partners and directly supervise the implementation of all project activities under the national standards of national policy, relevant and applicable local governments in Indonesia.
- E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc, and complies with the Environmental and Social Policy of the Adaptation Fund.**
55. This project will facilitate the pre-approval of social forestry in Forest Rehabilitation area with agroforestry patterns and strengthen social forestry systems post-approval/approval of the social forestry system in the Lake Tempe catchment area. The intervention area is the protection forest and commercial forests. The technical proposal for a social forestry program refers to the latest regulation of the Minister of Environment and Forestry of the Republic of Indonesia, namely Regulation No. 9 of the Minister of Environment and Forestry of 2021 on Social Forestry with Community Development and Participation by Forest Farmer Groups/Social Forestry Groups, Social Forestry Business Group and other village institutions. In the process of involving counselors in each district are engaged in the program.
56. In the Lake Tempe Catchment area intervention, the lake edge area will be managed by the Director-

General for Catchment area Management and Protection Forest Regulation No. P.4/PDASHL/SET/KUM.1/3/2019 on Lake Damage Control with the primary objective of damage management and protection lake ecosystem. Apart from that, the forest and land restoration activities in the Lake Tempe River Basin are guided by the Regulation of the Minister of Environment and Forestry No. P.105/MENLHK/SETJEN/KUM.1/12/2018 on the Procedures for Conducting Supporting Activities Incentives as well Promotion and control of forest and land rehabilitation activities.

57. This Project will support the regional institutions in preparing action plans for climate change adaptation, ensuring the sustainability of climate change adaptation measures at the regional level, concerning the Regulation of the Minister of Environment and Forestry No. 33 of 2016 on guidelines for the preparation of Measures to adapt to climate change by involving different sectors in their planning. Apart from that, the action of the Climate Village program is guided by the Minister of Environment and Forestry Regulation No. 84 of 2016 on the Climate Village Program (ProKlim) with the main components of site-level adaptation and mitigation. Apart from that, a team of experts will be recruited to oversee the Project based on their respective capacities, supporting certain research institutions such as the Center for Environmental Research and Development at Hasanuddin University will also become partners of the consortium and directly oversee the implementation of all project activities under national standards of national policy, relevant and applicable local government in Indonesia.

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

58. Currently, there is no duplication of projects with other funding sources. However, in the future, new projects may be expected to synergize and complement each other with the projects that will be encouraged in this concept note. The following are ecosystem and landscape-based projects that implemented in Indonesia, especially in Sulawesi:

1. Collaborative Integrated Management of the Lore Lindu Landscape Project, Forest Program III in Central Sulawesi Province in Lore Lindu National Park and Palu Watershed. This project is a collaboration between the Government of Indonesia and the German Federal Government implemented by the German Development Bank KFW (Kreditanstalt für Wiederaufbau). It focuses on biodiversity conservation and rehabilitation of the Palu watershed in and around Lore Lindu National Park, one of which is Participatory Land use Community Planning and Empowerment for alternative livelihood sources through Conservation Partnerships, Community-based forest, and land rehabilitation.
2. Mamasa Watershed Management Project, Forest Program IV Cooperation between the Government of Indonesia and the Government of Germany by KFW German Development Bank. This project empowerment Community in developing primary forests and land in and around the Mamasa Watershed and Gandang Dewata National Park in South Sulawesi and West Sulawesi Provinces for biodiversity and livelihoods community alternatives. This project is expected to synergize and serve as a place of learning in the ecosystem and Landscape-based projects and activities, which are expected to support each other for ecosystem resilience and resilience of the Sulawesi Island ecosystem community, where the Project location is also in South Sulawesi.
3. Forest and Land Rehabilitation Project in Sidenreng-Rappang Regency and Soppeng Regency DTA Danau Tempe in 2019-2021 covering an area of 1,650 ha implemented by the Jeneberang Saddang Watershed and Protected Forest Management Office, Ministry of Environment and Forestry. To obtain approval for social forestry schemes, forest, and land rehabilitation projects that have been implemented need to be continued by innovating in sustainable plant maintenance and enrichment through community facilitation activities.
4. The Sericulture Commodity Value Chain Study Project has been implemented in South Sulawesi Province by the Planning, Research, and Development Agency of South Sulawesi Province. This project can be a reference to restore the glory of natural silk, which is expected to complement and synergize. In this concept note, one particular component is designed, namely "**Improvement of the sericulture management system in a participatory manner through a pattern of collaboration between parties to support policies and restore the glory of the South Sulawesi natural silk business as an effort to improve the lives of people vulnerable to climate change.**"

G. Learning and Knowledge Management, If applicable, describe the learning and knowledge management Component to capture and disseminate lessons learned.

59. The essential elements of each program component in this project are based on appropriate knowledge management, communication strategies, and learning systems. This is important because adaptation efforts will not be achieved if the knowledge capacity of those involved is not yet qualified and not equally common. Success will be slow if the communication strategy is not right. The correct pattern of knowledge dissemination and systematic learning will accelerate and support project sustainability so that it can be repeated in the future. This knowledge management process can be seen in components four and component 5 of the project activities. Some specific and linear activities that will support this are as follows:

1. Promotion the Taskforces of Climate Change and Social Forestry

60. Component 4 of the project shows how knowledge can be captured by setting up task forces for pro-climate associations and Social Forestry in each district. It aims to be a forum for coordination and knowledge management to update problems that develop at the village to district level and to synthesize data and information from the lessons learned. From this, the task force team creates a joint plan, performs joint monitoring, and regularly updates the information. It is needed to form a group chat widely used as a means of efficient communication channels to facilitate communication between the task force members of pro-climate associations.

2. Distribution and Publication

61. Component 4 of the project focuses on disseminating learning and climate change adaptation campaigns at local, national, and even global levels. Providing media for climate change adaptation campaigns on social media and websites, movements in the form of documentaries, infographics/video graphics, and other print publications such as leaflets, posters, and banners. In addition, the outcome of this learning also produces knowledge products/assets such as best practice books and Lessons Learned and the journal Climate Change Adaptation, as well as short material for policy advocacy. Insights are also being generated and disseminated through various studies to support food security-based adaptation to climate change. The results of the study are then disseminated in the form of research papers or scientific journals.

3. Monitoring and Early Warning System for Climate Change Adaptation

62. Promoting the monitoring systems and technology platforms for early warning systems on climate change adaptation that parties can use to ensure the sustainability of support and programs. This system allows the parties to measure the extent to which climate change adaptation changes occur in the project's intervention area.

4. Capacity building

63. Building stakeholder capacity to document and disseminate project activity processes and photograph changes as they occur. Fostering stakeholder involvement in the project dissemination process will also encourage greater stakeholder involvement and enthusiasm. In addition, capacity building can be provided for field assistants/facilitators, program officers, and advisory staff in developing communication strategies, promoting the achievement of goals, and making significant project changes. To maintain continuity of knowledge and learning, modules and/or technical guidance will be produced on program elements such as forest food cultivation and forest and land restoration in the Lake Tempe catchment area.

64. Besides program components, many strategies are implemented to ensure the knowledge management process runs optimally. The use of multiple expert teams from universities or research institutes focusing on climate change adaptation included in the Task force of pro-climate association and expert teams in the Project implementation group structure. To reach out to indigenous peoples and/or vulnerable communities, project management will also consider linguistic diversity so that no lessons are missed when delivering learning content. Recruiting local workers as field facilitators can be a strategy to prevent this problem and ensure there is no communication gap at the community level, especially for indigenous and vulnerable communities.

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

65. Special attention to vulnerable groups and gender issues at the beginning of the project will seriously identify vulnerable individuals or groups who will be involved by considering the distance to where they live, the impact of the project based on the results of the analysis of the team of experts assigned to handle this matter. The following process of consultation with stakeholders is shown in Table 3.

