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ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category	:	Multi-sector Projects
Country/ies	:	Indonesia
Title of Project/Programme	:	**Sustainable Landscape Governance; Towards Climate Resilience of Community in Tempe Lake Ecosystem**
Type of Implementing Entity	:	National Implementing Entity
Implementing Entity	:	Kemitraan (The Partnership for Governance Reform)
Executing Entity/ies	:	1. Tim Layanan Kehutanan Masyarakat (TLKM) 2. Yayasan Romang Celebes Indonesia 3. Yayasan AKU Rimba Indonesia
Amount of Financing Requested	:	**$993,081** (in U.S Dollars Equivalent)

Project / Programme Background and Context

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

1. As a unity, the **Tempe Lake Ecosystem does not only cover the waters territorial but also includes areas that affect and are affected by the lake, namely the watershed landscape**.[1] The regions that affect Tempe Lake are the Walanae Watershed and Bila Watershed. Meanwhile, the areas affected by Tempe Lake are the Cenranae Watershed and some parts of the Walanae Watershed.[2] Tempe Lake, located in South Sulawesi Province, is one of the 15 critical lakes in Indonesia that the Government of Indonesia has designated since 2009. Currently, the Government of Indonesia has issued Presidential Regulation Number 60 of 2021 concerning Saving National Priority Lakes and including 15 critical lakes as priority lakes, including Temple Lake.
2. Administratively, the districts that contribute as sources of impact and recipients of both positive and negative effects in the Tempe Lake ecosystem include three districts, namely Soppeng, Wajo, and Sidenreng Rappang Districts. These three districts are directly adjacent to Tempe Lake. The Tempe Lake ecosystem is surrounded by a mountain range with an elevation of 1,500 to 3,000 meters above sea level (masl). The north watershed area in the Tempe Lake ecosystem is bounded by Bulu Simauran Mountains, Rantemario Mountains, and Latimojong Mountains in Enrekang District, with an altitude of 3,397 masl. While in the west, it is bounded by the Bulu Malloci Mountains, Sidenreng Rappang District, and the Bulu Niniconang Mountains, Soppeng District in the south with an elevation of 1,022 masl. These areas are the upstream of the Tempe Lake ecosystem, which affect the water volume in Tempe Lake.[3]
3. The water supply of Tempe Lake comes from the catchment area of the surrounding rivers, so Tempe Lake becomes a secondary reservoir that collects water before flowing out into Bone Bay. As a secondary reservoir for many rivers, the water level fluctuations of Tempe Lake depend on the inflow and outflow to and from Tempe Lake.[4] Twenty-three rivers are flowing into Tempe Lake. All of these rivers are included in the two main watersheds, the Bila Watershed with an area of ± 1,410 km^2 that crosses three districts, namely Enrekang, Sidenreng Rappang, and Wajo, and Walanae Watershed with an area of ± 3,170 km^2 that crosses four districts, namely, Maros, Bone, Wajo, and Soppeng.[5]
4. Meanwhile, the water bodies of Tempe Lake are located in three districts, namely Sidenreng Rappang

1 Ministry of Environment and Forestry, Indonesia. (2019). Ecosystem-Based Climate Change Adaptation: Tempe Lake Ecosystem

2 Anila, C. (2022). The Directions for Land Use in the Batu-Batu Watershed as an Effort to Mitigate Siltation of Tempe Lake, Hasanuddin University: unpublished.

3 Ministry of Environment and Forestry, Indonesia. (2019). Ecosystem-Based Climate Change Adaptation: Tempe Lake Ecosystem

4 Afbiantir M. Parandangi, Rita Tahir Lopa, Bambang Bakri, 2020, Handling Floods in Tempe Lake with Regulatory Pools on Inflow, Journal of Engineering Research (JPE), Vol. 24, No. 2.

5 Fajar Setiawan and Hendro Wibowo, 2013, Physical Characteristics of Tempe Lake as a Flood Exposure Lake, Limnology Research Center – LIPI

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1,092.80 ha (8.67%), Soppeng 3,548.07 ha (28.16%), and Wajo 7,958.85 ha (63.17%).[6] With a total area reaching ±13,000 ha, Tempe Lake is a source of raw water needs for approximately 23,000 people around Tempe Lake. In addition, there are about 26,883 ha of production paddy fields spread over four sub-districts directly adjacent to Tempe Lake.[7] Tempe Lake is also a habitat for 19 fish types. Farmers and fishers are the primary jobs of the people around Tempe Lake. Most people take advantage of the lake tidal conditions to perform agricultural and fishing activities. The smallholders plant corn and chilies at low tide (dry season), while they become fishers at high tide (rainy season).

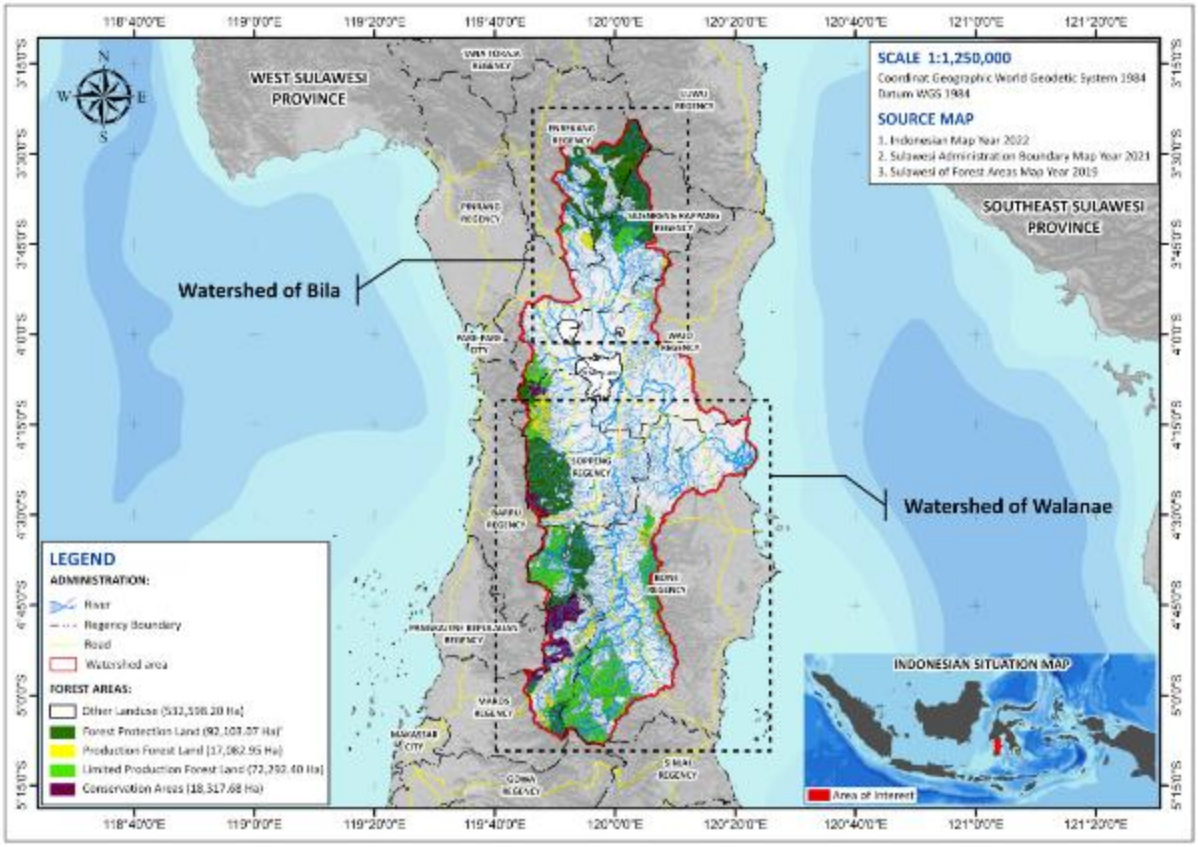

Figure 1. Tempe Lake Ecosystem Situation Map

Environmental and Climate Change Context

5. In the Tempe Lake Ecosystem context, **climate change has impacted weather anomalies**. The increased rainfall in an erratic time causes erosion and convey sediment to flow through rivers, toward Tempe Lake. This incident causes silting in the lake area and reduces the water capacity so that when the rainfall increases, flooding will occur. Floods arise almost yearly, forcing people to change their livelihoods, and even difficult to determine the right livelihood according to climatic conditions.

6. The rainy and dry season occurs in March – July, and August – February, respectively, with annual rainfall in the lake area of 1,400 - 1,800 mm per year. Meanwhile, the lake catchment area is 1,400 - 4,000 mm per year. The average air temperature from March to May and from September to November is high, while from June to August and from December to February, it is low. The annual mean temperature is 25.9^{o}C with slight seasonal variation. The maximum air temperature of 28.6^{o}C was observed at Kanyuara station in November, and a minimum air temperature of 21.4^{o}C was observed at Mallanroe station in July. Monthly evaporation between July – October is high, while between November – June is low. The maximum monthly evaporation was 310 mm recorded at Mallanroe station in October, and the minimum was 100 mm at Tanru Tedong station in June. The average annual evaporation is about 2,010 mm.[8]

7. Rainfall changes in the Tempe Lake Ecosystem area show an intensity increase every year. The highest rainfall in one decade (2009 - 2019) occurred in June 2018, around 2,000 mm. This rainfall increase caused catastrophic floods that submerged 52 villages and seven sub-districts in Wajo District, with a flood height of three meters.[9] The flood level has exceeded the floor height of the stilt houses of most people, which

6 Primary Data Analyzed by Tim Layanan Kehutanan Masyarakat. (2022)

7 Darti, B.S., Bariroh, L., Herman, S.R.W. (2022). The Dilemma of the Revitalization Policy for the Utilization of Tempe Lake, Wajo Districts. Politics and Humanism. 1(1); Thing. 1 -9

8 Using the RCP4.5 scenario which is a moderate scenario.

9 https://regional.kompas.com

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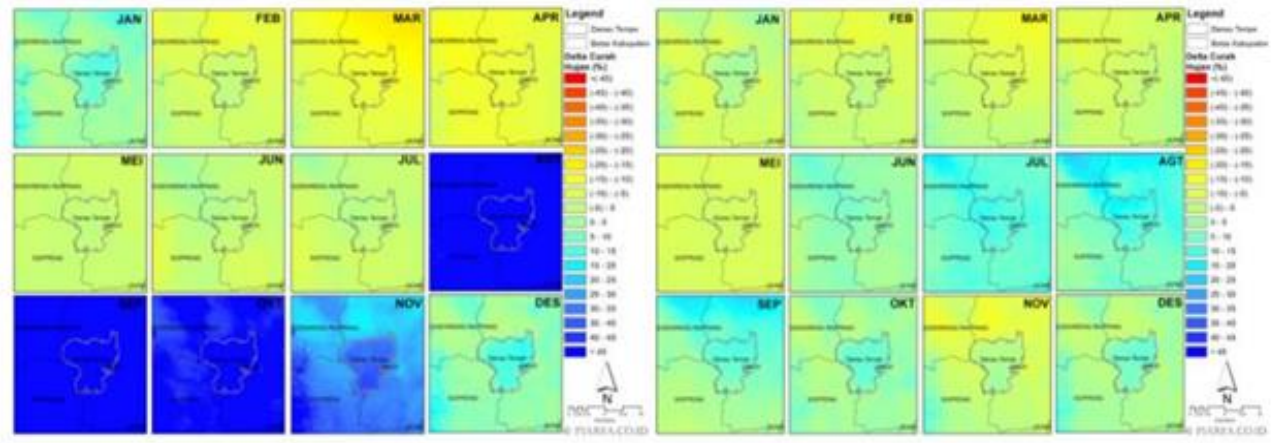
generally have a height of 2 - 2.5 m. The flood also resulted in crop failure covering an area of 11,480 ha in three districts in South Sulawesi Province, namely Wajo 7,591 ha, Soppeng 2,969 ha, and Bone 920 ha.[10]

8. The number of flood events in the Tempe Lake ecosystem is increasing due to the rivers surrounding the lake experiencing siltation and causing a decrease in the Tempe Lake effective area. It has an impact on the overflow area expansion. This condition is caused by the high intensity of erosion in the upstream area, causing sediment flow to major lakes every rainy season. The high erosion in the upstream area of the lake is caused by the land use for the cultivation of dry land plantations (e.g., corn and cloves).

9. The monthly rainfall in Tempe Lake ranges from 90 - 270 mm per month. The results of the rainfall projection show the percentage change in the value of future rainfall ranging from -15% to 45%, which tends to be the same throughout the Tempe Lake area. However, by two models used, the CSIRO model projects an increase in rainfall of up to 45% in August-November in almost the entire area of Tempe Lake.[11]
10. In addition, to impacting flood events around Tempe Lake, climate change also puts pressure on the Tempe Lake ecosystem. It will result in productivity and lake water quality changes in the next few decades. Climate change will affect the lake's physical, chemical, and biological characteristics. High rainfall will cause erosion which causes lake silting and reduces water quality. Increased rainfall carries not only sediment but also contaminants. Various contaminants from agricultural activities and other sources are carried away by run-off flows and further exacerbate pollution in the lake. Sedimentation also causes the loss or change of aquatic biota due to changes in the physical structure of the lake ecosystem in the form of shrinking water surface area and reduced lake depth.
11. **The sedimentation rate in Tempe Lake is 1 – 3 cm per year**.[12] The total sediment that enters Tempe Lake is 1,069,099 m^3 per year from the upstream area of the Walanae and Bila watersheds, while that which is discharged through the Cenranae River is 550,490 m^3 per year. The remaining sediment that settles at the bottom of the lake is 518,609 m^3 per year.[13] **If not maintained, the worst impact of sedimentation is the loss of Tempe Lake in the future**. The rate of decline in the area of Tempe Lake reaches 1.48 km2 per year, and it is estimated that in the dry season in 2093, Tempe Lake will disappear.[14]

Table 1. Changes in rainfall using the outputs of the Worldclim compiled climate model

Region	Rainfall (%)				
	Baseline	Future		Delta	
		CSIRO	MIROC	CSIRO	MIROC
Sidenreng Rappang	90 – 210	105 – 255	90 – 285	-15 – 45	-15 – 20
Wajo	90 – 255	105 – 270	90 – 240	-15 – 45	-15 – 20
Soppeng	90 – 270	135 – 300	75 – 300	-15 – 45	-15 – 20
Tempe Lake	90 - 210	105 - 255	90 - 210	-15 - 45	-15 - 20



10 https://katadata.co.id

11 Ministry of Environment and Forestry, Indonesia. (2019). Ecosystem-Based Climate Change Adaptation: Tempe Lake Ecosystem

12 Siti Aisyah and Eldest Nomosatryo. (2016). Spatial and Temporal Distribution of Nutrients in Tempe Lake, South Sulawesi, OLDI. LIPI.

13 Jeneberang-Saddang Watershed and Protected Forest Management Center (BPDASHL Jeneberang-Saddang). (2018). The role of BPDASHL Jeneberang-Saddang in the Management of Tempe Lake. Paper presented at the Priority Lake Management Coordination Meeting. 8-10 August 2018.

14 Ministry of Environment. (2014). Tempe Lake Rescue Movement (GERMADAN).

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Figure 3. Percentage change in monthly rainfall models CSIRO (left) and MIROC (right) using the Worldclim compiled climate model outputs.

12. In the climate change analysis, the air temperature needs considering is the decrease of the minimum air temperature value and the increase of maximum air temperature because these changes tend to have the potential extreme air temperature values in the future, both extreme cold and heat. The baseline air temperature in the Tempe Lake area ranges from 21.5 - 23.5ºC for the minimum and 29 - 31.5ºC for the maximum temperature. The minimum air temperature changes in the Tempe Lake area range from -0.5 - 1ºC, and the maximum air temperature changes between 0.3 - 1ºC. For changes in maximum air temperature, the highest increase occurred in the Sidenreng Rappang and Soppeng districts from April-September. For minimum air temperature changes, the temperature values rise occurred in almost all regions except in August, September, and October.
13. Temperature changes will affect ecosystem functions, especially when interacting with chemical pollution. When warmer water is associated with excess nutrients from agricultural fertilizers, eutrophication and explosive plankton growth on the lake's surface will reduce dissolved oxygen in the waters, endangering the lives of other organisms in the lake ecosystem.

Table 2. Minimum Temperature Change using the Worldclim compilation climate model output

Region	Minimum Temperature (ºC)				
	Baseline	Future		Delta	
		CSIRO	MIROC	CSIRO	MIROC
Sidenreng Rappang	21.5 – 23.5	21.5 – 24.5	21.5 – 24.5	-0.5 – 1	-0.5 - 1
Wajo	21.5 – 23.5	21.5 – 24.5	21.5 – 24.5	-0.5 – 1	-0.5 - 1
Soppeng	21.5 – 23.5	21.5 – 24.5	21.5 – 24.5	-0.5 – 1	-0.5 - 1
Tempe Lake	21.5 – 23.5	21.5 – 24.5	21.5 – 24.5	-0.5 – 1	-0.5 - 1

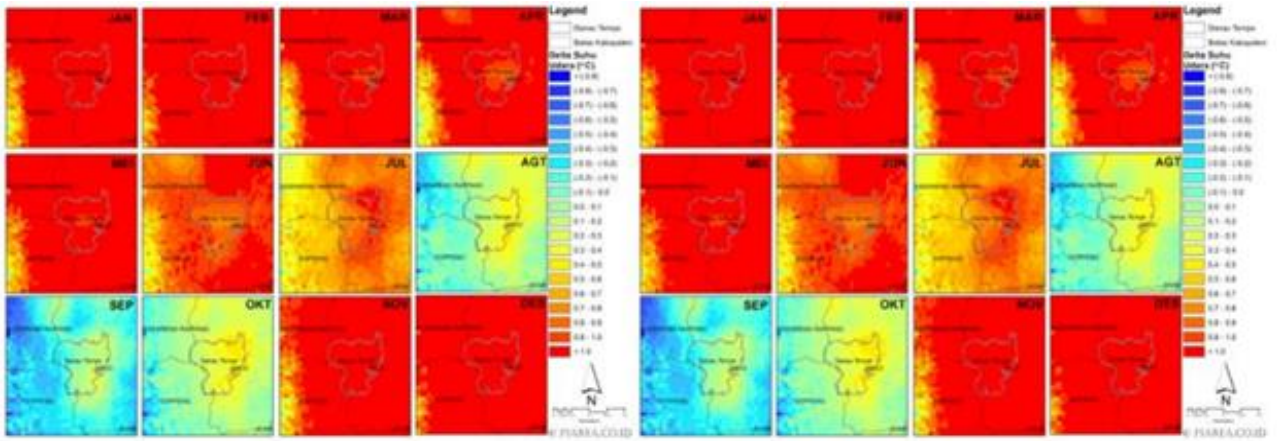

Figure 4. Changes in the monthly minimum temperature of the CSIRO (left) and MIROC (right) models using the Worldclim compiled climate model outputs

Table 3. Maximum Temperature Change using Worldclim compiled climate model outputs

Region	Maximum Temperature (ºC)				
	Baseline	Future		Delta	
		CSIRO	MIROC	CSIRO	MIROC
Sidenreng Rappang	29 - 31.5	29 - 31.5	29 - 31.5	29 - 31.5	29 - 31.5
Wajo	29 - 33	29 - 33	29 - 33	29 - 33	29 - 33
Soppeng	29 - 33	29 - 33	29 - 33	29 - 33	29 - 33
Tempe Lake	-0.3 - 1	-0.3 - 1	-0.3 - 1	-0.3 - 1	-0.3 - 1

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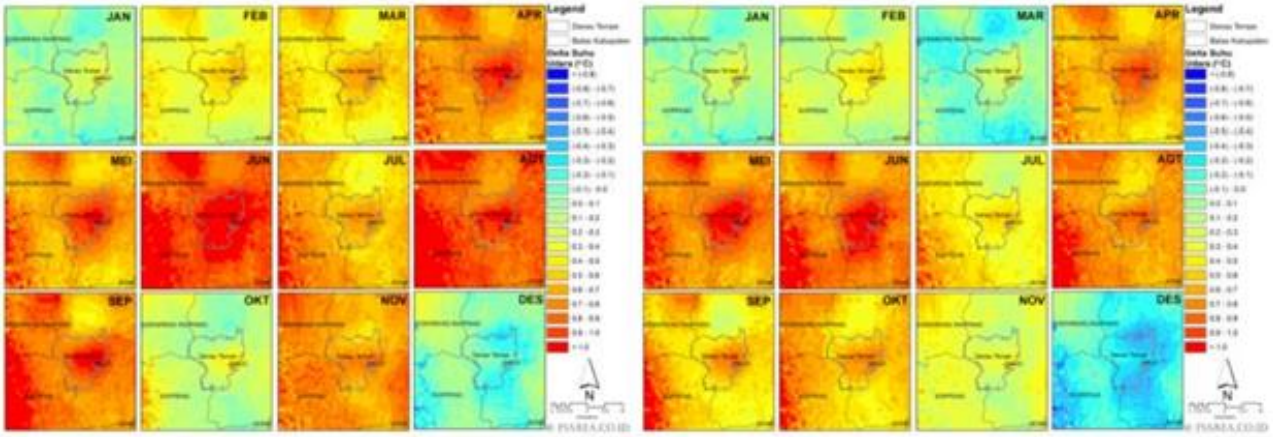

Figure 5. Changes in the monthly maximum temperature of the CSIRO (left) and MIROC (right) models by releasing the output of the Worldclim compiled climate model

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14. Climate change and human activities **threaten the systematic destruction of the entire Tempe Lake ecosystem, both on the terrestrial and lake border, as well as the lake water ecosystem**. The high erosion in the upstream area is due to reduced forest land cover encouraged by land conversion for dry land plantation activities such as corn and cloves cultivation. Rice fields dominate the Tempe Lake ecosystem's land cover by 39.66%, dry land mixed with bush agriculture by 23.41%, secondary forest by 10.20%, and dry land agriculture by 7.34%. In contrast, primary and plantation forests are only 5.23% and 0.63%.

Table 4. Tempe Lake Ecosystem Land Cover

Land Cover	Area (ha)	Percentage (%)
Secondary Mangrove Forest	352	0.05
Primary Forest	38,944	5.23
Secondary Forest	75,960	10.20
Plantation Forest	4,729	0.63
Open land	1,323	0.18
Settlement	16,142	2.17
Plantation	431	0.06
Dryland farming	54,706	7.34
Mixed shrub and dryland farming	174,377	23.41
Swamp	171	0.02
Savanna	7,584	1.02
Rice field	295,437	39.66
Shrubs	39,194	5.26
Swamp Scrub	8,777	1.18
Fishpond	393	0.59
Waterbody	22,376	3.00
Grand Total	**744,896**	**100.00**

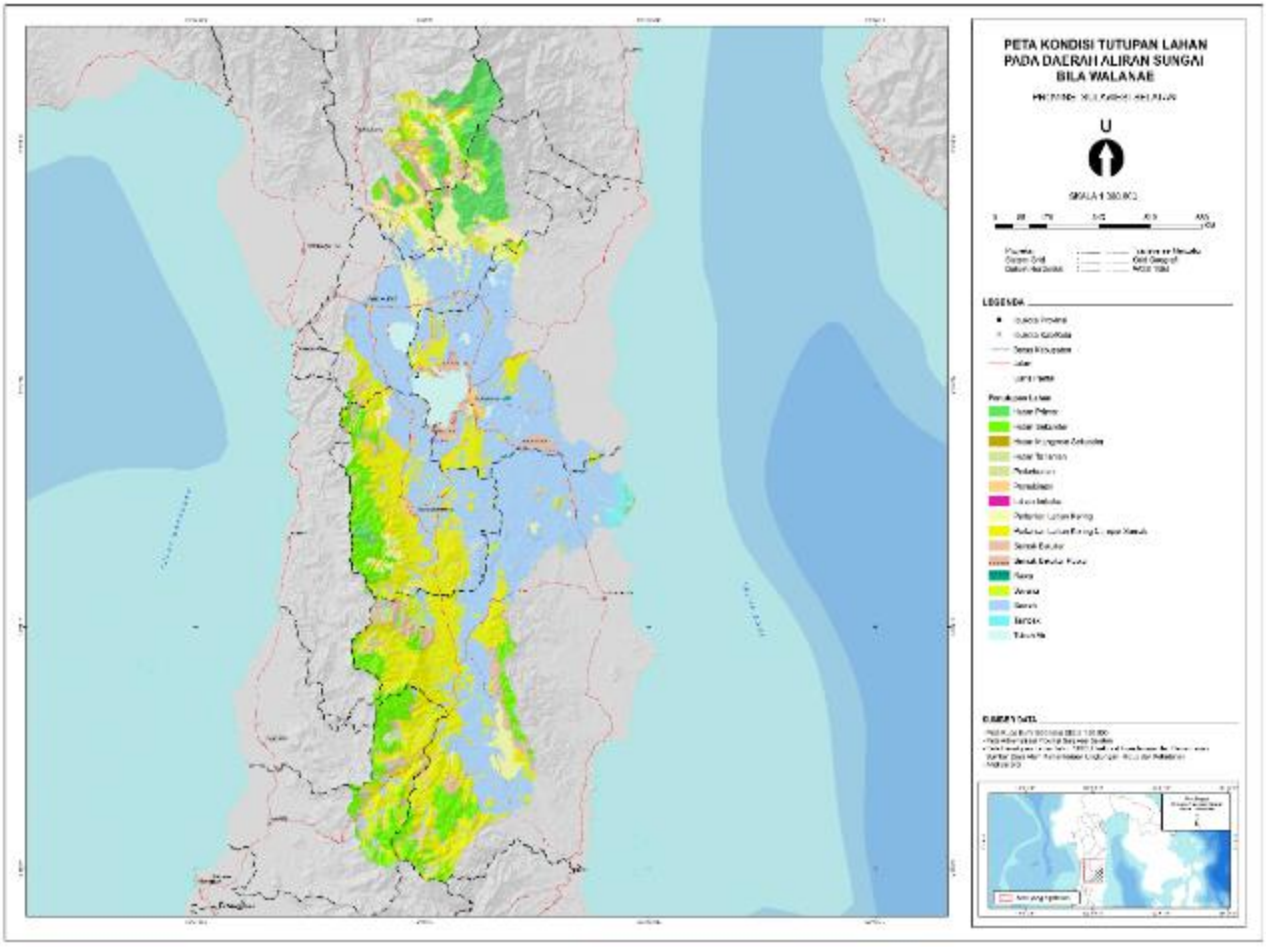

Figure 6. Map of Land Cover Conditions in the Tempe Lake Ecosystem Area

Socio-Economic Context

15. Farmers in the Tempe Lake ecosystem cultivate corn and cloves as their main livelihood. Corn and cloves are intolerant to other plant species, including trees, **causing forest area clearing**. It causes erosion which leads to sedimentation accumulation in Tempe Lake. As such, **flooding always hits the residents**

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on the coast of Tempe Lake at least twice a year, between April and June and November and February. Besides, in the last two years (2020-2021), farmers experienced **crop failures** and the sinking of public facilities. The flood occurred when the rice was ready to be harvested, so the farmers did not have time to reap the fruits of their farming, likewise with other commodities such as corn, chili, and soybeans. There are 4,677 ha of rice fields and 2,311 ha of corn yearly, and 36,685 women and 33,274 men are affected by flooding.[15] Currently, **Tempe Lake is flooded over the year**, resulting **in fish breeding cycle disruption, and smallholders have not yet found an adjustment form to this cycle change**. Besides, fishers' catches are reduced. Recently, fishers caught around one bucket (if they are lucky to get three buckets), which collector traders value in the village at around IDR 100,000 per bucket (approximately 25 kg per bucket). Generally, fishers got 3-4 buckets per day.

16. Smallholders cultivate corn because it is easy to grow on various types of soil, does not require much irrigation like rice fields, and most importantly, has a stable market. One hectare of a corn field can produce five tons of corn grain in four months. One hectare of corn land can produce IDR 20,000,000 per harvest, with an expenditure of around IDR 5,000,000 for production purposes (such as fertilizers, pesticides, herbicides, and others). Sometimes, farmers have to get into debt to start their farming business. Farmers cultivate corn at least twice a year, producing a minimum of IDR 30,000,000. Market access for corn commodities is also easily absorbed by the market, and traders directly come to buy from farmers. Some companies even finance farmers to cultivate corn, starting from seeds, pesticides, herbicides, and fertilizers, on the condition that farmers have to sell their crops to those companies.

17. In highland areas where cloves are the villager choice, the spacing of cloves is 10 x 10 meters, so there can be around 100 trees in one hectare. One tree can produce 25 kg of dry cloves, with a selling price of IDR 120,000. Cloves are harvested once a year to make IDR 300,000,000 in a year. Meanwhile, candlenut, originally the main commodity of the community in the catchment area, is currently experiencing a decline in production. According to the villager, this is caused by the aging plants, which are very old and unproductive. One farmer said that the candlenuts in his garden could only produce 500 kg of round candlenuts. The highest candlenut round is IDR 30,000, so they can get only IDR 15,000,000 in a year. This condition makes small farmers reluctant to collect candlenuts into the forest, not to mention after the process of breaking the seeds takes more time for farmers. So that farmers slowly shift to corn or cloves.

18. The communities living in the catchment area of Tempe Lake, especially those settling within and around forest areas, have access to manage forest areas through the social forestry scheme (*Perhutanan Sosial*/PS). Social forestry is a sustainable forest management system implemented in state forest areas, private forests, customary forests by communities surrounding the forest, or customary law communities as the main actors for 35 years. In Indonesia, social forestry is regulated by Minister of Environment and Forestry Regulation No. 9 of 2021. Social forestry permits provide access for communities in and around forests to utilize forest sources. A Social Forestry Business Group (*Kelompok Usaha Perhutanan Sosial/KUPS*) was formed to improve the forest farmer's economy based on the strategic mandate of the Indonesian government's policy on social forestry. This business group is expected to be a center for developing value-added for existing commodities in the social forestry permit area. Social Forestry Business Groups have been formed in various business types, including commodity-based businesses (such as candlenuts, palm sugar, and honey), agroforestry-based, and eco-tourism-based businesses. **However, no social forestry business group is truly independent and sustainably delivered products**. Lack of knowledge in terms of cultivation and post-harvest commodities, lack of adequate means of product production, and lack of market access are the causes of the business group's stagnation.