Table 3. Detailed Consultation Process with stakeholders in Project Intervention Area

Dates	Stakeholders	methods	Findings and Outputs	Incorporation of Findings into Project Design
April 24 th , 2022	<ol style="list-style-type: none"> 1. Haudec Herrawan, S. Hut. Head Forest Management Unit of Bila. 2. Community Empowerment Services of Sidenreng Rappang Regency. 3. Environmental Services of Sidenreng Rappang Regency. 4. Mr. Askar, Sulawesi Region of Social Forestry Office. 5. Head of Tana Toro Village and Head and members of Social Forestry Group in Toro Village, Sidenreng Rappang Regency. 	FGD processes for Licensing for Social Forestry, Community Empowerment, Involving Women in the Social Forestry Scheme, and the Climate Village Program, with 25 male and ten female participants	<ul style="list-style-type: none"> - attention in term of the involvement of women in the Board for Social Forestry Group (KPS) and the Climate Village Program (ProKlim). - The need to increase the capacity of community groups - Selection of commodity types familiar in the community. 	Representation of Women in Social Forestry Group Management, the planning process of at least 30%, increasing Group Capacity for Social Resilience and plant enrichment for land cover, synergized by the Climate Village Program (ProKlim) for catchment resilience in the Lake Tempe area
May 15 th , 2022	<ol style="list-style-type: none"> 1. Mukhsin S. Hut., Head of Sulawesi Regional Social Forestry Office. 2. Marten, SP, Head of Site Preparation Section 	Closed discussion between three members of the KAPASITAS Consortium and four staff of the Environmental Partnership Social Forestry Agency (BPSKL)	The need for Post-Agreement Social Forestry support for Group Capacity Building, Development of Social Forestry businesses, and sericulture in creating new sources of livelihood for food resiliences, socio-economics, and the Lake Tempe catchment ecosystem	The need for support for the development of Social Forestry and Sericulture businesses. The sericulture business is a local community culture generally carried out by women, hoping to increase socio-economic resilience in climate change adaptation.
June 1 st , 2022	<ol style="list-style-type: none"> 1. Prof. Imran Umar, Chief of Environmental Study Center of Hasanuddin University. 2. Mukrimin, S. Hut., MP., Ph.D., Head of Forestry Sciences Master program of Hasanuddin University with member of KAPASITAS consortium 	Closed Discussion on Synergy Management of the Lake Tempe catchment area in Climate Change Adaptation and Mitigation to support food, socio-economic, and ecosystem resilience.	<ul style="list-style-type: none"> - The conducted studies indicate that the Lake Tempe catchment area requires integrated management between stakeholders across districts. - Strategic Environmental studies, vulnerability assessments in the Lake Tempe 	- The importance of land cover aspects, strengthening community capacity to adapt to climate change, and Vulnerability Assessment as the basis for integrated

			Catchment Area, and preparation of Climate Change Adaptation and Disaster Resilience Policies are needed.	<p>policies for handling catchment areas. The role of vulnerable groups needs to increase through Gender Mainstreaming and other vulnerable groups.</p> <ul style="list-style-type: none"> - Published Recommendations from the Head of the Center for Environmental Studies of Hasanuddin University as attached in the Concept Note.
<p>June 10th, 2022</p>	<ol style="list-style-type: none"> 1. Ir. Abdul Rahman, M.M. Chairman of <i>Rimba Nusantara Berkarya (RNB)</i> Foundation 2. M. Tahir, S.P. Head of the Jeneberang Saddang Watershed and Protected Forest Management Office 3. Dr. Darhamsyah, M. Si Head of the Control Center for Sulawesi and Maluku Ecoregion Development with the KAPASITAS consortium team 	<p>Limited Discussion on Assistance for Forest and Land rehabilitation, sustainability after the 2nd year of Maintenance of Forest and Land Rehabilitation, the importance of continuing to increase the Capacity of Forest Farmer Groups formed, and the development of Forest and Land Rehabilitation areas for Social Forestry schemes, plant enrichment, and the Importance of Program Synergy Ecoregions especially the Lake Tempe Catchment Area.</p>	<p>Need for sustainability post Maintenance post-Reforestation and Afforestation in the Social Forestry Scheme, Plant Protection, and enrichment integrated with the Climate Village Program in the context of climate change resilience and adaptability.</p>	<ul style="list-style-type: none"> - Strengthening Forest and Land Rehabilitation Management needs to be continued to increase land cover and ecosystem resilience and increase Community Capacity in an integrated manner to increase Community Resilience in adapting to Climate Change. - Published a Letter of Recommendation from the Head of the Control Center for Sulawesi Ecoregion Development.
<p>June 15th, 2022</p>	<ol style="list-style-type: none"> 1. Ir. Parenrengi, M.P., Head of the South Sulawesi Provincial Forestry Service is accompanied by the Heads of Division 2. Hidayat, Head of Watershed Management and Forest and Land Rehabilitation 	<p>Limited discussion on the issue of Continuing Maintenance of Forest and Land Rehabilitation after Handover to the Forestry Service, and Increasing Development of Social Forestry Business Groups</p>	<ul style="list-style-type: none"> - Need support from parties, including NGOs, to Improve Management of the results of Forest and Land Rehabilitation activities, Facilitation of business development, and capacity building of Communities and Stakeholders for Program integration on 	<ul style="list-style-type: none"> - Project Components Improvement of post-maintenance of Reforestation and Afforestation management for Social Forestry schemes, the importance of Gender equality, and Vulnerable

	<ol style="list-style-type: none"> 3. Dr. Rosida, Head of Social Forestry and Extension 4. Ir. Muh. Faisal, Secretary of the Forestry Service, and four staff of Extension Functional officials. 	(KUPS) in the Role Model of each Regency in the intervention area related to Sericulture Development.	<p>the issue of Climate Change and Saving Tempe Lake as a National Priority Lake.</p> <ul style="list-style-type: none"> - Mainstreaming Gender and Vulnerable Groups in the Climate Change Adaptation Program in Integrated Forest Management and Sericulture Enterprises. 	<p>groups in the Climate Change Adaptation Improvement Program.</p> <ul style="list-style-type: none"> - Published the Recommendation of the Head of the South Sulawesi Provincial Forestry Service attached to the Concept Note.
<p>Juny 24th, 2022</p>	<ol style="list-style-type: none"> 1. Ir. Muh. Lutfi Halide, M.P. Vice Regent of Soppeng 2. Drs. A. Suherman Sericulture Businessman Director, 3. Mr. Thirupathi Niacaphan, Commissioner of PT. International Mulberry Silk. 4. Moh. Yunan, S. Hut, M. Si Head of the Walanae Forest Management Unit, Soppeng Regency. 	Limited discussion on flooding, damage to the Lake Tempe catchment area, and Sericulture prospects for increasing community and environmental resilience.	<p>The local government and the business world are ready to collaborate for integrated forest management and Sericulture programs by building community and environmental resilience to adapt to climate change.</p>	<ul style="list-style-type: none"> - The role of the parties needs to be prioritized in social forestry and Sericulture activities. - Compilation of ecosystem-based integrated policies to increase the capacity of district and village governments for sustainable development and climate change adaptation.
<p>Juny 26th, 2022</p>	<ol style="list-style-type: none"> 1. Budhi Kesumawaty Tachyar, S.P. M.P. Representing the head of the Wajo Regency Agriculture and Food Security Service, 2. Service for Women's Empowerment and Child Protection, 3. Moh. Sukri, S.P., M.Sc. Head of the Awota Forest Management Unit, Wajo Regency, and two staff, the Environment Agency and the Village Community Empowerment Service, 4. Ir. A. Darwin Tjukke, M.P. Former Head of the Wajo Forestry and Plantation Service for the 2001-2014 period. 	<ul style="list-style-type: none"> - Limited discussion on the Importance of Handling Lake Tempe to increase Resilience due to Climate Change. - The importance of regional and community Vulnerability studies. - Restore the glory of sericulture as an integrated program 	<ul style="list-style-type: none"> - Welcomes the KAPASITAS Consortium's plan to collaborate on Lake Tempe Management. - Integration in the Lake Tempe catchment management program to strengthen Community Resilience, especially in vulnerable groups and women's empowerment. - The Regional Governments will encourage stakeholders to synergize and complement each other in programs prepared by the KAPASITAS consortium. 	<ul style="list-style-type: none"> - Increasing the capacity of the community and stakeholders to increase social resilience and formulate policies related to climate change. - The Sericulture development program and the Climate Village program involve multi-stakeholders. - Published the Wajo Regent's Recommendation to support the Program proposed by the KAPASITAS Consortium (attached) in the Concept Note.

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

66. The integrated management of the Lake Tempe catchment area through follow-up maintenance of forest rehabilitation, post-permit development of Social Forestry Business Groups, and Sericulture Business

Development is expected to increase ecosystem, social and economic resilience to adapt to climate change. The activities to be carried out through the Adaptation Fund (AF) are intended to fill gaps in budgeting for climate change adaptation caused by limited government funds and a limited understanding of the impacts of climate change. Hence, one of the components of this project is strengthening cross-sectoral policies and climate change adaptation capacity for the resilience of the Lake Tempe Watershed ecosystem. Regional and Village governments' planning capacity can formulate policies that integrate climate change adaptation actions.