Developmental Context

19. The Tempe Lake ecosystem, which includes three districts classified as quite vulnerable to climate change, **does not yet have policies encouraging adaptation plans for affected communities**. In addition, the issue of adaptation is a sectoral issue of the environmental service which should be a joint issue with regional agencies at the district level so that this problem can be resolved by encouraging the formation of a working group consisting of related regional stakeholders. This working group is intended to develop a **Regional Action Plan for Climate Change Adaptation (*Rencana Aksi Daerah Adaptasi Perubahan Iklim*/RAD-API).** The document supports national programs to make program interventions and is

15 Wajo District Central Bureau of Statistics (2021)

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supposed to ensure sustainable climate change adaptation programs at the village level.

20. Social forestry, which is included in the national plan, has not been generated according to the target; in South Sulawesi, **93% of social forestry business groups do not have a market and capital access**. Therefore, it is vital to strengthen the cooperatives to increase income through capacity-building activities, expansion of market access, and market information. The lack of social forestry business group development is caused by the failure of regional initiatives to support business development in the forestry sector.[16]

21. Efforts to build a sustainable management system from upstream to downstream using the Tempe Lake ecosystem approach will directly impact controlling sedimentation in Tempe Lake through land management that can reduce soil erosion in the upstream area (Soppeng District) and simultaneously maintain land cover. Changes in livelihoods around Tempe Lake due to rising water levels and volumes make villagers adapt to livelihoods that rely on lakes; this adaptation should maintain the lake ecosystem sustainability. Therefore, it needs interventions to encourage awareness of sustainable management. The new Tempe Lake management working group was formed in 2018 and will end in 2022; while the condition for improving the Tempe Lake ecosystem has not yet been optimally performed, it remains necessary to continue multi-stakeholder efforts in improving and adapting the Tempe Lake ecosystem to climate change.

Project Context

22. Climate change and human activities threaten the systematic destruction of the Tempe Lake ecosystem. **The threat occurs in the whole part of Tempe Lake ecosystem, terrestrial, borders, and water bodies.** The high erosion in the upstream area is due to reduced forest land cover caused by land conversion for dry land plantation cultivation activities.

23. Based on the previous context, it was found that livelihoods in the catchment area of Tempe Lake had various significant impacts. Erosion upstream is caused by clearing and converting land to monoculture agricultural land. Weather anomalies cause erratic rainfall and, in turn, cause flooding. The flood submerged public facilities and rice fields, causing crop failure, and the fish reproduction cycle was disrupted, which caused the declined productivity of the fisheries sector. Moreover, it also causes decreasing the villagers' income of those affected by climate change. Likewise, agricultural activities upstream remain intense in using pesticides and chemical fertilizers, worsening the quality of the Tempe Lake ecosystem. Polluted lake water indirectly causes a high population of invasive fish (suckermouth catfish), a massive growth of water hyacinth, and decreasing availability of clean water.

24. Although various adaptive actions have been generated to reduce climate change's impact, both by community and government, policies and multi-stakeholder institutions remain unintegrated. Therefore, collaborative action from various related parties is required. Building stakeholder capacity and advocating for cross-sectoral policies will trigger joint initiatives that strengthen climate resilience.

25. The **"Sustainable Landscape Governance; Towards Climate Resilience of Community in Tempe Lake Ecosystem"** project will lead to improved governance based on the Tempe Lake ecosystem. The primary elements that this project will address include ecosystem resilience (including but not limited to improving land governance, erosion restraint, and strengthening institutions to ensure sustainability), economic resilience (forestry and fisheries sector), and strengthening multi-stakeholders collaborative actions and cross-cutting policies that are integrated. The principal components of this project include:

    a) **Improving land use** in ecosystems that contribute to erosion and sedimentation restraint in Tempe Lake. It will be achieved through strengthening agroforestry management practices that can prevent erosion. In implementing land management practices that contribute to erosion restraint, the capacity building of community knowledge about the causes, impacts, and restraint method of erosion is also performed.

    b) **Reinforcing economic resilience** of the Tempe Lake ecosystem community through livelihoods enhancement. It will be executed through increasing product value, capacity building, and delivering access to market information, in the context of developing community-based businesses in product management and development, both in the forestry business sector (in the upstream landscape) and fisheries in the water body/lake landscape. There will be sustainable group-based business development in the Tempe Lake ecosystem, involving vulnerable groups, especially women.

    c) **Encouraging multi-stakeholder collaborative action** and **cross-sectoral policies** will strengthen the parties' synergy to develop sustainable climate resilience. It will be achieved by establishing and strengthening multi-stakeholder forums as a means of communication and coordination in encouraging regional initiatives for climate change adaptation in the Tempe Lake ecosystem. Besides, it will be

16 Presentation by Social Forestry and Environmental Partnership Center Reigion Sulawesi, MoEF (2020)

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generated by advocating policies intended to develop Regional Action Plans for Climate Change Adaptation (RAD-API). Furthermore, this project will also encourage adaptation actions through the Climate Town Program (*Program Kampung Iklim*/ProKlim) to strengthen adaptation actions at the village level.

d) Developing collective intelligence by **increasing knowledge capacity and awareness of community climate change adaptation** through knowledge management and youth-based campaigns. Dissemination of information and development of appropriate learning systems will increase local communities' adaptive capacity. Thus, local initiatives can be strengthened to prevent potential losses from climate change impacts from being more significant. The involvement of youth, as the center of the change movement, at the local level will be initiated in this project to build awareness of the importance of climate change adaptation issues at the local level. Digital-based communication is encouraged to expand the information recipients (direct and indirect beneficiaries) through social media engagement and photo essay exhibitions. It will stimulate the attention of youth to actively participate in disseminating information about climate change adaptation actively.

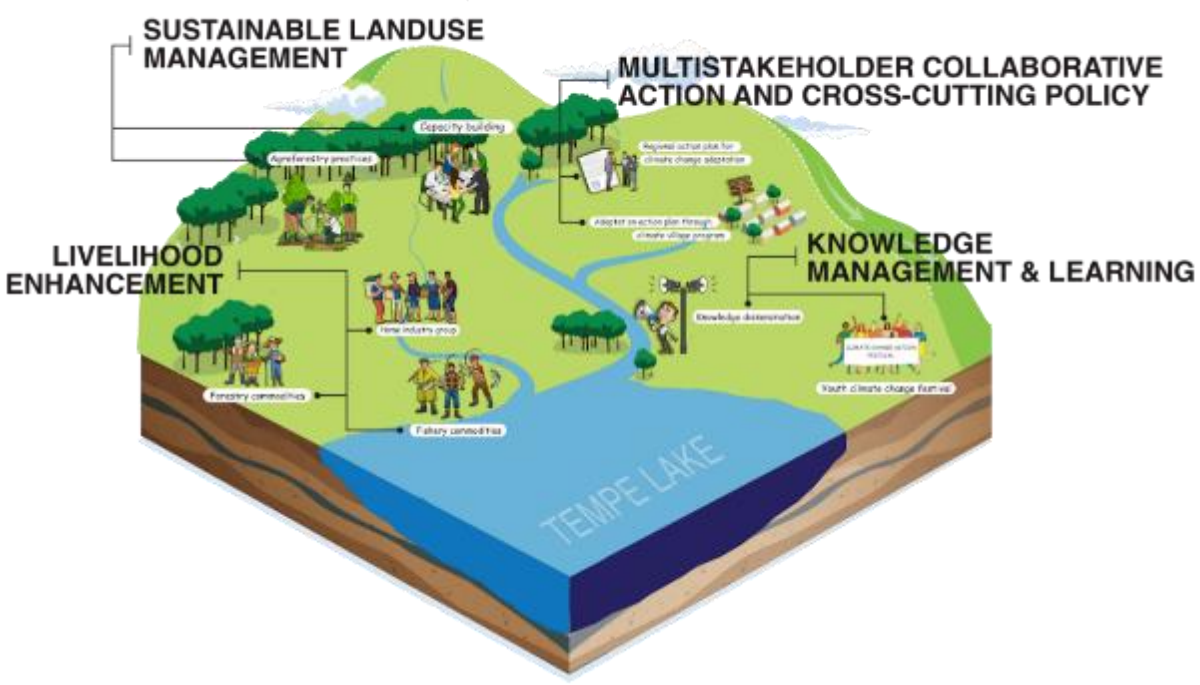

Figure 8. Project Framework

Project / Programme Objectives

List the main objectives of the project/programme.

26. The ultimate objective of this project is to encourage sustainable governance as an effort to adapt and increase the climate resilience of the Tempe Lake ecosystem community. Specifically, the objectives of this project address:

    1) Improving land use practices in the Tempe Lake ecosystem that contributes to sedimentation restraint
    2) Reinforcing the economic resilience of the community in the Tempe Lake ecosystem through livelihoods enhancement
    3) Encouraging collaborative action of stakeholders and cross-sectoral policies related to climate change adaptation
    4) Increasing knowledge capacity and community awareness regarding climate change adaptation through knowledge management and youth-based campaigns.

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Project / Programme Components and Financing

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.
For the case of a programme, individual components are likely to refer to specific sub- sets of stakeholders, regions and/or sectors that can be addressed through a set of well defined interventions / projects.

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
1. Improving land use practices in the Tempe Lake ecosystem that contributes to sedimentation restraint	1.1.1. Improved land management practices that contribute to erosion restraint	1.1. Strengthening agroforestry management practices that can prevent erosion	$375,874
	1.1.2. The availability of facilities and infrastructure to support land management activities		
	1.2.1. Increased community knowledge capacity regarding the causes and impacts of erosion, as well as land management-based erosion restraint	1.2. Community capacity building for erosion restraint	
2. Reinforcing the economic resilience of the community in the Tempe Lake ecosystem through livelihoods enhancement	2.1.1 Increased capacity and skills for developing forestry commodity businesses	2.1. Development of forestry commodity business through social forestry business groups	$284,615
	2.1.2. Increasing the added value of forestry commodity		
	2.1.3. Strengthening the marketing information of forestry commodity product		
	2.2.1 Increased capacity and skills for developing fishery commodity businesses	2.2. Development of fisheries commodity business based on women and vulnerable groups	
	2.2.2. Increasing the added value of fishery commodity		
	2.2.3. Encouraging the sustainable commodity cycle		
3. Encouraging collaborative action of stakeholders and cross-sectoral policies related to climate change adaptation	3.1.1. Presence of Regional Action Plan for Climate Change Adaptation (RAD-API) policies	3.1. Encouraging the cross-cutting policies in the Tempe Lake ecosystem	$98,252
	3.2.1. Establishment of Climate Town Program (ProKlim) as the climate change adaptation actions at the local level	3.2. Encouraging collaborative action based on the local community	
4. Increasing knowledge capacity and community awareness regarding climate change adaptation through knowledge management and youth-based campaigns.	4.1.1. The dissemination of learning on climate change adaptation programs based on the Tempe Lake landscape	4.1. Increased knowledge capacity of the community in the Tempe Lake ecosystem to increase resilience to climate change	$77,133
	4.1.2. Increased knowledge capacity of the community in improving local-based climate change adaptation actions in the Tempe Lake ecosystems		
	4.2.1. The establishment of youth initiatives in promoting climate change adaptation actions	4.2. Increased public awareness of climate change adaptation actions based on local youth-based campaign movements	
5. Project/Programme Execution cost			$79,408
6. Project/Programme Cost			$915,282
7. Project/Programme Cycle Management Fee charged by the Implementing Entity *(if applicable)*			$77,799
Amount of Financing Requested			**$993,081**

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Projected Calendar

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

Milestones	Expected Dates
Start of Project/Programme Implementation	April 2023
Mid-term Review (if planned)	March 2024
Project/Programme Closing	March 2025
Terminal Evaluation	June 2025

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PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Project Component

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.

Component 1: Improving land use practices in the Tempe Lake ecosystem that contributes to sedimentation restraint

Outcome 1.1. Strengthening agroforestry management practices that can prevent erosion

27. This project is directed to improving land governance with sustainable agroforestry systems in ecosystems to intervene in the adaptive behavior of the parties. This effort is expected to minimize land clearing for agricultural purposes in the forest area of the Tempe Lake ecosystem and will contribute to the control of sedimentation in Tempe Lake. This outcome will be achieved through:
28. **Crops Planting**: Planting types of crops that can prevent erosion in the catchment area that contributes to the sedimentation of Tempe Lake, covering an area of 500 ha. The types of plants selected are Multi Purpose Tree Species (MPTs) and erosion-reducing plants that can improve soil quality, protect the soil surface from rainwater collisions, reduce runoff water velocity and volume, retain soil particles through the root system, increase infiltration and percolation rates of water in the soil, and has economic value that can increase farmers' income. This type of plant will be determined by identifying land suitability at the location to be planted.
29. **Procurement of Cultivation Facilities**: The project will facilitate the procurement of facilities and infrastructure to support sustainable agroforestry management. This facility is in the form of construction of "Seedling Houses" and procurement of commodity cultivation equipment in eight villages. It will be done by field facilitators using the live-in method to assist farmers in conducting nurseries independently in producing superior seeds and reducing costs in the cultivation process.

Outcome 1.2. Community capacity building for erosion restraint

30. To ensure the Tempe Lake ecosystem improvement initiative, capacity building is also a significant concern in this project. Capacity building is directed at building community understanding and perspectives more oriented towards environmental improvement, in line with the sustainability of their livelihoods. This project will facilitate the community in understanding and realizing the causes and impacts of erosion, which will then become the basis for the community to switch to land management with a sustainable agroforestry system. This outcome will be achieved through:
31. **Training & FGDs:** This project targets 200 direct beneficiaries from eight villages through a training and Focus Group Discussions (FGDs) series at the village level concerning the causes and impacts of erosion. Some of the leading capacity building elements in this project are training on agroforestry development, training on plant cultivation of MPTs, and training on the cultivation of erosion-reducing plants to support the success and sustainability of agroforestry management.

Component 2: Reinforcing the economic resilience of the community in the Tempe Lake ecosystem through livelihoods enhancement

Outcome 2.1 Development of forestry commodity business through social forestry business groups

32. This project will strengthen the economy of communities that are members of social forestry groups by encouraging existing agroforestry commodities in the village. This effort is expected to reduce the potential for land clearing directed at monoculture agriculture while at the same time increasing livelihood resilience to the impacts of climate change around Tempe Lake. This outcome will be achieved through:
33. **Business Groups Institutional Strengthening**: Strengthening and developing social forestry business group institutions (KUPS) through entrepreneurship training to increase group institutional capacity with knowledge related to financial management, capital management, determining the cost of production, and financial management. Comparative studies will enrich the group's insight into running and developing their business. So that existing knowledge and capacity can be recorded and documented, a module will be made to serve as a reference for the group.
34. **Product Quality Enhancement:** Facilitating business licensing, lab tests, and halal certificates can make products have good standards and be marketed more widely with higher sales values. Regular meetings will be held to monitor and evaluate fellow group members to ensure this standard is maintained. In order

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for production to be sustainable and sustainable while at the same time making work more effective, it will be necessary to procure home industry facilities and production houses to concentrate and more easily organize group business activities.

35. **Market Research:** Research on market potential is needed to ensure that group members know the flow of goods, the types of markets they can access, and how the market accepts the products produced by the group. This research shows that the group has several market access options.