67. This project intervenes in the forest area, critical catchment area, and Lake Rim to policy reform, which are the main components that will be intervened to increase climate change adaptation in the Lake Tempe ecosystem. Regarding biophysics, topography, area, and distribution of intervention areas, the Adaptation Fund (AF) will be beneficial in building community and ecosystem resilience for climate change adaptation.

68. The following is the justification for each project component for the importance of Adaptation Fund (AF) funding support to adapt to climate change in each project component as follows:

Component 1. *Strengthening post-rehabilitation forest management for the development of social forestry schemes, protection, and security of forests has implications for improving forest management systems, the environment, and community income.*

a. Baseline (without AF): continued maintenance of forest rehabilitation and continuous development of forest farmer groups (KTH) do not work following the principles of management and empowerment of communities inside and outside forest areas.

b. Additionally (with AF): with funding support from AF, the management of the Lake Tempe catchment area will be oriented towards improving and increasing the carrying capacity of the environment through continued maintenance, enrichment of forest rehabilitation plants, and provision of productive seeds for income diversification and new sources of livelihood which are expected to be able to increase ecosystem, social, and economic resilience to adapt to climate change. Community empowerment in the Lake Tempe catchment area, especially groups heavily affected by climate change, needs to be developed in businesses that can sustainably create new sources of livelihood. The activities of forming a Social Forestry group (KPS) and strengthening groups concerned with climate change and lakes. The Climate Village Program (ProKlim) to increase the capacity of the community gathered in the Social Forestry group (KPS) is expected to advance social and economic resilience to adapt to changes in climate.

Component 2. *Improving post-approval social forestry management to strengthen adaptation capacity to climate change.*

a. Baseline (without AF): Post-permit social forestry management through the development of the Social Forestry Business Group (KUPS) does not work according to the rights and obligations of the approval holder.

b. Additionally (with AF): improving the management of Social Forestry Business Group (KUPS) can increase its institutional capacity. The capacity of the managing community is able to manage businesses and create sustainable new sources of livelihood through collecting non-timber forest products (NTFP) in cultivated areas to adapt to climate change.

Component 3. *Improvement of the Sericulture management system in a participatory manner through stakeholder collaboration patterns. It supports policies and restores the glory of the South Sulawesi sericulture business to improve the lives of people vulnerable to climate change.*

a. Baseline (without AF): Sericulture's management system is not performed by community groups and multi-stakeholder forums, where this business should involve many parties starting from mulberry plant production, silkworm rearing, cocoon processing or spinning, weaving, and marketing of products. In its implementation, it has yet to integrate climate change adaptation actions through activities that can

increase community resilience to adapt to climate change.

- b. **Additionally (With AF):** There will be a greater chance of accelerating the improvement of Sericulture management. Funds will be allocated to each component of activities to support climate change adaptation and mitigation action, which is a big goal through the development of Sericulture to diversify income and new sources of livelihood sustainably. Institutional capacity strengthening activities carries out through training, workshops, and FGD involving stakeholders to ensure project implementation goes as expected.

Component 4. *Strengthening cross-sectoral policies, and climate change adaptation capacity for the resilience of the Tempe Lake catchment area ecosystem.*

- a. **Baseline (without AF):** Without the support of AF, implementing adaptation plans at the regional level will not work, considering the weak system and capacity of multi-stakeholders to reduce the risks of climate change, including socio-economic impacts and environmental damage. The action plan for national climate change adaptation does not yet integrate the technical issues of climate change adaptation action into the regional action plan for Climate Change Adaptation (RAD-API).
- b. **Additionally (with AF):** Financial support from AF can ensure the sustainability of the adaptation plan for the Tempe Lake catchment area. Strengthening capacity and involving experts in the task force for Climate Change Adaptation (POKJA-API) and letting them do climate change related-studies. It will ensure the implementation of regional climate change adaptation actions in encouraging the sustainability of district adaptation efforts in the Tempe Lake catchment area and play a role in formulating policies that support climate change adaptation.

Component 5. *Management of knowledge and learning from stakeholders to ensure the sustainability of climate change adaptation efforts in an integrated manner for the resilience of the Lake Tempe Catchment area ecosystem.*

- a. **Baseline (without AF):** Without support from AF, the process of dissemination, knowledge management, and systematic learning in support of project activities will not run optimally. In the absence of publications as learning resources, the level of public and stakeholder awareness of the impacts of climate change is still at its lowest point.
- b. **Additionally (with AF):** With the support of AF, it can be made the learning media, e.g., films, videos, books, and other media campaigns. These dissemination efforts are to ensure program alignment that will expand the scope of climate change adaptation program benefits.

69. With AF funding support, this project will ensure community resilience that is more adaptive to climate change. Community resilience will be increased through capacity building to develop businesses that sustainably create new livelihood sources. Activities to be carried out include the formation of a Social Forestry Group (KPS), a Social Forestry Business Group (KUPS), a Sericulture Business Group, a Lake Care Forum, a Climate Village Program (ProKlim), and the Climate Change Adaptation taskforce (POKJA-API). It is to ensure community capacity building and project sustainability. It will be carried out through training, workshops, and FGD involving stakeholders to internalize climate change adaptation action plans to increase food, socio-economic, and ecosystem security.

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

70. Each component proposed in this project is related and complements one another to ensure the project's sustainability. Monitoring and evaluation are also deemed necessary to ensure local community involvement in decision-making to increase commitment and ensure sustainability after the project is completed. The aim is that at the end of the project duration, the selected communities/groups will be able to continue to adapt to climate change independently, supported by an open and participatory government. The following are the main elements in the project sustainability that will be achieved:

1. Environmental Sustainability

71. This project will increase the land cover of the Lake Tempe catchment area to become more resilient and adaptive to climate change. Integrated forest management will increase carbon sequestration

through Social Forestry, Agroforestry, and Mulberry Cultivation, which will positively impact and produce sustainable environmental services for the community. This will indirectly improve soil and water quality, supporting sustainable ecosystems and social and community economic improvements. The project will integrate post-rehabilitation forest management and collaborative mulberry cultivation into a financing plan sourced from village funds as outlined in the village's medium-term development plan (RPJM Desa) To ensure environmental sustainability. Through the 17 village sustainable development goals (SDGs Desa) program and the District Intermediate Regional Development (RPJMD) in project intervention areas through special allocation funds for the Environment and Forestry sector. In addition, component 4 in this concept note will focus on knowledge management and learning activities, such as establishing a natural school and a climate change early warning platform.

2. Financial Sustainability

72. This project will strengthen the livelihoods and sources of income for the intervention village communities as an agreement and their commitment to implementing a natural resource management plan as an action to reduce the impact of climate change to achieve ecosystem resilience that supports community food security. Women's and men's groups will receive assistance from this program to develop sources of income and community welfare.

73. The financial sustainability in question is the sustainability of regional government funding to support climate change adaptation programs even after the project has ended, as well as the sustainability of the financial beneficiaries of Forest Food and the creative endeavors that result from this project. Funding in favor of climate change adaptation programs is encouraged through POKJA and Regency or provincial ordinances, so that relevant regional working units (OPD) and village governments have a legal basis for implementing strategic climate change adaptation programs and action programs. Financial sustainability at the beneficiary level will be achieved through technology processing the results, increasing financial and operational capacity, and connecting the processed products to the right market while prioritizing gender mainstreaming. In addition, companies from forest food patterns that are encouraged will benefit from the local wisdom of the sericulture business. We know it as an effort to restore the glory of the sericulture of South Sulawesi, previously described in the socio-economic context, as well as integration into Village ordinances and village head decrees in ensuring the sustainability of funding in the Village finance.

3. Institutional sustainability

74. Institutional sustainability is carried out by forming groups concerned with climate change and lakes, social forestry business groups, and Sericulture business groups. These community groups are vulnerable communities or other target communities equipped with capacity building in institutional governance. Active involvement of the community with participatory models and collaborative processes as managers in institutional sub-systems is an adaptive effort to ensure the management of institutions that will support the achievement of long-term climate change adaptation. In addition, the presence of communal forum organizations can work continuously even though this project has already been finished. The project will conduct Several community forum organizations, e.g., the task force for greenhouse gases, the task force for Social Forestry, the Lake forum, Climate Change Concern Group, Sericulture Consultative Body (BAMUS-Sutera), and others.