Outcome 2.2 Development of fisheries commodity business based on women and vulnerable groups

36. This project is oriented towards strengthening the community's economy around Tempe Lake, which focuses on increasing the adaptability of women and vulnerable groups to have an economic foundation and gain access to a more equal and sustainable livelihood. This outcome will be achieved through:

37. **Institutional Strengthening**: Groups formed of women and vulnerable people will be carried out around the lake to diversify livelihoods other than being captured fishers by creating business groups that manage fishery products. To support this plan will ensure the addition of the members' capacity through a series of entrepreneurship training. Group institutions will be strengthened with administrative training and preparation of group rules so that there are routine group procedures and activities as a medium for recording and monitoring member evaluations of the group running. For production to have shared standard procedures, a module will be created for the group.

38. **Product Added-Value Enhancement**: It will perform by procuring production tools and facilities and facilitating business licensing to obtain standards that can access a broader market. Besides, the lab test results and halal certificates displayed on the packaging also add to the product's feasibility on the market. Aquaculture groups will also be strengthened to ensure sustainability, especially in fisheries business groups. The development of the cage demonstration plot will be carried out as an effort to initiate alternative methods for capturing fishers and ensure the availability of fish raw materials in Tempe Lake. The main activities to ensure this group can run are procurement of facilities and supporting cages for cages and procurement of fish seeds.

Component 3: Encouraging collaborative action of stakeholders and cross-sectoral policies related to climate change adaptation

Outcome 3.1 3.1. Encouraging the cross-cutting policies in the Tempe Lake ecosystem

39. This project will encourage strengthening cross-sectoral actions in the regions to ensure the sustainability of adaptation actions in the Tempe Lake ecosystem. Local governments from various sectors will further improve Tempe Lake governance in dealing with climate change. Multi-stakeholder involvement will be strengthened through establishing and strengthening the Climate Change Adaptation Working Group (*Kelompok Kerja Adaptasi Perubahan Iklim/POKJA API*) consisting of various elements, namely the government, academics, CSOs, and other related parties. The POKJA API will be directed to carry out climate change adaptation initiatives at the regional level based on their duties that are relevant to their institutional characteristics. This outcome will be achieved through:

40. **Policy Advocacy:** This project will facilitate all processes, from establishing the POKJA-API to preparing the Regional Action Plan for Climate Change Adaptation (RAD-API). The intervention elements in this RAD-API will focus on reducing disaster risk and increasing community preparedness against the threat of climate change within a single unit of governance of Tempe Lake. Each local government unit related to the environment, agriculture, and climate, CSOs, and academics will be involved in each process of preparing the RAD-API. Preparing the RAD-API begins with a climate change vulnerability study by formulating risks and constraints on climate change conditions at the district level. RAD-API can be encouraged to be internalized into part of Draft Regional Regulations and Strategic Plans in each local level agency. With this, stakeholders can optimize initiatives at the regional level and ensure their sustainability in the future.

Outcome 3.2 Encouraging collaborative action based on the local community

41. This project is directed at building climate resilience at the village level and involving all elements of the village community to participate in efforts to increase the adaptive capacity of local communities both upstream and around the water body of Tempe Lake. This project will encourage the implementation of the Climate Town Program (*Program Kampung Iklim/ProKlim*) at the intervention sites. ProKlim is a national program guided by the Ministry of Environment and Forestry. The implementation of ProKlim refers to the Regulation of the Minister of Environment and Forestry Number 84 of 2016 concerning the Climate Town Program. This outcome will be achieved through:

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42. **Facilitation or Technical Assistance:** ProKlim will encourage the involvement of the community and other stakeholders to increase adaptive capacity to the impacts of climate change and reduce greenhouse gas emissions, as well as gain recognition for the adaptation and mitigation efforts of climate change that have been conducted. To achieve this, a Climate Town Program Working Group will first be formed, which involves all elements of society: the Village Government, fishers' groups, farmer groups, and marginal groups such as youth and women. Furthermore, the group is strengthened through training and regular working group meetings to build mutual understanding and commitment to collective action on climate change.
43. **Advocacy:** The Climate Town Program Working Group will be encouraged to take decisive adaptation actions to climate change at the village level. It will perform by building collective intelligence so that adaptation actions are carried out in the face of climate change, one of which is by carrying out sustainable land use practices. It will perform by developing a Participatory Land-Use Plan at the village level. Together with villagers, the Climate Town Program Working Group will collect data on landscape conditions to local socio-economic activities, process it into information, and compile it into knowledge products that describe the objective and ideal conditions of land use in the village. The knowledge product is then internalized into the Village Government Work Plan to be applied as a whole.

Component 4: Increasing knowledge capacity and community awareness regarding climate change adaptation through knowledge management and youth-based campaigns

Outcome 4.1 Increased knowledge capacity of the community in the Tempe Lake ecosystem to increase resilience to climate change

44. Climate change adaptation action is not only a question of how to achieve community resilience but also provides broad access to information. Strengthening access to information and increasing knowledge capacity in projects is carried out by disseminating project lessons learned, from capturing and processing, to disseminating climate learning to beneficiaries. To ensure the learning process will continue, the project will build a knowledge management system, which is carried out through data and information system management and knowledge production. Knowledge and lessons learned from climate change adaptation actions obtained from the village are expected to be accepted and replicated in various regions in the future. This outcome will be achieved through:
45. **Dissemination:** Data from the field will be processed into audio-visual content and text. The information will be published and practically can be used by the parties to gain knowledge and learn about climate change adaptation actions. The knowledge products produced include short documentary videos, posters, leaflets, infographics, and banners. Digital publications will also be encouraged through social media and websites to reach a wider audience and contribute to the greater mainstreaming of climate change issues.
46. **Training & Workshops:** Capacity building is encouraged through training and workshops at local (village) and regional (district and province) scales. The training is aimed at increasing beneficiaries' capacity to read and understand the village microclimate. Local knowledge in reading climate patterns for rural communities will be strengthened by the design of integrating scientific knowledge that is relevant to stakeholders to ensure that learning can be accepted readily.

Outcome 4.2. Increased public awareness of climate change adaptation actions based on local youth-based campaign movements

47. Project orientation is centered on participatory, transparent, and open activities because climate change adaptation will target all levels of society in adapting and anticipating the worst climate conditions, including youth groups. As the next generation, youth must be actively involved in climate change adaptation actions and be the center of efforts to increase local community awareness. Especially in today's digital era, youth can be a stimulus for change in society, including a change in mindset. This outcome will be achieved through:
48. **Festivals & Youth Competitions:** This activity opens access to youth groups' involvement and becomes an arena for campaigns to increase collective awareness of environmental issues. The festival will be held at Tempe Lake with an environmentally friendly concept, prioritizing community participation, especially youth groups. The festival will be coupled with a poster competition and creative content presenting environmental issues. This competition work will be used as campaign material for festival visitors to see. This activity will leave an impression on the youth in promoting climate change adaptation actions.

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B. Economic, Social, and Environmental Benefits

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

49. This project will provide various benefits from an economic, social, and environmental point of view for the community in the Tempe Lake ecosystem, the government, and all parties involved in this project. All activities will be oriented towards participatory, transparent, and inclusive principles so that all parties who receive benefits can be actively involved in achieving project objectives. This project will pay attention to gender mainstreaming and equitable inclusion of vulnerable groups in every implementation. Providing access and active involvement of women in achieving goals will be the primary concern to be more gender-responsive.

50. **Economic Benefits:** This project will provide economic benefits to the communities most affected by climate change. Smallholders whose income is affected by climate change can be strengthened by developing creative businesses and expanding market access, and it will save them from market uncertainty. It is also hoped that strengthening community-based businesses will develop and contribute to regional income at the village and district levels.

51. **Social Benefits:** This project will increase access to information and knowledge for stakeholders related to climate change adaptation initiatives. Increased knowledge capacity for stakeholders will contribute to increasing independent action initiatives, even after this project ends. In addition, the multi-stakeholder communication spaces initiated in this project are based on justice and inclusiveness so that all elements of society have the same opportunity to express their opinion and be actively involved in the development of climate-resilient regions. This project also targets the active involvement of youth in campaigning for climate change adaptation actions, where the younger generation can become trendsetters for the climate change adaptation movement, starting from the village level, and is expected to develop further so that it can have an impact at the regional level. Benefits for affected communities, in this case, women and vulnerable groups, can open up opportunities to participate and be involved in achieving project objectives. Thus, it can create a constellation of resilient communities to climate change. This project will also involve women and vulnerable groups [e.g., minorities, marginalized groups, disabilities, elderly] in decision-making on every activity in this program. The involvement of women and vulnerable groups is expected to increase their resilience to the impacts of climate change.

52. **Environmental Benefits:** This project will contribute to the control of erosion and sedimentation in Tempe Lake through ecosystem improvement interventions in the catchment area. Strengthening social forestry schemes, which are directed at sustainable community-based forest management systems, will ensure that land cover will be maintained with agroforestry systems. Land cover improvement is beneficial in reducing erosion in the upstream area, which has implications for controlling sedimentation in Tempe Lake. Using suckermouth catfish will reduce pests in Tempe Lake to keep the fish ecosystem in the lake in balance. This pest control allows other fish (especially those with high economic value) to breed.

Category	Description of Benefits	Beneficiaries
Economy	• Increasing the income of affected community groups through business development	Community
	• Contribute to local and/or regional revenue	Government
	• Expanding opportunities for cooperation in improving the economy, especially in the development of small and medium enterprises	Community CSO Government
Social	• Expanding opportunities for the most affected groups (women and vulnerable groups) to be involved in regional development, especially those oriented to climate change adaptation	Community
	• Access to information and knowledge about climate change adaptation	Community Academics CSO
	• The existence of policies that are directed to support the initiation of climate change adaptation down to the village level (RAD-API, ProKlim)	Government Community
	• The existence of a multi-stakeholder communication forum so that various parties can have the same opportunity to initiate	Community Government

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Category	Description of Benefits	Beneficiaries
	climate change adaptation	CSO Academics
Environment	• Ecosystem improvement (especially sedimentation and erosion control) from planting with agroforestry patterns • Through agroforestry schemes, it helps to absorb atmospheric carbon dioxide, reduce emissions and global warming • The implementation of sustainable land management practices in the catchment area with the presence of a nursery	Government Community Government Community Community

C. Cost Effectiveness

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

Intervention alternative	Cost Effectiveness Ratio for 10 years Projection ($)	Cost Effectiveness Ratio Over Project Period ($)	Cost Effectiveness Incremental Ratio for 10 years Projections ($)	Cost Effectiveness Incremental Ratio for Production Over Project Period ($)
Without Project	11,428,571	11,428,571	657,554	3,287,770
With Project AF	8,197,266	8,986,331		

53. The high average cost of repair and disaster management of the ecosystem areas affecting Tempe Lake, which can reach an average of $4,000,000 per year, is very significant for project effectiveness.

54. During the project period, if implemented optimally, it is projected to have an impact on the financing effectiveness, which should be $4,000,000 to $3,287,770, and more effective if it is projected for 10 years when the land improvement of 500 ha can be optimal, then the financing effectiveness will be $657,554.

D. Alignment with National and Sub-National Sustainable Development Strategies

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.

National Development Strategies

55. This project aims to participate in Indonesia's national development related to improving the economic standard of the community in each region, reducing inequality through development that minimizes the risk of natural disasters based on environmentally friendly natural resource management and climate change adaptation, as stated in the Indonesia **Nationally Determined Contributions (NDC)** one of them is maintaining forest sustainability through community-based management contained in social forestry.[17] To ensure collaborative and integrated work in overcoming the impacts of climate change through national planning, namely the **National Action Plan for Climate Change Adaptation (RAN-API)** to increase disaster and climate resilience through maintaining land cover and preventing erosion.[18]

56. The Indonesian Government issued **Presidential Regulation 60 of 2021 concerning Saving National Priority Lakes**. The Presidential Regulation is then used as a reference for all relevant ministries and institutions to build collaborative actions and strengthen synergy in efforts to accelerate the rescue of 15 national priority lakes, one of which is Tempe Lake. The South Sulawesi Provincial Government has incorporated the Tempe Lake Management Plan into the Regional Medium-Term Management Plan (Rencana Pengelolaan Jangka Menengah Daerah/RPJMD) for 2018-2023.

57. Lake damage control is taken through various ecosystem-scale approaches in the form of upstream erosion control to reduce Tempe Lake sedimentation. In addition, water hyacinth control is also carried out, disrupting the lake ecosystem and controlling the population of suckermouth catfish into pellets. This intervention is integrated with the Strategic Plan of the Directorate General of Watershed Control and

17 Nationally Determined Contributions Indonesia, (2017).

18 National Action Plan for Climate Change Adaptation (RAN-API), (2020)

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Protected Forests for 2020-2024 concerning the prevention of priority lake damage.[19]

58. Improvement of land use in lake ecosystems, the intervention of agroforestry in social forestry areas through the cultivation of erosion-preventing plants, and strengthening of group institutions through capacity building and business development skills in line with the policy direction of the National Strategic Plan 2020-2024 of Social Forestry and Environmental Partnership, Ministry of Environmental and Forestry (MoEF) on page 37 points 2 and 3 namely increasing the capacity of social forestry groups to carry out social forestry business and improving the quality of access that has been provided to the community marked by the more excellent value of benefits to the community.[20]
59. Water hyacinth control is carried out as a raw material for liquid fertilizer and biogas, in line with the draft program recommendations contained in the Ecosystem-Based Climate Change Adaptation Plan: Tempe Lake Ecosystem through water hyacinth processing activities.[21]
60. Strengthening the economy of the community around Tempe Lake, the formation of village-based fishing business groups in line with the priority program of the Tempe Lake Rescue Movement by the Ministry of the Environment in 2014, namely increasing the role and participation of the community through the development of small business management groups for rural catch fishers of Tempe Lake.[22]
61. Strengthening agroforestry upstream (Walanae Watershed, Batu-Batu sub-watershed) through land cover improvement and planting along river borders to reduce soil erosion that can accumulate sediment in Tempe Lake is in line with the **Super Priority Program for Saving Ecosystems in the Bila and Walanae Watersheds**.[23]

Sub-National Development Strategies

62. Social forestry management to maintain and conserve forest areas is in line with Regional Regulation Number 3 of 2022 concerning the South Sulawesi Province Spatial Plan 2022-2041, which regulates areas that protect subordinate areas such as Soppeng to protect river boundaries and areas around lakes. Based on the Amendment to the Medium Term Development Plan of South Sulawesi Province for 2018 - 2023, which states that it will optimize the management of Tempe Lake to improve the quality of the environment as well as the ability to adapt and mitigate climate change, this is in line with the project's big goals, namely towards climate resilience of the Tempe Lake ecosystem community
63. Utilization of Tempe Lake as a fishery cultivation area will refer to the Long Term Development Plan of Wajo District for 2005-2025, which regulates the division of areas for aquaculture use, covering an area of 9,100 ha. It aligns with the program's objective to strengthen the community's economy through fishery resources.
64. To initiate the fisheries business group, it will cooperate with the relevant agencies as stated in the Wajo Regent's Regulation No. 142 of 2019 concerning the Strategic Plan of the 2019-2024 Regional Apparatus within the Wajo District Government, which regulates the provision of support for the implementation of fishery areas.
65. Business development in the fisheries sector will be encouraged through the provision of business development facilities as the problems in the fisheries business sector are listed in the Regional Medium-Term Development Plan of Wajo District for 2019-2024, which targets the development of the fisheries business sector by providing business support facilities.
66. The development of the business sector in the forestry sector through Social Forestry Business Group (KUPS) follows Soppeng Regent Regulation Number 29 of the 2020 Soppeng District Work Plan, namely optimizing regional income through natural resources management in the forestry sector by considering the principle of sustainability. As well as improving the quality of the environment through the maintenance of forests and land cover around rivers.
67. The role of forest management in preserving, protecting, restoring, and increasing the sustainable use of ecosystems is stated in the Decree of the Head of the Regional Research and Development Planning Agency of Sidenreng Rappang District in 2021 regarding changes to regional strategic plans.