4. Sustainability of the System

75. The availability of a monitoring and surveillance system for climate change adaptation programs supported by partnership funding will continue and be used by POKJA-API, POKJA PS, BAMUS SUTERA, FORUM DANAU, and the wider community, including the integration of knowledge about lakes and Sericulture in the local content curriculum from elementary, intermediate and high school. It will also relate to knowledge management to strengthen project sustainability.

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

Table 4. Environmental and social impacts of proposed programme

Checklist of environmental and social principles	No required further assessment is for compliance	Potential impacts and risks—further assessment and management required for compliance
Compliance with the Law	No further assessment of compliance is required	<p>This project is consistent with relevant policies and further supports the Indonesian government's programs, including;</p> <ul style="list-style-type: none"> • Law Number 16 of 2016 concerning the Ratification of the Paris Agreement • Law no. 32 of 2009 concerning Environmental Protection and Management • Law no. 37 of 2014 concerning Soil and Water Conservation • Law no. 11 of 2020 concerning Job Creation • Presidential Regulation Number 59 of 2017 concerning the Implementation of Achieving Sustainable Development Goals • Presidential Regulation Number 18 of 2020 concerning Climate Resilient Development • Presidential Decree Number 98 of 2021 concerning Control of Greenhouse Gas Emissions • Guidelines for National Development and Climate Resilient development in 2021 by the National Development Planning Agency (BAPPENAS) • Roadmap Document Nationally Determined Contribution to Climate Change Adaptation (NDC-API) • Decree of the Minister of Environment and Forestry number SK 168/MENLHK/PKTL/PLA.1/2/2022 concerning Indonesia Forestry and Other Land Use (FOLU) Net Sink 2030 • Minister of Environment and Forestry Regulation number P.33/Menlhk/Setjen/Kum.1/3/2016 concerning Guidelines for Preparing Climate Change Adaptation Actions • Ministry of Environment and Forestry Regulation No. P 16/MENLHK/SETJEN/SET.1/8/2020 Concerning the Ministry of Environment and Forestry Strategic Action Plan for 2020-2024. • Minister of Environment and Forestry Regulation No. P.83/MENLHK/SETJEN/KUM.1/10/206 Concerning Social Forestry, • Minister of Environment and Forestry Regulation No. P.37/MENLHK/SETJEN/KUM.1/6/2017

		<p>Concerning Procurement and Distribution of Silkworm Eggs.</p> <ul style="list-style-type: none"> • Government Regulation (PP) No.37 of 2012, regarding integrated watershed management, • Regulation of the Minister of Environment and Forestry Number 7 of 2018 concerning Guidelines for Vulnerability, Risk, and studies of climate change impacts
<i>Access and Equity</i>	<i>Compliance assessment during implementation may be required</i>	This project will provide fair and equitable access to beneficiaries, so it is hoped to build the community, including increasing awareness of climate change vulnerability and ecosystem resilience to local food security. The potential involvement of community groups in this project requires further assessment.
<i>Marginalized and Vulnerable Groups</i>	<i>Compliance assessment during implementation may be required</i>	Considering the project's social and economic benefits, an assessment is required. This project aims to provide opportunities for all communities, including vulnerable groups living in program areas, to participate in decision-making processes including in the development and improve people's livelihoods and incomes.
<i>Human Rights</i>	<i>No further assessment of compliance is required</i>	This project highly upholds the enforcement of human rights. The basic rights of beneficiary communities will be upheld in the implementation of this project.
<i>Gender Equality and Women's Empowerment</i>	<i>Compliance assessment during implementation may be required</i>	The project seeks to advance gender equality and women's empowerment. Increasing the participation from all genders, targets have been set for the coverage of women in all project interventions related to training and other capacity-building activities. This will ensure that women have equal access to information and skills acquisition under the project.
<i>Core Labour Rights</i>	<i>No further assessment of compliance is required.</i>	Payments to the workforce under the project will be made in accordance with Government-approved norms adhering to the minimum wage rate and thereby ensuring the core rights of the workforce.
<i>Indigenous Peoples</i>	<i>Compliance assessment during implementation may be required</i>	Project implementation will always respect and consult community leaders as the primary target beneficiaries and key stakeholders in project implementation. The project will adjust and resolve the dispute if there is a conflict.
<i>Involuntary Resettlement</i>	<i>No further assessment of compliance is required.</i>	The program did not displace any communities, and thus resettlement issues did not arise
<i>Protection of Natural Habitats</i>	<i>No further assessment of compliance is required.</i>	This project will be directed towards protecting the Lake Tempe catchment ecosystem through post-rehabilitation forest management and Sericulture efforts which are expected to produce ecosystem resilience to achieve food security in the

		project intervention area. This project must constantly adjust to mitigate the management of each activity
<i>Conservation of Biological Diversity</i>	<i>No further assessment of compliance is required.</i>	This project will be directed at protecting fauna, including the endemic flora and fauna of the Lake Tempe Watershed Ecosystem
<i>Climate Change</i>	<i>No further assessment of compliance is required.</i>	This project supports increasing the adaptive capacity of the community in the intervention area to the impacts of climate change and is consistent with strategic climate studies in South Sulawesi, and supports all policies and activities related to this project
<i>Pollution Prevention and Resource Efficiency</i>	<i>No further assessment of compliance is required.</i>	The main policies in this project are consistent with the principles of adaptation policies. This project will use environmentally friendly materials and reuse organic waste to save resources and minimize the use of single-use products.
<i>Public Health</i>	<i>No further assessment of compliance is required.</i>	There was no adverse impact on public health-related issues as a result of this project
<i>Physical and Cultural Heritage</i>	<i>No further assessment of compliance is required</i>	This project will be fully implemented through the active participation of the community. Further compliance assessments during project implementation may be required if there is cultural and physical heritage.
<i>Lands and Soil Conservation</i>	<i>No further assessment of compliance is required.</i>	Considering the ecological benefits of this project, watershed protection efforts are expected to assist in soil and water conservation which will not damage soil and water resources.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

76. This project is implemented through the KAPASITAS (Konsorsium Aksi Peduli Masa Depan Danau Tempe), which the Center for Environmental Research and Development (PPLH), the Yayasan Peduli Lingkungan dan Hutan Sosial (EDUKASI) as the consortium leader, and the Rimba Nusantara Berkarya Foundation as a member of the consortium. The EDUKASI Foundation has facilitated and strengthened the Conservation Partnership Recognition and Protection Scheme (KULIN KK) in the Bulukumba TAHURA Conservation Area, facilitating the formulation of guidelines and a Social Forestry Roadmap for Bulukumba Regency, members of the POKJA for the Acceleration of Social Forestry in the province South Sulawesi and POKJA for Social Forestry in the Bulukumba Regency. The Rimba Nusantara Berkarya Foundation has experience supporting forest and land restoration in South Sulawesi through a collaboration with the Jeneberang Saddang River Basin and Protection Forest Management Center that began in 2020. PPLH is an institution among universities with experience in research and community service related to environmental issues in East Indonesia, especially in South Sulawesi province, especially in terms of involvement in study activities conducted by the government from various aspects of the study, especially technical ones, and social factors and the economics of Tempe Lake management.
77. For the implementation of the project, we will cooperate with the county environmental agency, Forest Management Unit (KPH) Walanae, Forest Management Unit (KPH) Aota, and Forest Management Unit (KPH). One of the priorities is forest and land restoration, the Development of Social Forestry, and Sericulture Business. In addition, the Ministry of Agriculture, the Ministry of Industry of Wajo Regency,

and the Soppeng Regency may be involved according to their duties in organizing farmers related to mulberry and silkworm cultivation. Technical training and guidance take place after or during the organization, which usually involves data collection and analysis so that the training/consultancy and its participants reflect the objectives (issues and stakeholders) extracted from accurate data. Placement of assistants/consultants. Capacity building for competence (including sensitivity to gender issues and social inclusion) and incentives for facilitators/enhancements to facilitate farmer-entrepreneur partnerships.

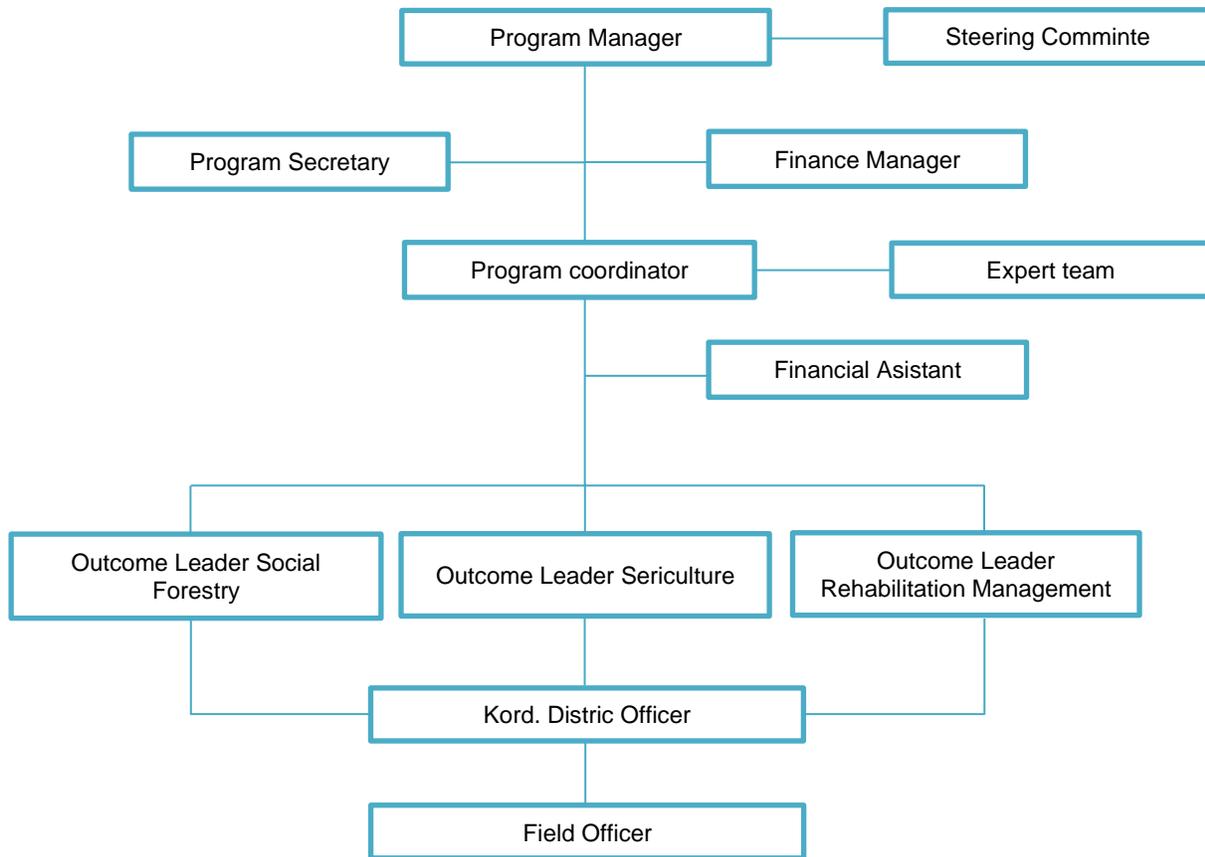


Figure 7. Structure Project Management Unit (PMU)

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

78. All risks in project implementation are analyzed during the design stage with the participation of all relevant stakeholders. Mitigation strategies are established to ensure that risks are appropriately managed. The table below presents the types of risk, risk description, level of risk, and strategies that have been and will be implemented to reduce them.

Table 5. Programme Risk Management

Risk Type	Risk Description	Risk Category (L/M/H)	Risk Mitigation Strategy
Institutional	Weak engagement between project implementers and central/provincial/regional governments due to changes in government structure and lack of coordination and communication.	Moderate	This project has a work component focused on community empowerment, so changes in the governance structure will not significantly impact the project's direct beneficiaries. To ensure that the project successes can be achieved, the PMU continues to establish active coordination and communication with the local government.
	Changes in project personnel can affect the availability of qualified personnel	Low	In establishing a working relationship with PMU, the consortium implements a recruitment system with the issuance of an employment contract during the project. With this mechanism, the involvement of staff in the consortium to achieve the project objectives becomes the legal basis.
Finance	Disbursing funds, procurement, and institutional inefficiencies (long approval processes, etc.) can delay project implementation.	moderate	Establish active communication with grant providers and comply with all forms of financial procedures in budget disbursement.
Social	Lack of community support (direct beneficiaries) for the project	moderate	<ul style="list-style-type: none"> Establish a good relationship with local government (at the village level), community leaders, and the community (direct beneficiaries) before project implementation. When forming groups at the village level, all groups/levels in the target community can be assembled. Use of training/workshop/group discussion activities to provide an understanding of the project
	Communities are less aware of climate change and less enthusiastic about responding to disasters. It will be complicated to achieve community engagement in forest food development and climate change adaptation if beneficiaries are not fully aware of the impacts of climate change.	Low	This project will implement and introduce participatory methods to the community so that the community can understand the impact of climate change. In addition, the mentoring process is carried out at the village level by deploying field assistants in each of the project's target villages.
	Community conflict of interest in land use by PMUs in project implementation	Moderate	In this project, trust is built up together with stakeholders. In addition, land use mechanisms are developed that can be used as a basis for the PMU in project implementation.
	Farmers and the community have insufficient technical knowledge and technology in modern forest food development.	Low	This project provides technical support to the project beneficiaries using forest food development technology in the form of training, advice, and discussion rooms for knowledge transfer.

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

79. Project/program preparation identifies environmental or social risks, and the proposal must include an environmental and social management plan that identifies the actions needed to avoid, minimize or mitigate potential environmental and social risks. Environmental and social risk management is described in Table 6.

Table 6. Environmental and Social Management Plan

Environmental and Social Principles	Risk Description	Risk Category (H/M/L)	Risk Mitigation Strategies
<i>Compliance with the Law</i>	The political dynamics in 2023-2024 resulted in a weak commitment from the local/provincial/central government that has been built with the Project Management Unit (PMU), in addition to land use conflicts that will become an area after the approval of social forestry and forest rehabilitation at the community level.	middle	<ul style="list-style-type: none"> - This project has an activity component that can be used to build follow-up communications with the regional/provincial/central government regarding matters that have become agreements in realizing the project. - This project has a space in the activities that will identify potential communities along with the land that will become the area after the approval of the social forestry scheme and forest rehabilitation
<i>Access and Equity</i>	The process of allocating access to projects is not transparent and not well coordinated with stakeholders, and the selection of locations/villages for project implementation can trigger jealousy from other villages.	low	Transparent coordination will be carried out to ensure the involvement of local stakeholders in project implementation, which is also helpful in coordinating site/village selection.
<i>Marginalized and Vulnerable Groups</i>	Marginalized and vulnerable groups may have limited access to participate in project implementation.	middle	The project will ensure the participation of marginalized and vulnerable groups, provide training, and encourage vulnerable groups to ensure their involvement during implementation and continue after the project is completed.
<i>Human Rights</i>	Project implementation may be negligent or forget about upholding human rights.	middle	Human rights will always be upheld in project implementation, and consultations with stakeholders will be routinely carried out, especially regarding human rights.
<i>Gender Equality and Women's Empowerment</i>	<ul style="list-style-type: none"> - Women and men have different capacities in adapting to the adverse impacts of Climate Change. - Women tend to be less involved among authorities and underrepresented in decision-making structures. - Women may have limited or denied access to participate in implementation projects. 	middle	In this project, women will have better access to decision-making, as previously explained in the "Gender and Vulnerable Groups Benefits" section. The project will also encourage women to participate in training, discussions, and workshops to strengthen women's voices and participation
<i>Core Labour Rights</i>	Coercion and discrimination may occur.	low	The norms approved by the Government will always guide workers and the workforce under the project. Through capacity-building activities, core labor rights will be affirmed.
<i>Indigenous Peoples</i>	Disobedience to customary norms and community culture.	low	Consultations with stakeholders will always be carried out to ensure no community norms and culture violations.
<i>Involuntary Resettlement</i>	-	-	-
<i>Protection of Natural Habitats</i>	Land use change can result in damage to natural habitats.	middle	This project will improve the ecosystem through post-rehabilitation land management and sericulture cultivation so that there is no damage to the ecosystem
<i>Conservation of Biological</i>	The overlap between human and natural interests will cause the	middle	During the implementation of this project, ecological and social studies will be carried

<i>Diversity</i>	loss of endemic flora and fauna in the catchment area of Lake Tempe.		out. This will ensure the endemic flora and fauna in Lake Tempe are maintained.
<i>Climate Change</i>	- se of fossil fuels for the production of livelihood products which may increase Greenhouse Gas emissions - Use of chemicals may result in Resource damage.	low	- Limit fossil fuels and use renewable energy whenever possible (e.g., solar panels for electricity). - Socialization and workshops on the use of organic materials will be carried out to reduce the use of chemicals.
<i>Pollution Prevention and Resource Efficiency</i>	-	-	-
<i>Public Health</i>	-	-	-
<i>Physical and Cultural Heritage</i>	-	-	-
<i>Lands and Soil Conservation</i>	Land clearing will cause a decrease in land quality and can have negative impacts such as erosion, flooding, and landslides.	middle	Post-rehabilitation land management activities through social forestry activities and mulberry cultivation will be carried out to increase productivity and reduce land damage.