E. Compliance with National Technical Standard

Describe how the project / programme meets relevant national technical standards, where applicable, such as standards for

19 Strategic Plan of the Directorate General of Watershed Control and Protected Forests for 2020-2024, Ministry of Environment and Forestry. (2020). p.31

20 Strategic Plan of the Directorate General of Social Forestry and Environmental Partnership 2020-2024, Ministry of Environment and Forestry. (2020).p.37

21 Ministry of Environment and Forestry, Indonesia. (2019). Ecosystem-Based Climate Change Adaptation: Tempe Lake Ecosystem. p.62

22 Lake Rescue Movement (GERMADAN) Tempe Lake. (2014). p.55

23 Lake Rescue Movement (GERMADAN) Tempe Lake. (2014). p.37

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environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

68. The implementation of the project in order to strengthen social forestry groups refers to the Minister of Environment and Forestry Regulation No. P. 89 of 2018 regarding guidelines for the development of social forestry groups. The development of social forestry business groups that have been formed will follow the guidelines of the Minister of Environment and Forestry Regulation No. 9 of 2021 regarding the formation and development of social forestry business groups (KUPS). Assistance for Forest Farmers Groups to manage agroforestry to optimize the area's potential will refer to the Regulation of the Director General of Watershed and Protected Forests Control No. P.7/PDASHL/SET/KUM.1/8/2017.
69. Encouraging the assisted villages to adopt the climate town program will refer to the Minister of Environment and Forestry Regulation No. 84 of 2016, and its guidelines will depart from the regulation of the Director General of Climate Change Control No. P4/PPI/API/PPI.0/3/2021. To ensure local action in dealing with climate change, the project will facilitate the formulation of the Climate Change Adaptation Regional Action Plan (RAD-API), referring to the Minister of Environment and Forestry Regulation No. P.33/Menlhk/Setjen/Kum.1/3/2016 concerning guidelines for the preparation of climate change adaptation actions.
70. To take care of household business licenses will refer to Law Number 20 of 2008 concerning Micro, Small, and Medium Enterprises and Wajo District Regulation No. 12 of 2017, which regulates the procedures and conditions for the formation and business licenses. The formation of cage cultivation groups and fish processing household businesses around Tempe Lake will follow the Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number PER.12/MEN/2007 concerning fish cultivation business licensing and also refers to the Wajo District Regional Regulation Number 1 of 2012 concerning Retribution Fishery Business License.
71. Fish cultivation is regulated in the Wajo District Regional Regulation Number 14 of 2016 concerning the use of Tempe Lake for aquaculture, which also regulates the zoning of the use of the lake. Fish farming in Tempe Lake is also included in the strategic plan of the Department of Livestock, Animal Health, and Fisheries of Soppeng District for 2019-2024.

F. Duplication of Project

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

72. Currently, no similar program has been implemented using other funding sources. So that this program can continue to run and the intervention village can continue, it will develop cooperation with related institutions through multi-stakeholder communication forums to oversee the intervention villages that have started climate change adaptation actions.

G. Learning and Knowledge Management

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

73. Efforts to strengthen the learning process are carried out to build and increase community capacity to take appropriate and relevant climate change adaptation actions in the regional context. The project will also initiate climate change adaptation actions based on youth movements directed at initiating climate awareness campaign actions in the regions. These principles, methodologies, and mechanisms for managing knowledge and learning are contained in **Component 4 of the project**. The following are strategies to ensure effective management of this knowledge:
74. **Knowledge Cycle**: To ensure the mainstreaming of knowledge management and learning in the program management cycle, the project will establish a knowledge management team with competent personnel with expertise in producing knowledge based on information and stories obtained from the field. The knowledge management team will also be directed to manage data and information, making it easier for project management to make strategic decisions to achieve the project's main objectives. The involvement of other parties, such as practitioners and academics, will also be encouraged to gain diverse perspectives in seeing the learning needs required for each element of the project.
75. **Youth-based Climate Adaptation Campaign:** Youth will disseminate knowledge on climate change adaptation through photo essay competitions and content creation on social media. This competition is expected to ignite the youth creativity who are attached to digital technology trends and use. Through this activity, the dissemination of information among youth can be massive and expansive. Indirectly, this activity makes youth more aware of the impacts and actions of climate change adaptation.

H. Consultative Process

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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.

76. Collecting essential data and information is carried out in consultation with several related parties. In addition to gathering information, this consultation is also intended to seek agreement and support for grant funding applications to address community problems related to climate change. Consultations on potential intervention sites have also been carried out. This consultation process is carried out in a participatory manner to identify the interests of each beneficiary which will then be optimally accommodated in project implementation.

No.	Stakeholder	Issue/Key Point
Province Level		
1	Center for Control of Climate Change and Forest and Land Fires in Sulawesi	• Condition of the watershed and ecosystem of Tempe Lake affected by climate change • Progress of the Climate Town Program in South Sulawesi • The direction of the climate Town Program in the future.
2	Forestry Service in South Sulawesi Province	• The widespread activity of clearing forest land into monoculture agriculture. • In addition, Forestry Agency also stated that the sedimentation contribution to Tempe Lake came from Sidenreng Rappang District, whose land cover is dominated by rice fields.
3	Environmental Service in South Sulawesi Province	• Information on the deteriorating water quality of the Walanae and Bila watersheds and Tempe Lake. • They also confirmed that the increase in the suckermouth catfish population indicated a decrease in water quality.
4	Environmental Service in Soppeng District	• Information related to the floods that always hit the shores of Tempe Lake. • In addition, they also conveyed the potential for the development of floating agriculture in Tempe Lake.
Wajo District		

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No.	Stakeholder	Issue/Key Point
5	Regent of Wajo District	● Information that in Wajo District, there has been a policy in the form of a regional regulation related to the management of Tempe Lake, but there is no specific policy regarding climate change adaptation. ● We also found data and information about local governments, which are still weak in developing integrated development policies.
6	Urban-village (*kelurahan*) Salomenraleng	● The majority of the people make a living as fishermen. Very prone to flooding with an intensity of two to three times every year with a height of more than 2 meters which causes a lot of material losses, transportation difficulties, fish catch areas are getting further away, and catches are drastically reduced.
7	Urban-village (*kelurahan*) Laelo	● Information that Laelo is one of the worst flood-affected areas. Floods occur due to high rainfall and cause rivers and lakes to overflow. This incident occurs yearly and causes agricultural land to be submerged, resulting in crop failure in the last two years.
8	Urban-village (*kelurahan*) Tancung	● Information that Tancung is one of the flood-affected areas. Floods occur due to heavy rainfall and cause rivers and lakes to overflow. The flood submerged two hamlets and caused considerable losses to farmers and fishermen.
9	Urban-village (*kelurahan*) Baru Tancung	● Information that Baru Tancung is one of the flood-affected areas. Floods occur due to heavy rainfall and cause rivers and lakes to overflow. The flood submerged two hamlets and caused considerable losses to farmers and fishers.
10	Ujung Pero Village	● Information that Ujung Pero is one of the areas affected by flooding and cut-off access to one of the hamlets. The flood also submerged most of the houses and public facilities and caused damage to the water retaining embankment.
11	Mallusesalo Village	● Information on the existence of an annual record of the times when floods come. Floods have become part of people's lives, and this condition forms a pattern of adaptation to people's livelihoods. The community has prepared themselves before the flood by making additional buildings above the houses using bamboo to secure equipment and places for activities.
12	Limporilau Village	● Information that floods and submerges agricultural land. Floods have also caused farmers to fail their crops in the last two years. Floods submerged not only agricultural land but also submerged entire villages.
13	Wele Village	● Floods occurred and inundated agricultural land. ● Floods have also caused farmers to fail their crops in the last two years. ● Floods only submerge agricultural land.
Soppeng District		
14	Regent of Soppeng District	● Regent suggested encouraging improvements in water management through the construction of soil and water conservation buildings such as *dams.* ● Regent stated that by encouraging the construction of reservoirs, water could be used for the agricultural sector. Regarding the development of forestry businesses ● The government continues to encourage the strengthening of the development of village products.
15	Pesse Village	● The current information shows there is a Social Forestry (PS) scheme in the form of Village Forests (*Hutan Desa/HD*) with 1 permit and Community Forest (*Hutan Kemasyarakatan/ HKm*) with 3 permits. ● Involvement of women, youth groups and vulnerable groups is still

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No.	Stakeholder	Issue/Key Point
		lacking. Currently, only HD shows progress with the KUPS product, palmsugar. Even then, it is still in plain packaging. ● Currently, the community cultivates rice fields, corn, cloves, and candlenuts as their livelihoods.
16	Sering Village	● There are currently Social Forestry (PS) schemes in the form of Village Forests (HD) and Community Forests (HKm). ● Villagers in the HD permit area routinely utilize Non-Timber Forest Products (NTFPs), namely pine resin. The amount of production can reach 20 tons per month. ● The commodities developed in the HKm permit area are candlenut and honey, which are still managed traditionally. ● The involvement of women and youth groups and Vulnerable Groups in social forestry groups remains lacking. ● The condition of social forestry groups is not yet active, nor is the Social Forestry Business Group (KUPS). ● Smallholders cultivate corn, rice fields, and candlenut as their main livelihood. Clearing land for corn farming is still routinely carried out by smallholders to meet their daily needs.
17	Patampanua Village	● There are currently Social Forestry (PS) schemes in the form of Village Forests (HD) and Community Plantation Forests (HTR). ● Institutional conditions are still less active due to the lack of assistance from forestry agencies. ● The involvement of women, youth groups, and vulnerable groups in the social forestry group is still lacking. ● Currently, smallholders cultivate rice fields, corn, and candlenut as their livelihood. Clearing land for corn farming is still routinely carried out by smallholders to meet their daily needs.
18	Bulue Village	● There are currently Social Forestry (PS) schemes in the form of Village Forests (HD) and Community Forests (HKm). HD has 1 permit, HKm has 4 permits, and there is also 2 social forestry scheme that is currently in the proposal stage. ● Institutional conditions are still less active due to the lack of assistance from forestry agencies. ● The involvement of women, youth groups and vulnerable groups in the social forestry group is still lacking. ● There are two villages located in the forest area, which cultivate cloves, corn, and rice fields as commodities. Corn has been found since entering the village. When it rains, the river water that passes through Bulue Village is dark brown, indicating land clearing upstream of the river.
19	Mattabulu Village	● There is currently a Social Forestry (PS) scheme in the form of Village Forest (HD) with 1 permit. Currently, the Village Forest Management Institute (*Lembaga Pengelola Hutan Desa/LPHD*) is proposing a map revision because it is not following forest area boundaries and management. ● A social forestry business group focused on environmental service and commodity-based businesses (pine, palm sugar, honey, ginger, and coffee). ● Smallholders in Bulue Village depend on the forest for their livelihood. The commodities outside the forest area are rice fields, corn, and cloves.
20	Tellu Limpoe Village	● Tellu Limpoe Village is located in the middle of the Batu-Batu sub-watershed ● The main livelihood of the residents in this village is rice farmers. ● Farmers routinely use chemical fertilizers and pesticides in their rice fields. Currently, it is complicated for farmers to get subsidized fertilizers. ● Women's groups in the village are also still less active in decision-making in the agricultural and social sectors.

I. Justification for Funding Requested

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

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77. This project will make forest areas and aquatic ecosystems and policy reforms a key component in efforts to improve climate change adaptation in the Tempe Lake ecosystem. The proposed project will be implemented to increase resilience and reduce community vulnerability by optimizing land management, household economic resilience, and increasing capacity against climate-related risks and hazards. It will be achieved through capacity building, which is then used in land management practices and sustainable development of productive enterprises.

78. Without Adaptation Fund's support, the Tempe Lake ecosystem community will continue to suffer from weather anomalies that cause floods and then inundate houses, public facilities, and productive land. In addition, environmental damage will get worse if the incident continues.

Component	Baseline (Without AF)	Additional (With AF)
Improved land use in the Tempe Lake ecosystem that contributes to sedimentation control	The amount of sedimentation continues to increase, causing silting of rivers and lakes, plus weather anomalies resulting in catastrophic flooding in the Tempe Lake ecosystem. These events continue to occur and make the community suffer huge losses.	It will reduce the amount of sedimentation, which is the cause of climate risk disasters, and reduce the number of people affected systematically.
Improving the economic resilience of the Tempe Lake ecosystem community through livelihoods enhancement	The number of people affected by climate change disasters continues to increase. Economic losses continue to occur every year and impact the level of community vulnerability to climate change which also continues to increase.	It will reduce the number of people affected by climate change. Structured economic strengthening can be carried out sustainably in the Tempe Lake ecosystem.
Encouraging collaborative action of stakeholders and cross-sectoral policies related to climate change adaptation	There is no firm commitment due to the system's weakness and policymakers' capacity to reduce climate risk, which further exacerbates the impact of climate change on society.	It will reduce the impact of climate change by increasing community resilience by encouraging the government to formulate policies and budgets related to climate change adaptation actions. Through this project funding, all these processes will be facilitated.
Increase knowledge capacity and awareness of community climate change adaptation through knowledge management and youth-based campaigns	There is not yet massive action on climate change adaptation widely due to weak capacity and collective awareness.	It will reduce vulnerability to the impacts of climate change by encouraging the development of sensitivity and mutual concern through social movements carried out based on awareness of the risks of climate change.

J. Sustainability

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

79. This project will guarantee some kind of sustainability after the project ends. Several categories of sustainability are intended, including:

Financial Sustainability:

80. The sustainability of funding for beneficiaries after the project period ends will be strengthened through the internalization of climate change adaptation through the Climate Change Adaptation Working Group (POKJA API) to follow up on activities that have been built so that the target site receives funding and follow-up from the local government. In addition, the village will later take part in continuing through village budgeting in village funds.

81. Financial sustainability for the community will be guaranteed through group cooperation with the market, as evidenced by a business cooperation agreement letter, so that the absorption of products produced by business groups can be maximally absorbed and financial turnover is stable.

Institutional Sustainability

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82. This project will ensure several types of institutions that will continue in the future, including:
83. **Forest Farmer Groups (KTH)**: To ensure the sustainability of forest farmer groups, productive activities will be carried out for them, such as capacity building, planting of economically valuable crops, as well as group collaboration with social forestry business groups.
84. **Social Forestry Business Groups (KUPS)**: To ensure the sustainability of the social forestry business group, activities will be carried out to ensure the smooth marketing of its products through cooperation with potential markets. In addition, cooperation with forest farmer groups will also ensure the supply of raw materials to continue producing products.
85. **Aquaculture Groups**: To ensure the group's sustainability, productive activities will be carried out for them, such as capacity building and provision of fish seeds as a core part of cultivation, so this process will continue. In addition, group collaboration with fisheries business groups will determine where the supply will go.
86. **Fishery Business Groups:** To ensure the sustainability of the fishery business, activities will be carried out to ensure the smooth marketing of products through cooperation with potential markets, as well as cooperation in supplying raw materials from aquaculture groups and several other suppliers.
87. **Climate Town Working Group**: To ensure the sustainability of the Climate Village Working Group, capacity building activities will be carried out, and the climate change action plan will be internalized into the village. So, this group will continue because of the support from the village.
88. **Climate Change Adaptation Working Group (POKJA-API)**: To ensure the sustainability of the working group on climate change adaptation, activities that will build cooperation and mutual commitment will be carried out so that an action plan is drawn up, which will form the basis for future actions.