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

80. In the project management cycle, monitoring and evaluation are integral parts of realizing the objectives of implementing the program/project. Monitoring and evaluation will provide the information needed to assess and guide project strategy, ensure effective implementation, meet reporting requirements and inform future planning.

81. Monitoring and evaluation (M&E) will be carried out based on the framework that has been prepared, taking into account; 1). Strategy and goals, 2). Achievement indicators, 3). Implementation of activities, and 4). Use of funds, where this component will assist in:

1. Prepare the M&E Tool for the project: M&E will be prepared through the KAPASITAS consortium meeting before implementation.
2. The project will recruit consultants to prepare, ensure implementation, and evaluate the M&E plan.
3. Organize a Kick-off/Inception workshop, which will be integrated with the Policy Implementation Workshop.
4. M&E related to Climate resilience at the local level will be held at the start of project implementation involving stakeholders, including government agencies at national and regional levels, local universities, and NGOs. This stage will identify and update critical strategic issues concerning climate resilience in the intervention area.
5. Prepare progress reports (quarterly and annually). The Project Management Unit (PMU) will prepare periodic progress reports on project implementation based on agreed key performance indicators/targets.
6. Conduct a Project Evaluation by an independent consultant at the end of the project to evaluate the achievement of target indicators and analyze lessons learned from project implementation.

82. In this project, monitoring is directed to see Efficiency, Effectiveness, and Results. The results of monitoring and evaluation can become learning materials used for improvement or development in other places so that the results of monitoring and evaluation obtained will be reported periodically to related parties: Adaptation Fund (AF), Partnerships, and Stakeholders.

Table 7. M&E Budget & Plan

Activities	Target	Cost (\$)	Time
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Baseline Survey	Target outcome indicators, output	\$1.500	Project Beginning
Mid Survey	Target outcome indicators, output	\$1.500	Part-Time Project
Final Project Survey	Target outcome indicators, output	\$1.500	End of Project
Review reports, interviews, PMU FGD	Process, milestones, efficiency, effectiveness, results	\$800	1 time a month
money workshop	Process, milestones, efficiency, effectiveness, results	\$1.200	Six months
Internal Audit	Management	\$3.500	Annual
Total		\$10.000	

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

Table 8. Result Framework

Outcome/Output	Indicator	Baseline	Target		Source of Verification	Risk & Assumption
			2023	2024		
Component 1. Strengthening post-rehabilitation forest management for the development of social forestry schemes, protection, and security of forests has implications for improving forest management systems, the environment, and community income.						
Outcome 1.1. The formation of a group capable of raising public awareness of the sustainability of post-remediation forest functions across 1,220 hectares.	1,220 ha of rehabilitated forest area in the governance of social forest programs.	1,220 ha of forest area as a result of good restoration declared a social forest program but not managed through a forest management system and PS permit	1,220 ha		Permission to manage Social Forestry, Forestry, and Reports	If social forestry regulations don't change
Output 1.1.1. The formation of KTH became a pioneer in implementing local government policies related to Lake Tempe	1,220 ha of social forest area receive legal access/permission	0	1	10	Copy of the permit for the management of social forest management systems	The length of time for issuing permits, social forestry consortiums, and advocating for permit agreements must be routine
Output 1.1.2. Increased stakeholder support for forest conservation and restoration to protect Lake Catchment.	The existence of a memorandum of understanding by the parties to remediate, protect and fight forest fires		1		Copy of the MoU for restoration and forest protection	
Output 1.1.3. The establishment of PERDES (Village Regulations) is the Village Chief's decision to direct community involvement in forest management to control KARHUT and protect the ecosystem of the Lake Tempe catchment area	PERDES and Village Head Decrees	There are no community groups as partners in controlling Forest fire and Forest Protection		1	Copy of Village Regulation and Village Head Decree.	
Outcome 1.2. Strengthening actors and institutions in supporting adaptation to climate change	Formation of forest farmer groups and Lake Care Forum, 3 POKJA API districts		10	9	Activity Reports, Documentation	-
Output 1.2.1. Implementation of help for groups dealing with climate change and lakes	10 companions increased their capacity and 30 members of the Lake Care Forum	0			Activity Reports and documentation	-

Outcome/Output	Indicator	Baseline	Target		Source of Verification	Risk & Assumption
			2023	2024		
Output 1.2.2. They are strengthening municipal capacities to develop adaptation strategies to the impacts of climate change in the Lake Tempe catchment area.	50 people increased their capacity in preparing the Climate Change Adaptation Action Plan document	0	50		Activity Reports, Documentation	-
Output 1.2.3. There is the internalization of climate change adaptation and OPD mitigation actions related to Lake Tempe	Plant enrichment of non-timber forest products (NTFPs) in rehabilitation/group action areas	0	1		NTFP's Plant Enrichment Plan, Activity Report	-
Output 1.2.4. There is a monitoring system for climate change adaptation and mitigation that can be used by the parties to ensure sustainability.	There are periodic, monthly, quarterly, semesterly, and yearly reports	0		1	Reports and documentation	Data input is not maximal
Outcome 1.3 Increased independence and community income from forest and sea economy results	30% increase in income through the implemented system as a source of household income	Community income by not applying the pattern in the area that already has an HKm/HD administrative permit		30	Activity Reports, Documentation	There are differences in the direction of development between agriculture, forestry, and animal husbandry It is difficult to change the management pattern of collective livestock farming
Output 1.3.1 Increased KTH skills in forest and land reclamation management to improve the Lake Tempe catchment area	250 people from 10 social forestry groups, women, and people in need increase their capacities for the sustainable management of forest food	0	200	50	Activity Reports, Documentation	Farmers' unions reject the project's new approach to improving skills, saying it deviates from traditional patterns
Output 1.3.2 Availability of study results, forest management, forest products processing technology facilities and infrastructure, and economic potential of lake management.	KPHL Business Plan 3 Policy Documents and Water Hyacinth Economic Studies.	There is no business plan for FMU as Site Management Unit and Lake Management Unit	10		Study Documents, Documentation, Activity Reports	
Output 1.3.3 The formation of a market network	Sales of forest food products 75% of the production	0		75	Purchase Documents/ Contract	-

Outcome/Output	Indicator	Baseline	Target		Source of Verification	Risk & Assumption
			2023	2024		
Component 2. Improving post-approval social forestry management to strengthen adaptation capacity to climate change.						
Outcome 2.1. Increased KUPS in the KPS permit area of 4,160 ha in Lake Tempe catchment	Formed 17 KUPS	Public understanding of PPP about KUPS is still lacking,		17	BA document of KUPS establishment	
Output 2.1.1. The development of management aspects after the approval of Community Forest (HKM) or Village Forest (HD).	Area boundary markings, Garapan's contribution includes a PPP plan, KUPS classification, Business Units, marketing cooperation, and capital assistance.	There is no sign of area boundaries, area utilization, NTFP collection		70%	Activity Reports, Documentation	-
Output 2.1.2. Increased forest land cover in areas after KPS legal access/approval	Presence of HHBK as a result of plant enrichment, forage for livestock.	Forest rehabilitation has not been carried out after approval		70%	Activity Reports, Documentation	-
Outcome 2.2. Strengthening parties and institutions of POKJA PS, Social Forestry Groups (KUPS) in supporting climate change adaptation	Formed 3 POKJA PS District	There is no coordination forum for social forestry management.	100		Activity Reports, Documentation	Changes in the pattern of financial management
Output 2.2.1. Capacity building for facilitators and local communities in the Social Forestry Group (KUPS).	17 assistants and 150 community members increase their capacity in developing creative businesses and food diversification	0	150		Activity Reports, Documentation	-
Output 2.2.2. Increased capacity of stakeholders in sustainable forest management.	Implementation of management workshops.	0		52.982	Documentation, Activity Report	-
Output 2.2.3. Increased support of the parties in the POKJA Encouraging the Social Forestry Scheme in encouraging the Social Forestry Group (KPUS).	3 Policy document Social Forestry Roadmap/Regency PS Roadmap.	0		2	District Government Policy Documents	Differences in perceptions about forestry authority
Output 2.2.4. Increased skills of Social Forestry/KPS and KUPS groups, women, and the vulnerable in managing sustainable forest food.	425 people from 17 social forestry groups/KUPS, women, and the vulnerable increase their capacity in managing forest food sustainably	0	300	125	Activity Reports and Documentation	PPP rejects the project's new approach to skills improvement because it is considered different from the usual pattern

Outcome/Output	Indicator	Baseline	Target		Source of Verification	Risk & Assumption
			2023	2024		
Outcome 2.3. Increasing community income from forest food in the Lake Tempe catchment	20% increase in income as a source of household income	Community income by not applying the pattern in the area that already has a management permit		20	Activity Reports and Documentation	There are differences in the direction of development between the agricultural, forestry, and livestock sectors
Output 2.3.1. Availability of forest food processing technology facilities and infrastructure.	17 units of forest food management facilities and infrastructure	0	17		Goods handover documents, documentation, and activity reports	Machine specifications do not match market demand product specifications
Output 2.3.2. The absorption of forest food products into the market	Sale of forest confectionery products 50% of the production	0		50	Purchase/contract documents	-
Component 3. Improving the sericulture management system in a participatory manner through a cooperative pattern of parties to help revitalize the sericulture business to improve the lives of people affected by climate change.						
Outcome 3.1 The formation of a sericulture business group.	6 Sericulture Groups (KSA) Formed	Business groups by sector	1	2	Copy of Policy Documents, Activity Reports	There is a policy for each sector, the Joint business group.
Output 3.1.1 Pre-condition silky nature	1 POKJA/BAMUS SILK and KTSA formed	0	1		Copy of SK TIM Pokja, Work Plan	-
Output 3.1.2 Increased land cover through mulberry cultivation	Mulberry planting 15 Ha	0		2	Copy of policy document	-
Output 3.1.3 Increased public awareness of the importance of mulberry cultivation and silkworm maintenance	There is a pilot project for the silkworm maintenance unit	0	1		Purchase Documents/ Contracts, Activity Reports	Data input is not optimal, and the measurement system and measurement indicators are not running
Outcome 3.2. Strengthening of sericulture business parties and institutions in supporting adaptation and mitigation of climate change.	6 sericulture business institutions are formed and their capacity increases in supporting climate change adaptation and mitigation	Sericulture business institutions still lack an understanding of group functions	6		Activity Reports, and Documentation	-
3.2.1 Exits. Increasing the common good through empowerment models while at the same time focusing on economic aspects and nature conservation	30% of people's income increases by introducing the system as a source of household income	Community income by not applying the pattern in the area that already has a		30	Activity reports, and documentation	There are differences in the direction of development between the agricultural, forestry, and livestock sectors

Outcome/Output	Indicator	Baseline	Target		Source of Verification	Risk & Assumption
			2023	2024		
		management permit				
3.2.2 Exits. Enhancing the creativity and innovation of Sericulture business players in the development of each KUPS formed	150 employees from 6 sericulture enterprise groups have increased their capacity to develop sericulture enterprises	0	100	50	Activity reports and documentation	The KUPS group rejected the project's new approach to skills improvement because it was considered different from the traditional pattern
3.2.3 Exits. Increasing the parties' capacity in managing sustainable sericulture business.	50 people have expanded their capacity to run a sustainable sericulture company	0		50	Activity reports and documentation	-
3.2.4 Exits. Increased support from the parties to promote the development of sericulture	1 Understanding of the parties in the development of the sericulture business	0	1		Copy of the understanding of the parties in the development of the sericulture business	-
3.2.5 Exits. Improved ability of sericulture groups to manage sustainable production	150 employees from 6 sericulture company groups have expanded their capacities for the sustainable management of sericulture companies	0	100	50	Activity Reports and Documentation	The sericulture business group rejected the project's new approach to skills improvement because it was considered different from the traditional pattern
3.2.6 Exits. Availability of facilities and infrastructure for sericulture processing technology.	6 units of sericulture management technology facilities and infrastructure	0	6		Goods handover documents, documentation, and activity reports	Machine specifications do not match market demand product specifications
3.2.7 Exits. The inclusion of sericulture products in the market	Sale of sericulture products 50% of production	0		50	Purchase/contract documentation	-
Component 4. Strengthening multisectoral climate change adaptation strategies for ecosystem resilience and socio-economic resilience of the Lake Tempe catchment area						
Outcome 4.1 Strengthening of cross-sectoral policies to ensure sustainable adaptation to climate change	3 policy products that support climate change adaptation	policy products that support climate change adaptation		27.143	Activity Reports, Documentation	-

Outcome/Output	Indicator	Baseline	Target		Source of Verification	Risk & Assumption
			2023	2024		
Output 4.1.1 Establishment and operation of the working group team on climate change adaptation (POKJA-API)	1 API Taskforce Lake Tempe Catchment Area	0	1		Copy of SK Pokja Team, Work Plan	-
Outcome 4.1.2 Internalization of the Climate Change Adaptation Action Plan into local government policies and the existence of a planning document for the Climate Change Adaptation Action Plan at the local level	2 API internalized regional planning documents	0		2	Copy of activity documents	-
4.1.3 Exits. The existence of a climate change adaptation monitoring system that can be used by parties to ensure sustainability.	1 adaptation monitoring application system used to support policy implementation	0	1		Purchase/contract documents, and activity reports	Data input is not maximal
Component 5. Management of knowledge and learning for stakeholders to ensure the sustainability of climate change adaptation efforts in an integrated manner for the resilience of the Lake Tempe catchment ecosystem.						
Outcomes 5.1. Strengthening stakeholder understanding through the dissemination process	52. 982 people received information on the dissemination process	0		52. 982	Activity reports, and documentation	-
Output 5.1.1. Dissemination of programs to strengthen and encourage policies and alignments	1 film, 1 module book for local lakes and sericulture, 1 lesson learned/best practice book, 1 journal, 1 leaflet/poster/banner, 1 digital media	0	3	3	Documentation	-
5.1.2 Outputs. The existence of an early warning system platform for Climate Change Adaptation Communities Lake Tempe Catchment area Ecosystem	1 platform early warning system	0	1		Activity reports, and documentation	-

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

Table 9. Alignment With Adaptation Fund Result Framework Result

Project Objective (s)1	Project Objective Indicators (s)	Fund Outcomes	Fund Outcomes Indicator	Grant Amount (USD)
1. Strengthening post-rehabilitation forest management for the development of social forestry schemes, forest protection and security which has implications for improving the forest management system, improving the environment and community income.	1,220 ha of rehabilitated forest area into the governance of social forestry schemes.	Outcome 5. Increased ecosystem resilience in response to climate change and variability-induced stress	1.120 ha natural assets maintained or improved under climate change and variability-induced stress	\$250,093
	250 people from 10 Social Forestry groups, women, and the vulnerable increase their capacity in managing forest food sustainably	Outcome 6. Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	3% of households having more secure (increased) access to livelihood assets	
2. Improved social forestry management after approval to strengthen adaptation capacity to climate change.	The formation of 17 KUPS in an area of 4,160 ha of Lake Tempe D Catchment area Ecosystem	Outcome 5. Increased ecosystem resilience in response to climate change and variability-induced stress	4.160 ha natural assets maintained or improved under climate change and variability-induced stress	\$225,333
	425 people in the community have increased their capacity in developing creative businesses and diversifying food	Outcome 6. Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	5% of households having more secure (increased) access to livelihood assets	
3. Improvement of the sericulture management system in a participatory manner through the collaboration pattern of the parties to support the revitalization of the sericulture business as an effort to improve the lives of people vulnerable to climate change.	150 people from 6 sericulture business groups have increased their capacity in managing sericulture businesses in a sustainable manner	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	150 people from 6 silk business groups have increased their capacity in managing sericulture businesses	\$182,647
	50 people increased their capacity in managing a sustainable sericulture business	Outcome 6. Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	3% of households having more secure (increased) access to livelihood assets	