Environmental Sustainability

89. Environmental sustainability in this project involves two different landscapes, namely:
90. **Forests:** To ensure sustainability in forest areas, activities that have a positive impact on the environment will be carried out, such as capacity building, especially on how to prevent erosion, as well as planting erosion-reducing plants and providing cultivation facilities and infrastructure. So that good practices for the environment are developed.
91. **Water Body (Lake)**: To ensure sustainability in the Tempe Lake area, activities will be carried out to reduce/control invasive populations and disturb other populations.

K. Environmental and Social Impact and Risk

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

Checklist of environmental and social principles	No further compliance assessment required	Potential impacts and risks – further compliance assessment and management are required
Compliance with the Law	√	
Access and Equity	√	
Marginalized and Vulnerable Groups		√
Human Rights	√	
Gender Equality and Women's Empowerment	√	
Core Labour Rights	√	
Indigenous Peoples	√	
Involuntary Resettlement	√	
Protection of Natural Habitats	√	
Conservation of Biological Diversity	√	
Climate Change	√	
Pollution Prevention and Resource Efficiency	√	
Public Health	√	
Physical and Cultural Heritage	√	

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Lands and Soil Conservation	√	

Principles 1. Compliance with the Law

92. The project implementation will ensure that all activities comply with the law, and in principle, the project implementer will ensure that all licensing components follow the applicable regulations. Every permit will follow the regulations written in Part II - D & E on this project concept note. Therefore, there are no risks and negative impacts arising from the project, so no further assessment is needed.

Principles 2. Access and Equity

93. The project does not hinder access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights. The project also does not exacerbate existing inequities, particularly concerning marginalized or vulnerable groups. The project has been designed not to impede any group's access to the essential services and rights stated in principle and therefore does not require further compliance assessment.

Principles 3. Marginalized and Vulnerable Groups

94. The project to be implemented does not harm marginalized and vulnerable groups, and instead, this project will touch on and intervene for these marginalized and vulnerable groups. However, what needs to be considered is that there is a possibility of marginalized and vulnerable groups due to limited data and information regarding the number of marginalized and vulnerable groups in the target area. So **further assessment is needed** to see the extent of the intervention that can be carried out.

Principles 4. Human Rights

95. The project will respect and, if possible, promote international human rights. Promoting human rights will be achieved by creating awareness with everyone involved in the project, including planning, implementation, monitoring, and evaluation. The International Declaration of Human Rights became the guiding principle for the entire project. So, it does not require further assessment of compliance.

Principles 5. Gender Equality and Women's Empowerment

96. The project will be designed in such a way as to maintain gender equality. So that women and men can be sure to have equal opportunities in project involvement. The project will actively involve equal participation in project/program activities and stakeholder consultation. The project also ensures that both men and women effectively access positions in the project/program, and women are encouraged to undertake and take positions, which in essence, project design and implementation will ensure equal access for men and women. Gender involvement is assessed through the proportion of work in the household so that it can support their livelihood. Activities related to the beneficiaries of training and capacity building are 30% women. The planned intervention will positively impact women's empowerment and ensure gender equality due to specific livelihoods. The principle of gender equality and women's empowerment in project activities is designed using an integrated gender plan as a safeguard that sees the proportion of involvement between men and women in all project activities as much as possible. It does not require further assessment of compliance.

Principles 6. Core Labour Rights

97. The proposed project will meet the required work standards determined by international and national standards. The ILO labor standards are stated in the Declaration of Principles and Fundamental Rights and Rights in 1998. Meanwhile, the National standards follow the fulfillment of rights for workers such as health insurance, work safety, and others. Thus, the project will incorporate the core ILO labor standards in the design and implementation of the project or program and create awareness among all involved on how these standards are applied. Apart from that, this project will also follow Law No. 11 of 2020 concerning *Cipta Kerja*, which includes how employment is regulated. The entire program is not related to violations of core labor rights, so no further assessment is required.

Principles 7. Indigenous People

98. The proposed project does not involve indigenous peoples because the project site does not have indigenous peoples in it, so it does not require further compliance assessment.

Principles 8. Involuntary Resettlement

99. The proposed project will not involve resettlement, loss of assets, or transfer of economic facilities and infrastructure. So, it does not require further assessment related to compliance.

Principles 9. Natural Habitat Protection

100. The proposed project will not intervene in the conversion or degradation of nature, and instead, it will

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further improve the quality of nature through cultivation and management models. So, no further assessment is needed.

Principles 10. Biodiversity Conservation

101. The proposed project is not located in an area with endemic animals or plants. So that it does not interfere with the biodiversity continuity. Therefore, no further assessment is needed.

Principles 11. Climate Change

102. The proposed project does not add a positive contribution to climate change; it is precisely through this program that the community can adapt to the current climate change impacts. So, no further assessment is needed.

Principles 12. Pollution Prevention and Resource Efficiency

103. The project does not generate any pollutants or waste production, so no further assessment is required.

Principles 13. Public Health

104. The project did not focus on activities related to avoiding significant negative impacts on public health, access to medical care, and health facilities and thus did not require further compliance assessments.

Principles 14. Physical and Cultural Heritage

105. The project is also not subject to attempts to alter, damage, or remove physical and cultural resources, cultural sites, and sites of unique nature, such as in the community. This national or international level is World Cultural and Natural Heritage, so no further compliance assessment is required.

Principles 15. Soil and Land Conservation

106. In project implementation, all activities will not impact land damage and other activities that can cause land loss and degradation. Instead, this project will restore good land use. Thus, no further compliance assessment is required.

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PART III: IMPLEMENTATION ARRANGEMENTS

A. Project Implementation Arrangements

Describe the arrangements for project / programme implementation.

107. This project will be implemented 24 months with the Partnership for Governance Reform as the Implementing Entity (IE) Adaptation Fund in Indonesia. In implementing the project in the target area, NIE will work together with institutions that work a lot on landscape issues in South Sulawesi, including (1) Tim Layanan Kehutanan Masyarakat (TLKM); (2) Yayasan Romang Celebes Indonesia; and (3) Yayasan AKU Rimba Indonesia, which in this project acts as the Executing Entity (EE). TLKM as the lead Executing Entity (EE). In this case, the personnel is directly involved in the project as Project Director. The Project Director is in charge of leading the EE, which will be responsible for reporting project results to National Implementing Entity (NIE) and National Designated Authoritiy (NDA). TLKM already has experience running watershed ecosystem-based projects, where TLKM, as the lead of the KAPABEL Consortium, previously became EE in the Project Adaptation Fund for 2020-2022 with the title "Community Adaptation for Forest-Food Based Management in Saddang Watershed Ecosystem" in Indonesia. Yayasan Romang Celebes Indonesia has experience in managing marine resources in South Sulawesi. Yayasan AKU Rimba Indonesia is also a member of the KAPABEL consortium and has a series of experiences in improving forest landscapes in South Sulawesi. With the capacity and experience of each institution involved in this project, it is hoped that this project will significantly impact the beneficiaries in a targeted, effective, efficient, and gender-responsive way.

108. This project will be managed by the **Project Management Unit (PMU)** with the composition of the Project Manager, Finance, Experts, and M&E. The Project Manager (PM) will lead the implementation or execution of the project, ensure that all project outcome-output-objective indicators are following the plan, report the results based on the M&E plan to the Project Director, and coordinate and report to relevant stakeholders both at the provincial and district levels. The Project Manager will also be supported by experts based on the areas of expertise needed based on the needs of achieving project components. Experts become a consultancy tool to strengthen the right decision making in project implementation and ensure that project activities comply with the ESMP. To ensure project implementation goes on track, M&E Specialists are needed as the main person responsible for maintaining the quality and achievement of project output-outcome-objectives indicators.

109. To ensure that the project implementation agenda is carried out correctly, effectively, and efficiently in the field, it is necessary to obtain assistance from operational personnel at the site level through the Project Component Team. Elements in this team include the Project Component Leader, who assists PM tasks in pursuing the project indicators achievement; team personnel in each component such as field facilitators, policy advocacy staff, and multi-stakeholder involvement, as well as knowledge management and communication personnel.

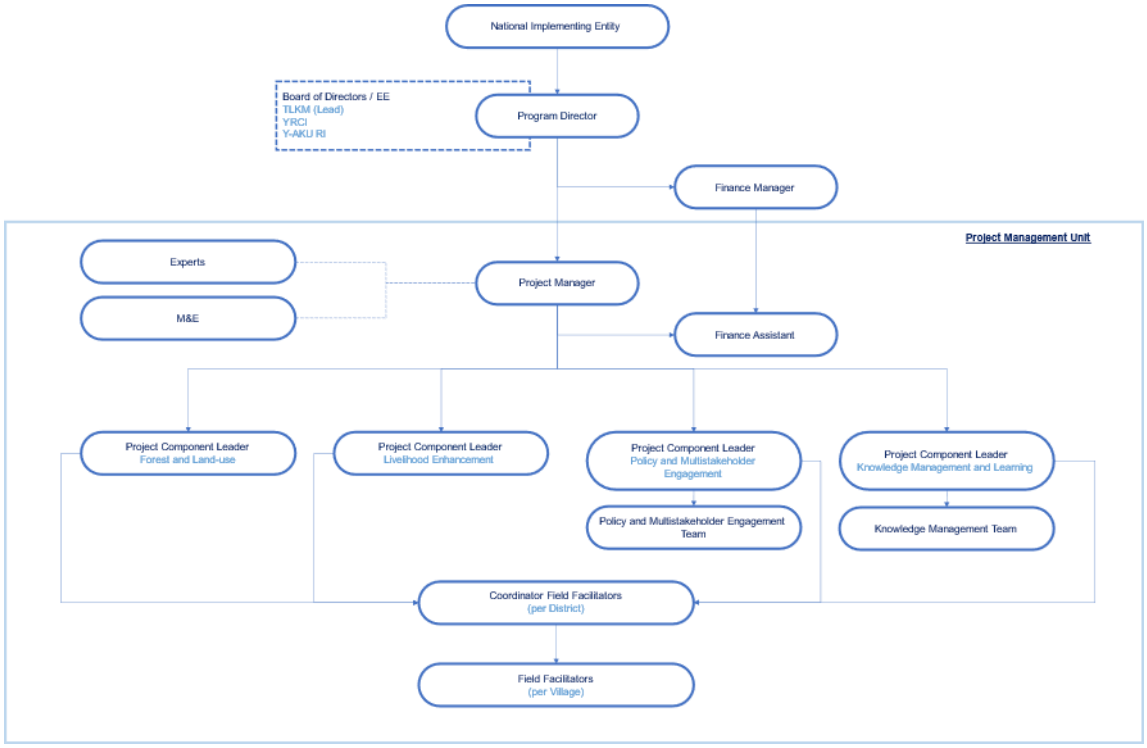

Figure 13. Project Implementation Arrangements Structure

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B. Financial and Project Risk Management

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

110. In project implementation, all phases of planning are analyzed to see the level of risk of the proposed project. A risk mitigation strategy is loaded to manage risk appropriately. The following is a table of types of risks, risk descriptions, and risk mitigation strategies to minimize project risks

Category	Potential Risk	Level	Risk Mitigation Strategy
Institutional	Structural changes to local government with great potential will occur in 2024, so it will weaken project management in intervening at the local government level	Medium	The project intervention will not have a significant effect, especially in the beneficiary village/urban-village (*kelurahan*) community. However, the project intervention in the government will be very influential, so it is necessary to carry out intense coordination and communication.
	Personnel changes in project management that will affect project achievement	Low	In the recruitment process, commitment from management personnel is required, which is marked by a contract that becomes the legal basis for project personnel
Financial	Delays in the disbursement of funding, procurement, and others that require a relatively lengthy process that delays the project's progress	Low	Active communication with grant providers regarding the fulfillment of needs. The Community Forestry Service Team will also play a role in meeting temporary funding
	Delays in financial reporting due to accessibility barriers in the field	Medium	Field Finance is needed, which will collect all reports in the field, as well as create a financial reporting system that is relevant to field conditions
	Changes in currency exchange rates led to changes in the proposed budget system and their impact on the activities and work plans of the proposed budget	Medium	Adjustments to changes in exchange rates and funding reductions

C. Environmental and Social Risk Management

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

Environmental and social principles	Impact and Risk	Mitigation Strategy
Compliance with the Law	-	-
Access and Equity	-	-
Marginalized and Vulnerable Groups	Uneven involvement of marginalized and vulnerable groups	● Further assessment of marginalized and vulnerable groups ● Involve marginalized and vulnerable groups
Human Rights	-	-
Gender Equality and Women's Empowerment	-	-
Core Labour Rights	-	-
Indigenous Peoples	-	-
Involuntary Resettlement	-	-
Protection of Natural Habitats	-	-
Conservation of Biological Diversity	-	-
Climate Change	-	-
Pollution Prevention and Resource Efficiency	-	-
Public Health	-	-
Physical and Cultural Heritage	-	-
Lands and Soil Conservation	-	-

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D. Monitoring & Evaluation

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.

111. Monitoring and Evaluation (M&E) of the project will refer to the framework that has been prepared by considering the components (1) Strategy and objectives; (2) Achievement Indicators; (3) Implementation of Activities; (4) Financial Use, which later these components will assist in:

1) Compliance: M&E determines whether the actions of administrators, staff, and all involved follow established standards and procedures.
2) Auditing: M&E determines whether resources and services destined for specific parties (targets) have reached them.
3) Accounting: M&E produces information that helps to "calculate" the results of social and societal change due to policy implementation after a certain period.
4) Explanation: M&E generates information that helps explain the hows of policy outcomes and why planning and implementation do not match.

112. Monitoring and Evaluation are performed using document review methods, field visits, interviews, or parties' discussions. Monitoring is directed to see Efficiency, Effectiveness, and Results. The monitoring and evaluation results can be used as learning materials for improvement or development in other places so that the results of monitoring and evaluation obtained will be reported periodically to the relevant parties: adaptation funds, partnerships, and stakeholders in the region. Reporting within the M&E framework is in the form of:

1) **Activity Report**: Reports will be issued on every activity so that there is monitoring through the report, thus helping to prove the progress that has been made, including assessing finance use on activities that have been carried out.
2) **Quarterly Report**: Reports will be made every 3 months. The Quarterly Report section will summarize the related activities and output levels contributing to the expected results.
3) **Annual Performance Report**: A performance assessment system carried out by superiors to their subordinates. The elements that are assessed are loyalty, work performance, responsibility, obedience, honesty, cooperation, initiative, and leadership. Assessment will be conducted at the middle and end of each project.
4) **Final Project Report:** This evaluation was carried out two months before the end of the project. This evaluation is carried out through reporting that summarizes the results achieved (Objectives, Outcomes, and Outputs), problems, and results not achieved. These evaluation results will become recommendations for each region to ensure the sustainability of the projects that have been implemented. Evaluation is carried out in a comprehensive, transparent, and accountable manner.

Monitoring and Evaluation Budget

Activities	Targets	Cost ($)	Time
Baseline Survey	Outcome, Output indicator targets	$2,797	Starting Project
Midline Survey	Outcome, Output indicator targets	$2,797	Mid of Project
Final Survey	Outcome, Output indicator targets	$8,392	Final Project
Report Reviews, Interview, FGD Management	Process, milestones, efficiency, effectiveness, results	$3,357	once every 3 months
Monev Workshop	Process, milestones, efficiency, effectiveness, results	$5,594	once every 6 months
Internal Audit	Managements	$13,986	Annual

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E. Results Framework

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.

Outcome/Output	Indicator	Baseline	Target			Source of Verification
			2023	2024	2025	
Component 1. Improving land use practices in the Tempe Lake ecosystem that contributes to sedimentation restraint						
Outcomes 1.1. Strengthening agroforestry management practices that can prevent erosion	improvement of agroforestry pattern on 500 ha land	0	0	0	500	Reports, Documentation
Outputs 1.1.1 Improved land management practices that contribute to erosion restraint	planting erosion prevention plants covering an area of 500 Ha	0	0	0	500	Reports, Documentation
Outputs 1.1.2. The availability of facilities and infrastructure to support land management activities	as many as 8 villages will get facilities and infrastructure	0	0	8	0	Reports, Documentation, Minutes of Handover of Goods
Outcomes 1.2. Community capacity building for erosion restraint	200 farmers increase their capacity	0	200	0	0	Reports, Documentation
Outputs 1.2.1. Increased community knowledge capacity regarding the causes and impacts of erosion, as well as land management-based erosion restraint	200 farmers increase their capacity	0	200	0	0	Reports, Documentation
Component 2. Reinforcing the economic resilience of the community in the Tempe Lake ecosystem through livelihoods enhancement						
Outcomes 2.1. Development of forestry commodity business through social forestry business groups	8 growing social forestry enterprise groups	0	0	0	8	Reports, Documentation
Outputs 2.1.1. 2.1.1 Increased capacity and skills for developing forestry commodity businesses	8 business groups increase their capacity	0	8	0	0	Reports, Documentation
Outputs 2.1.2. Increasing the added value of forestry commodity	8 products of social forestry business groups that have been certified 8 social forestry business groups get business development facilities and infrastructure	0	0	4	4	Reports, Documentation, Minutes of Handover of Goods
Output 2.1.3 Strengthening the marketing information of forestry commodity product	1 dokumen informasi potensi pasar kehutanan	0	1	0	0	Reports, Documentation

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Outcome/Output	Indicator	Baseline	Target			Source of Verification
			2023	2024	2025	
Outcomes 2.2. Development of fisheries commodity business based on women and vulnerable groups	3 home-industry-based business groups in each village	0	0	3	0	Reports, Documentation
Outputs 2.2.1. Increased capacity and skills for developing fishery commodity businesses	3 business groups increase their capacity	0	3	0	0	Reports, Documentation
Outputs 2.2.2. Increasing the added value of fishery commodity	3 certified fishery products 3 groups get facilities and infrastructure	0	0	3	0	Reports, Documentation, Minutes of Handover of Goods
Outputs 2.2.3. Encouraging the sustainable commodity cycle	1 market potential information document 3 cages and a cage management group	0	1	3	0	Reports, Documentation
Component 3. Encouraging collaborative action of stakeholders and cross-sectoral policies related to climate change adaptation						
Outcomes 3.1. Encouraging the cross-cutting policies in the Tempe Lake ecosystem	1 regional policy	0	0	0	1	Reports, Documentation
Outputs 3.1.1. Presence of Regional Action Plan for Climate Change Adaptation (RAD-API) policies	1 Decree of POKJA Formation 1 RAD Document	0	0	0	1	Reports, Documentation
Outcomes 3.2. Encouraging collaborative action based on the local community	4 Proklim villages in the Tempe Lake ecosystem	0	0	0	4	Reports, Documentation
Outputs 3.2.1. Establishment of the Climate Town Program (ProKlim) as the climate change adaptation actions at the local level	4 POKJA ProKlim	0	0	0	4	Reports, Documentation, Decree of POKJA Formation
Component 4. Increasing knowledge capacity and community awareness regarding climate change adaptation through knowledge management and youth-based campaigns						
Outcomes 4.1. Increased knowledge capacity of the community in the Tempe Lake ecosystem to increase resilience to climate change	100 people increased capacity	0	0	0	100	Reports, Documentation
Outputs 4.1.1. The dissemination of learning on climate change adaptation programs based on the Tempe Lake landscape	1 short video Documentary 1 best practice book 3 posters, banners, infographics 1 operating website	0	0	0	7	Reports, Documentation

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Outcome/Output	Indicator	Baseline	Target			Source of Verification
			2023	2024	2025	
	1 social media platform					
Outcomes 4.1.2. Increased knowledge capacity of the community in improving local-based climate change adaptation actions in the Tempe Lake ecosystems	100 people increased capacity	0	20	20	60	Reports, Documentation
Outcomes 4.2. Increased public awareness of climate change adaptation actions based on local youth-based campaign movements	100 people are involved in the climate change adaptation campaign	0	0	0	100	Reports, Documentation
4.2.1. The establishment of youth initiatives in promoting climate change adaptation actions	100 youths involved in the campaign	0	0	0	100	Reports, Documentation

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F. Alignment with Adaptation Fund Framework

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

Project Objective(s)[24]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. Improving land use practices in the Tempe Lake ecosystem that contributes to sedimentation restraint	500 ha of agroforestry is strengthened (enhanced) through crop management that can prevent erosion 200 people increased their capacity for erosion control	**Outcome 5**: Increased ecosystem resilience in response to climate change and variability -induce stress **Outcome 2**: Strengthening institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	**5.** Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress **2.1.** Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	$375,874
2. Reinforcing the economic resilience of the community in the Tempe Lake ecosystem through livelihoods enhancement	120 people who are members of the social forestry group improve their economy through the development of forestry businesses by the social forestry businesses group 45 people on the coast have improved their economy through the development of fisheries businesses by women and vulnerable groups	**Outcome 6**: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	**6.1** Percentage of households and communities having more secure access to livelihood asset **6.2.** Percentage of targeted population with sustained climate-resilient alternative livelihoods	$284,615
3. Encouraging collaborative action of stakeholders and cross-sectoral policies related to climate change adaptation	Approval of the regional action plan of climate change adaptation (RAD-API) policy in the form of a Regent's Regulation Encouraging four (4) villages in the climate village program (ProKlim) in order to strengthen climate change adaptation actions in the Tempe Lake ecosystem. 15 institutions (key actors) increasing capacity, awareness and alignment related to climate change adaptation	**Outcome 7**: Improved policies and regulations that promote and enforce resilience measures **Outcome 2**: Strengthening institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	**7.** Climate change priorities are integrated into the national development strategy **2.1.** Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	$98,252
4. Increasing knowledge capacity and community	1 short video documentary, 1 best practice book, 3 posters, banners,	**Outcome 3**: Strengthened awareness and ownership of	**3.1.** Percentage of the targeted population aware of predicted adverse impacts of	$77,133

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

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awareness regarding climate change adaptation through knowledge management and youth-based campaigns	infographics, 1 operating website, 1 social media platform to increase public knowledge capacity Involving 100 youths in climate change adaptation campaigns	adaptation and climate risk reduction processes at the local level	climate change and appropriate responses **3.2.** Percentage of targeted population applying appropriate adaptation responses	
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
1.1. Strengthening agroforestry management practices that can prevent erosion	500 Ha of agroforestry land use practices that contribute to erosion control Procurement of facilities and infrastructure to support land management activities in 8 intervention villages	**Output 5**: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability **Output 4**: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	**5.1.** No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale) **4.1.2.** No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	$225,874
1.2. Community capacity building for erosion restraint	200 people increase their knowledge capacity about the causes and impacts of erosion, as well as land management-based erosion control	**Output 3.2** Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	**3.2.1.** No. of technical committees/ associations formed to ensure transfer of knowledge **3.2.2** No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	$150,000
2.1. Development of forestry commodity business through social forestry business groups	8 social forestry business groups increase their capacity and skills in business development Increasing the added value of forestry products through facilitation of business facilities and licensing of 8 social forestry business groups Strengthening of forestry product marketing information through the preparation of 1 market potential document	**Output 6**: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	**6.1.1.** No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies **6.2.1.** Type of income sources for households generated under climate change scenario	$153,147
2.2. Development of fisheries commodity business based on	Forming 3 business groups on a home industry scale and increasing their capacity and skills in	**Output 6**: Targeted individual and community livelihood strategies strengthened in	**6.1.1.** No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or	$131,469

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women and vulnerable groups	developing fishery businesses Increasing the added value of 3 home industry-scale products through the facilitation of facilities and business certification Building 3 floating net cages; forming 3 management groups; and having 1 market potential document in order to ensure a sustainable production cycle	relation to climate change impacts, including variability **Output 4**: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	community livelihood strategies **6.2.1.** Type of income sources for households generated under climate change scenario **4.1.2.** No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	
3.1 Encouraging the cross-cutting policies in the Tempe Lake ecosystem	1 planning document on RAD-API in the regions in order to encourage joint action of the parties in climate change adaptation	**Output 7**: Improved integration of climate-resilience strategies into country development plans	**7.1.** No. of policies introduced or adjusted to address climate change risks (by sector)	$73,077
3.2. Encouraging collaborative action based on the local community	Encouraging 4 Proklim Villages in the Tempe lake ecosystem in the context of Village-Based Joint Action in Adapting to Climate Change	**Output 5**: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	**5.1.** No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	$25,175
4.1. Increased knowledge capacity of the community in the Tempe Lake ecosystem to increase resilience to climate change	Making 1 short video documentary, 1 best practice book, 3 posters, 3 banners, 3 infographics, 1 operating website, & 1 social media platform in order to disseminate learning on climate change adaptation programs based on the Tempe Lake ecosystem through Increased knowledge capacity of 100 people in improving village-based climate change adaptation actions in the Tempe Lake ecosystem	**Output 3.2**: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	**3.2.2** No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	$33,217
4.2. Increased public awareness of climate change adaptation actions based on local youth-based campaign	100 youths initiate and promote climate change adaptation actions through climate change adaptation campaigns	**Output 3.1:** Targeted population groups participating in adaptation and risk reduction awareness activities **Output 3.2**: Strengthened	**3.1** No. of news outlets in the local press and media that have covered the topic **3.2.1** No. of technical committees/associations	$43,916

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		capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	formed to ensure transfer of knowledge	

G. Budget

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

Budget Description		Cost
Component 1.	**Component 1. Improving land use practices in the Tempe Lake ecosystem that contributes to sedimentation restraint**	**$375,874**
Outcome 1.1.	**Strengthening agroforestry management practices that can prevent erosion**	**$225,874**
Output 1.1.1.	**Improved land management practices that contribute to erosion restraint**	$24,476
Activity	1.1.1.1. Identification of land suitability	$3,497
	1.1.1.2. Planting with agroforestry pattern	$6,993
	1.1.1.3 Planting erosion control plants	$13,986
Output 1.1.2.	**The availability of facilities and infrastructure to support land management activities**	$201,399
Activity	1.1.2.1. Seedling House Construction	$27,972
	1.1.2.2. Facilitation of commodity cultivation equipment	$33,566
	1.1.2.3. Operationalization Functional Forest and Landuse	$139,860
Outcome 1.2.	**Community capacity building for erosion restraint**	**$150,000**
Output 1.2.1.	**Increased community knowledge capacity regarding the causes and impacts of erosion, as well as land management-based erosion restraint**	$150,000
Activity	1.2.1.1. FGD on the causes and impacts of hamlet-based erosion	$1,399
	1.2.1.2. Agroforestry development training	$1,748
	1.2.1.3. MPTs plant cultivation training	$5,245
	1.2.1.4. Erosion-resisting plant cultivation training	$1,748
	1.2.1.5. Operationalization Capacity Building and Learning functional	$139,860
Component 2.	**Reinforcing the economic resilience of the community in the Tempe Lake ecosystem through livelihoods enhancement**	**$284,615**
Outcome 2.1.	**Development of forestry commodity business through social forestry business groups**	**$153,147**
Output 2.1.1.	**Increased capacity and skills for developing forestry commodity businesses**	$34,266
Activity	2.1.1.1. Business development training series	$13,986
	2.1.1.2. Comparative study of business development	$11,189
	2.1.1.3. Strengthening business institutions	$5,594
	2.1.1.4. Product processing module creation	$3,497
Output 2.1.2.	**Increasing the added value of forestry commodity**	**$41,958**
Activity	2.1.2.1 Regular business group meetings	$6,993
	2.1.2.2 Business licensing facilities	$6,993
	2.1.2.3. Facilitation of home industry facilities and infrastructure	$27,972
Output 2.1.3.	**Strengthening the marketing information of forestry commodity product**	**$76,923**
Activity	2.1.3.1 Research on forestry business market potential	$3,497
	2.1.3.2 Facilitate meetings with potential business partners	$3,497
	2.1.3.3. Operationalization forest livelihood functional	$69,930
Outcome 2.2.	**Development of fisheries commodity business based on women and vulnerable groups**	**$131,469**
Output 2.2.1.	**Increased capacity and skills for developing fishery commodity businesses**	**$84,615**
Activity	2.2.1.1. Program Socialization at the Village level	$2,098
	2.2.1.2. Operationalization of aquaculture livelihood	$69,930
	2.2.1.3. Establishment of a household business group	$2,098
	2.2.1.4. Serial-Training Aquatic Business Development	$4,196
	2.2.1.5. Strengthening business institutions	$4,196
	2.2.1.6. Making aquatic product processing modules	$2,098
Output 2.2.2.	**Increasing the added value of fishery commodity**	$28,671
Activity	2.2.2.1 Regular business group meetings	$3,497
	2.2.2.2 Business licensing facilities	$4,196
	2.2.2.3. Facilitation of home industry facilities and infrastructure	$20,979