Project Objective (s)1	Project Objective Indicators (s)	Fund Outcomes	Fund Outcomes Indicator	Grant Amount (USD)
4. Strengthening cross-sectoral policies, in adapting to climate change for ecosystem resilience and socio-economic resilience of the Lake Tempe catchment area.	2 API internalized regional planning documents	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	Fifty-three (53) Institutions from the Provincial Government, District, and Village Governments, with increased capacity to minimize exposure to climate variability risks	\$90,447
		Outcome 7. Improved policies and regulations that promote and enforce resilience measures	Two (3) climate change adaptation policy products are integrated with the National Strategy for Climate Change Adaptation	
5. Management of knowledge and learning for stakeholders to ensure the sustainability of climate change adaptation efforts in an integrated manner for the resilience of the Lake Tempe catchment ecosystem.	A total of 52,982 received information during the dissemination process	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3% targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	\$68,047
1. The formation of a group capable of increasing public awareness of the sustainability of post-rehabilitation forest functions covering an area of 1,220 Ha.	1,220 ha of rehabilitated forest area into the governance of social forestry schemes.	5. Increase forest reahabilitation area as response to climate change impact	5.1. 1.220 ha of forest area enhanced for climate change adaptation	\$42,783
2. Strengthening of stakeholders and institutions in supporting climate change adaptation	Formation of Forest Farmers Group and Lake Care Forum, 3 POKJA API Districts	6. Strengthened of local community and livelihood strategies	6.1.1. Ten (10) local community are created and strengthened in support of livelihood strategis	\$76,567
3. Increased independence and community income from forestry and lake business products	30% increase in income from Implemented system as a source of household income	6. Increase household income in targeted area	6.1.2. Agroforestry as income source for households under climate change scenario	\$130,743
4. Additional KUPS in the KPS approval area of 4,160 ha in the Lake Tempe catchment	4,160 Ha of land at 17 KPS	5.1. Increase forest reahabilitation area as response to climate change impact	5.1. 4,160 ha of improved PPP/KUPS area for climate change adaptation	\$64,343
5. Strengthening of parties and institutions of POKJA PS, Social Forestry Groups (KUPS) in supporting climate change adaptation	17 local KUPS institutions that have been formed have increased their capacity	6. Strengthened of local community and livelihood strategies	6.1.1. 17 community are created and strengthened in support of livelihood strategis	\$130,483
6. Increasing community income from forest food in the Lake Tempe catchment	30% Increase in Income from Implementing the system as a source of household income	6. Increase household income in targeted area	6.1.2. Agroforestry as income source for households under climate change scenario	\$60,507
7. The formation of a sericulture business group.	10 sericulture business groups were formed and their capacity increased	6. Increase household income in targeted area	6.1.2. Sericulture as income source for households under climate change scenario	\$94,589

Project Objective (s) ¹	Project Objective Indicators (s)	Fund Outcomes	Fund Outcomes Indicator	Grant Amount (USD)
		6. Strengthened of local community and livelihood strategies	6.1.1. 10 community are created and strengthened in support of livelihood strategies	
8. Strengthening the role of parties and sericulture business institutions as well as increasing income in supporting climate change adaptation and mitigation.	The formation of the sericulture consultation body	6. Strengthened of local community and livelihood strategies	6.1.1. The Sericulture Consultative Body (BAMUS) was formed	\$88,058
9. Strengthening cross-sectoral policies to ensure sustainable adaptation to change	2 Planning documents supporting climate change adaptation	2. Local planning documents internalized by API	2.1.1. (30) staff trained to respond and mitigated impacts of climate related events	\$90,447
		7. Improved regulation of climate-resilience strategies	7.1. Three (3) regulation will introduced to address climate change risks	
10. Strengthening stakeholder understanding through the dissemination process	52,982 people understand policies that support climate change adaptation	3. Targeted population groups participating adaptation and risk reduction awareness activities	3.1.2. Five (5) of news outlets in the local press and media that have covered the topic	\$68,047

G. Include a detailed budget with budget notes, a budget on the Implementing Entity.

H. Management fee use, and an explanation and a breakdown of the execution costs. Include a disbursement schedule with time-bound milestones.

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

A. Record of endorsement on behalf of the government²

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

Ir. H. A. Andi Parenrengi, M.P Head of Forestry Service South Sulawesi Province	Date: 27 June 2022
Prof. Dr. rer. Nat. A.M. Imran Head of the Center for Environmental Research and Development Hasanuddin University.	Date: 30 June 2022
Dr. Ir. Darhamsyah, M. Si Head of the Center for Control Development Ecoregion Sulawesi and Maluku	Date: 24 June 2022
Dr. H. Amran Mahmud, S. Sos., M.Si. Regent of Wajo	Date: 30 June 2022

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.

<p>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 (.....list here.....) and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.</p>	
	
<p>REZA DIAN RIANDY NURDIN Implementing Entity Coordinator</p>	
Date: July, 12 2022	<p>Tel. and Email: 081243170707, 082189653533, echa.nurdin@gmail.com, edukasi.foundation@gmail.com</p>
<p>Project Contact Person: Mukrimin, 081324408144</p>	
<p>Tel. And Email: mukrimin@unhas.ac.id</p>	

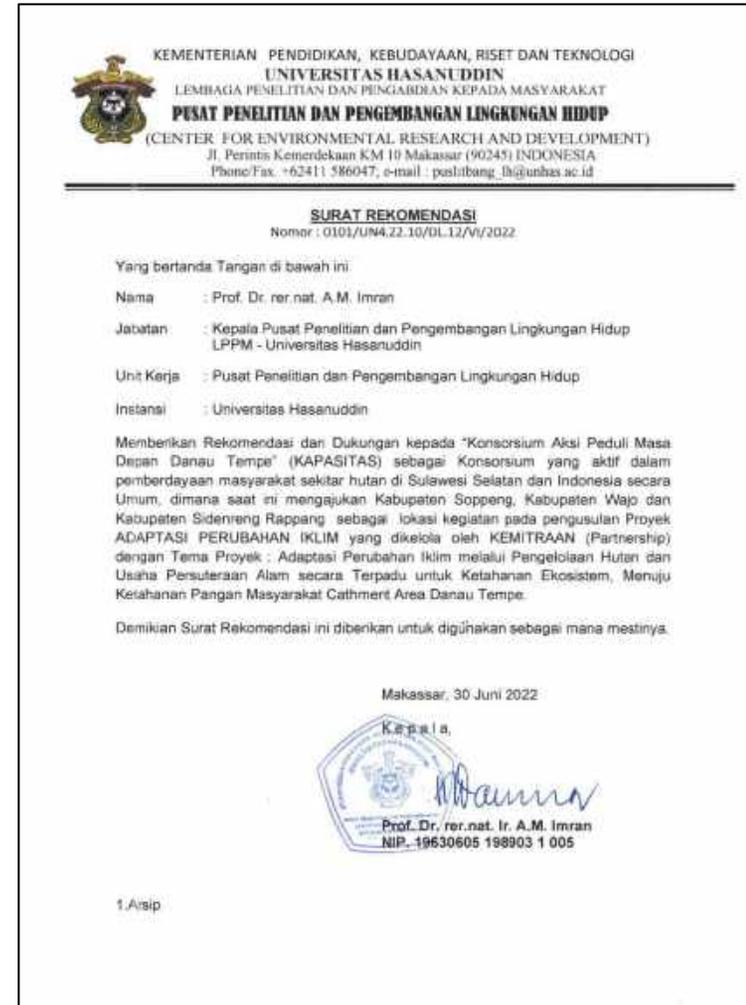
C. The Endorsement Letter From

1. Forestry Service South Sulawesi Province



3. Center for Control Development Ecoregion Sulawesi and Maluku

2. Center for Environmental Research and Development Hasanuddin University



4. Wajo Regency



IKA PRATIWI SYAMSIBAR, SH., M.Kn

NOTARIS

S.K. MENTERI HUKUM DAN HAK ASASI MANUSIA REPUBLIK INDONESIA
NOMOR : AHU-00916.AH.02.01. TAHUN 2017
Tanggal 09 OKTOBER 2017

PPAT

SK. MENTERI AGRARIA DAN TATA RUANG / KEPALA BADAN PERTANAHAN NASIONAL
NOMOR : 292/KEP-400.20.3/VI/2018
TANGGAL 23 JULI 2018

SALINAN RESMI

AKTA : AKTA PENDIRIAN YAYASAN
"PEDULI LINGKUNGAN DAN HUTAN
SOSIAL"
.....
.....
.....
TANGGAL : 08 (delapan).
NOMOR : 09 FEBRUARI 2021.-

KANTOR :
Jalan Poros Daya Moncongloe
Kabupaten Maros
Telp. 08114199601
Email : ikapratwi0220@gmail.com



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/PP1/ARI/PP1.0/8/2022*
Attachments :
Subject : Letter of endorsement

Jakarta, 5 August 2022

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 Watershed Landscapes through the Potential of Silvopasture and Community Agroforestry*
6. KOAKSI; *Building Climate Resilient District in Indonesia: Case of Sigi District*
7. KEMITRAAN; *Village Based Coastal Adaptation and Resilience 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 through 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)