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Output 2.2.3.	**Encouraging the sustainable commodity cycle**	$18,182
Activity	2.2.3.1 Research on the market potential of marine business	$1,748
	2.2.3.2 Facilitating meetings with potential business partners	$2,098
	2.2.3.3 Formation of pond management group	$2,098
	2.2.3.4. Fisheries Cultivation Training Series	$2,098
	2.2.3.5. Group institutional strengthening	$1,748
	2.2.3.6. Procurement of group facilities and infrastructure	$8,392
Component 3.	**Encouraging collaborative action of stakeholders and cross-sectoral policies related to climate change adaptation**	**$98,252**
Outcome 3.1.	**Encouraging the cross-cutting policies in the Tempe Lake ecosystem**	**$73,077**
Output 3.1.1.	**Presence of Regional Action Plan for Climate Change Adaptation (RAD-API) policies**	**$73,077**
Activity	3.1.1.1 Meeting to Build Mutual Understanding Regarding Regional Action Plans for Climate Change Adaptation Wajo District	$6,993
	3.1.1.2 Establishment of the Working Group on Climate Change Adaptation (Pokja API) Wajo District	$3,497
	3.1.1.3 Facilitating Climate Change Vulnerability Assessment Wajo District	$2,098
	3.1.1.4 Seminar on Climate Change Vulnerability Study Results Wajo District	$2,797
	3.1.1.5 Preparing Regional Action Plans for Climate Change Adaptation (RAD - API)	$5,245
	3.1.1.6 Facilitating the Preparation of the RAD-API Regent's Regulation	$1,399
	3.1.1.7 Advocacy of bupati regulations related to RAD-API Wajo District	$51,049
Outcome 3.2.	**Encouraging collaborative action based on the local community**	**$25,175**
Output 3.2.1.	**Establishment of Climate Town Program (ProKlim) as the climate change adaptation actions at the local level**	**$25,175**
Activity	3.2.1.1 Socialization of the Climate Village Program	$3,497
	3.2.1.2 Meeting for the Establishment of the Climate Village Working Group	$4,196
	3.2.1.3 Regular Meetings of Climate Village Working Group Working Group	$5,594
	3.2.1.4 Preparation of a Climate Change Adaptation Action Plan Document	$5,594
	3.2.1.5 Socialization of climate change adaptation action plans	$3,497
	3.2.1.6 Climate Village Program Proposal Training	$1,399
	3.2.1.7 Facilitation of Proklim Desa Village Proposals	$1,399
Component 4.	**Increasing knowledge capacity and community awareness regarding climate change adaptation through knowledge management and youth-based campaigns**	**$77,133**
Outcome 4.1.	**Increased knowledge capacity of the community in the Tempe Lake ecosystem to increase resilience to climate change**	**$33,217**
Output 4.1.1.	**The dissemination of learning on climate change adaptation programs based on the Tempe Lake landscape**	**$20,280**
Activity	4.1.1.1. Making short video documentary	$10,490
	4.1.1.2. Compilation of best practice books	$3,497
	4.1.1.3. Local knowledge-based banners and posters	$1,748
	4.1.1.4. Website and social media management	$3,147
	4.1.1.5. Operationalization Communication Functional	$1,399
Output 4.1.2.	**Increased knowledge capacity of the community in improving local-based climate change adaptation actions in the Tempe Lake ecosystems**	**$12,937**
Activity	4.1.2.1. Workshop on Climate Change Adaptation in the Tempe Lake landscape	$4,196
	4.1.2.2. Training on recognizing and reading village-based microclimates	$3,497
	4.1.2.3. Tempe Lake Climate Change Adaptation Festival	$1,748
	4.1.2.4. Field Facilitator Training	$3,497
Outcome 4.2.	**Increased public awareness of climate change adaptation actions based on local youth-based campaign movements**	**$43,916**
Output 4.2.1.	**The establishment of youth initiatives in promoting climate change adaptation actions**	**$43,916**
Activity	4.2.1.1. Youth climate change action festival	$3,497
	4.2.1.2. Climate change adaptation photo essay competition in Tempe Lake	$1,748
	4.2.1.3. Competition for climate change adaptation content creation in Tempe Lake	$1,748
	Monitoring and Evaluation	$36,923
Project Execution Cost		**$79,408**
Forest and Land Use Specialist		$3,462
Monev Specialist		$4,154
Social Gender Specialist		$3,462
Livelihood and Economic Specialist		$3,462

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Climate Change and Spatial Specialist	$3,462
Program Director	$8,308
Project Manager	$13,846
Finance Manager	$6,923
Finance Assistant (x3)	$20,417
Office Rent	$7,200
Stationary	$1,458
Communication	$1,177
Electricity, WIFI, Water	$2,077
Project Cycle Management Services	**$77,799**
Total Components	**$993,081**

H. Disbursement Schedule

Include a disbursement schedule with time-bound milestones.

	Upon signature of the Agreement	One Year after Project Start [a)]	Total
Scheduled date	April 2023	Maret 2024	
Project Cost	$540,594	$295,280	$835,874
Execution Cost	$40,706	$38,702	$79,408
Implementing Entity Fee	$38,899	$38,899	$77,799
Total	**$616,800**	**$371,482**	**$993,081**

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

A. Record of endorsement on behalf of the government[25]

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:

Dr. Amran Mahmud, S.Sos., M.Si Regent of Wajo District	Date: *June, 20, 2022*
H. Andi Kaswadi Razak, SE Regent of Soppeng District	Date: *July, 14, 2022*
Ir. Andi Parenrengi, M.P Head of Forestry Service of South Sulawesi	Date: *July, 07, 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

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (President Decree No. 16 Year 2015; President Decree No. 60 Year 2021; MoEF Regulations No. P.13/Menlhk/Setjen/OTL.0/1/2016; MoEF Regulations No. P.33/Menlhk/Setjen/Kum.1/3/2016; Indonesia Intended Nationally Determined Contribution (INDC); COP 21 Paris Agreement signed by Government of Indonesia; Book and Map of Information System of Vulnerability Index Data (SIDIK); Climate Change Adaptation National Action Plan) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Laode M. Syarif *Executive Director of Partnership for Governance Reform in Indonesia (KEMITRAAN)* Implementing Entity Coordinator	
Date: *July, 15, 2022*	Tel. and email:
Project Contact Person:	
Tel. and Email:	

[25] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

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Annex 1. Endorsement Letter

BUPATI WAJO

SURAT REKOMENDASI

Nomor: 800/501/Setda

Yang bertanda tangan di bawah ini:

Nama : Dr. H. Amran Mahmud, S.Sos., M.Si
Jabatan : Bupati Wajo
Instansi : Pemerintah Kab. Wajo

Mewakili Pemerintah Kabupaten Wajo dengan ini memberikan rekomendasi dan dukungan penuh kepada Yayasan Tim Layanan Kehutanan Masyarakat (TLKM) sebagai *Non-Government Organization* (*NGO*) yang aktif dalam pemberdayaan masyarakat desa, untuk mengajukan daerah di Kabupaten Wajo, Sulawesi Selatan sebagai lokasi pengusulan program/project Adaptasi Perubahan Iklim dengan tema "Penguatan Ketahanan Iklim Masyarakat Ekosistem Danau Tempe Melalui Tata Kelola Berkelanjutan". Dalam hal ini Yayasan TLKM akan mengajukan usulan program/proyek kepada lembaga pemberi dana hibah internasional "*Adaptation Fund*" melalui Kemitraan (*The Partnership for Governance Reform*).

Demikian Surat Rekomendasi ini untuk digunakan sebagaimana mestinya.

Sengkang, 20 Juni 2022

BUPATI WAJO

DR H AMRAN MAHMUD, S.Sos., M.Si

BUPATI SOPPENG

SURAT REKOMENDASI
Nomor : 811 / KDS / VII / 2022

Yang bertanda tangan di bawah ini:

Nama : **H. A. KASWADI RAZAK, SE**
Jabatan : Bupati Soppeng
Instansi : Pemerintah Kabupaten Soppeng

Mewakili Pemerintah Kabupaten Soppeng dengan ini **memberikan Rekomendasi** dan dukungan penuh kepada Yayasan Tim Layanan Kehutanan Masyarakat (TLKM) sebagai *Non-Government Organization* (*NGO*) untuk mengajukan daerah di Kabupaten Soppeng Sulawesi Selatan sebagai lokasi pengusulan program/project Adaptasi Perubahan Iklim dengan tema **"Penguatan Ketahanan Iklim Masyarakat Ekosistem Danau Tempe Melalui Tata Kelola Berkelanjutan"**. Dalam hal ini Yayasan TLKM akan mengajukan usulan program/proyek kepada lembaga pemberi dana hibah internasional *"Adaptation Fund"* melalui Kemitraan (*The Partnership for Governance Reform*) dengan ketentuan sebagai berikut :

1. Dalam melaksanakan kegiatannya tidak bertentangan dengan peraturan dan perundang – undangan yang berlaku.
2. Pemerintah Kabupaten Soppeng tidak bertanggungjawab terhadap penyalahgunaan Surat Rekomendasi ini.

Demikian Surat Rekomendasi ini untuk digunakan sebagaimana mestinya

Watansoppeng, 14 Juli 2022

BUPATI SOPPENG

H. A. KASWADI RAZAK, SE

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PEMERINTAH PROVINSI SULAWESI SELATAN
DINAS KEHUTANAN
Jl.Bajiminasa No. 14 Telp (0411) 873181–854638 Fax (0411) 873182 E-mail: dishutanselprov.go.id
M A K A S S A R 90126

SURAT REKOMENDASI

Nomor: 800/2018/DISHUT

Yang bertanda tangan di bawah ini:

Nama	:	**Ir. H. ANDI PARENRENGI, MP.**
Jabatan	:	Kepala Dinas
Instansi	:	Dinas Kehutanan Provinsi Sulawesi Selatan

Mewakili Dinas Kehutanan Provinsi Sulawesi Selatan dengan ini **memberikan rekomendasi** dan dukungan penuh kepada Yayasan Tim Layanan Kehutanan Masyarakat (TLKM) dan Yayasan Romang Celebes Indonesia (YRC) sebagai *Non-Government Organization* (*NGO*) yang aktif dalam pemberdayaan masyarakat desa, untuk mengajukan daerah Kabupaten Wajo dan Soppeng, Sulawesi Selatan sebagai lokasi pengusulan program/project Adaptasi Perubahan Iklim dengan tema **"Penguatan Ketahanan Iklim Masyarakat Ekosistem Danau Tempe Melalui Tata Kelola Berkelanjutan"**. Dalam hal ini Yayasan TLKM dan YRC akan mengajukan usulan program/proyek kepada lembaga pemberi dana hibah internasional *"Adaptation Fund"* melalui Kemitraan (*The Partnership for Governance Reform*).

Demikian Surat Rekomendasi ini untuk digunakan sebagaimana mestinya.

Makassar, 07 Juli 2022

Kepala Dinas Kehutanan
Provinsi Sulawesi Selatan

Ir. H. ANDI PARENRENGI, MP.
Pangkat : Pembina Utama Muda
NIP : 19631231 199703 1 020

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Annex 2. Environment and Social Management Plan

This Environmental and Social Management Plan (ESMP) aims to identify and assess potential environmental and social risks that may be detrimental as a result of the project. Therefore, a framework for monitoring impacts and mitigation strategies has been developed to minimize the negative potential that may arise.

Impact and Risk of Activities			Risk Mitigation & Monitoring Plan		Location	Period	Implementing Management and Monitoring
ESP Safeguards	**Description of Risk**	**Risk Category (H/M/L)**	**Mitigation/ Action Plan**	**Monitoring**			
ESP Principle 3: Marginalized and Vulnerable Groups	Uneven involvement of marginalized and vulnerable groups	L	Assessment of vulnerable groups will be carried out further by assessing age, occupation, income, family responsibilities, adaptability, and others. The data will then be equitably selected for the group's involvement in the project Assistance and involvement of marginalized groups in capacity building Carry out defects to assess how much involvement of marginalized and vulnerable groups as beneficiaries Monitor and evaluate the involvement of marginalized and vulnerable groups in each project activity	Assessment Report ESMP Reports	Sidenreng Rappang, Soppeng and Wajo Districts	April 2023 – Septermber 2023	Implementer: Grantee Monitoring; ESMP Specialist

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Annex 3. Gender Assessment

A. Gender Assessment and Methodology

To observe the way in which gender involvement at the project intervention sites, an assessment was conducted with several women representatives using the individual interview approach at the village. So that the information acquired can describe the gender setting as a whole and in its entirety. The findings obtained during the field are as follows:

Women Groups

The dominant activities of the women in intervention sites were settling in household work and helping their husbands in farming. Some of them are single parents who work as breadwinners and housekeepers. Each of them carries out their various routines individually, and there is no activity carried out jointly by women. For this reason, it is necessary to have a forum that involves women so that they will have activities other than those previously mentioned. This project is designed to empower women by encouraging groups that will involve them fully, from giving them access to participate until they can manage and/or get direct benefits.

Division of Labor within the family

There is no division of labor within the family. The village's customary rule suggests that women do household (domestic work) activities while men usually do work related to family earnings (public work).

The restrictions for women

There are no restrictions on activities specifically for women in the intervention sites.

Economy Sector

Based on the results of the assessment in several villages at the location of the Tempe Lake ecosystem project intervention in the catchment area and around Tempe Lake, data on the dynamics of community livelihoods were obtained, namely:

1. *Upstream Catchment Area Community*

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Most people make a living as farmers, and people who live and or own arable land in forest areas have obtained social forestry permits and have been included as members of the social forestry business group (KUPS) whose members only involve men. Meanwhile, the specific role of women in one of the candlenuts business groups is to collect fruit and break candlenuts. Some women work as candlenut crushers to increase household income.

In the agricultural sector, there is a division of roles between men and women, starting from preparing agricultural land to marketing commodity products. Men have the role of preparing the land before planting, planting, caring for the plants, and harvesting, and they dominate the decision-making regarding the types of crops to be planted. Meanwhile, the women's role is to prepare the seeds, helping plants, caring and harvest plants, and post-harvest treatments such as drying the crops. The role of women in the agricultural sector is seen as assistance, while men are the main actors. In the marketing of crops, men dominate market information and price determination. Several women work as entrepreneurs selling agricultural products but in tiny numbers, while most women rely more on marketing matters to men.

2. Community Around the Water Body (Lake)

The community's livelihood pattern is strongly influenced by the flood disaster, where people work as farmers during the dry season, and during the rainy season, people work as fishermen. The division of roles between men and women is apparent, and men work as fishermen while women sell their catch. In addition, some women work as trawlers (fish fishing gear), weavers, and harvest workers to increase household income.

Roles, functions, positions, and responsibilities at the village level

The results of the interviews showed that most of the critical positions at the village level were dominated by men. This fact was obtained during visits to several village offices at the project intervention sites. Head officials at the village and sub-village levels are always male, while women are in charge of administration and finance. During meetings and deliberation involving the village community, the invitation to the meeting is more often addressed to men. Meetings are always dominated by men in terms of decision making, while women only attend.

B. Gender Analysis Pathway

Assist planners in planning gender-responsive programs, identify gender gaps in access, participation, control, and benefits obtained by male and female citizens, find out the background to the occurrence of gender gaps, formulate problems as a result of gender gaps and identify steps/ necessary intervention.

The above gender mainstreaming efforts will be pursued by:

1) Involve women's groups in all activities supporting income-generating activities and the household economy.
2) Involve gender groups equitably in decision making.
3) Activities targeting beneficiaries, such as capacity building and training that, involve women.
4) Gender mainstreaming will apply the principles of access, participation, control, and benefits approach.

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12 Jun 2022 15.02.51
S 4° 7' 49", E 120° 1' 19"
Jalan Poros Bakke Alau, Indonesia

MINISTRY OF ENVIRONMENT AND FORESTRY
DIRECTORATE GENERAL OF CLIMATE CHANGE

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

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

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

Dear Board Member,

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

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

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

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

Sincerely Yours,

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

Copy to:
Kemitraan (Partnership Governance Reform in Indonesia)

Project Formulation Grant (PFG)

Submission Date: **August 8, 2022**

Adaptation Fund Project ID:
Country/ies: **Indonesia**
Title of Project/Programme: **Sustainable Landscape Governance; Towards Climate Resilience of Community in Tempe Lake Ecosystem**.
Type of IE (NIE/MIE): **NIE**
Implementing Entity: **Kemitraan – The Partnership for Governance Reform**
Executing Entity/ies: **TLKM (Tim Layanan Kehutanan Masyarakat – Community Forest Services Team) & Partners**

A. Project Preparation Timeframe

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

B. Proposed Project Preparation Activities ($)

Describe the PFG activities and justifications:

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

C. Implementing Entity

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

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