



ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category	: Small-Sized Project/Programme
Country/ies	: Indonesia
Title of Project/Programme	: Sustainable Livelihood and Ecoenterprise in Karst Ecosystem for Adapting to Climate Change
Type of Implementing Entity	: National Implementing Entity
Implementing Entity	: Kemitraan (Partnership for Governance Reform)
Executing Entity/ies	: Konsorsium Adaptasi Ekosistem Karst (KARST)
Amount of Financing Requested	: \$ 1,048,636

Project / Programme Background and Context:

The National Medium-Term Development Plan (RPJMN) for Indonesia 2014-2019, aimed specifically at improving forest conservation and governance, aims at: optimizing the management of conservation areas covering 20.63 million d hectares, including the protection of karst, peat and mangrove areas.

The Karst Maros-Pangkep region in southern Sulawesi is the largest and most beautiful karst area after southern China¹. The United Nations Educational, Scientific and Cultural Organization (UNESCO) has proposed that the Maros-Pangkep Karst become a World Heritage status. The karst region of Maros-Pangkep is also one of the most biodiverse karst areas in the Asia-Pacific region.²

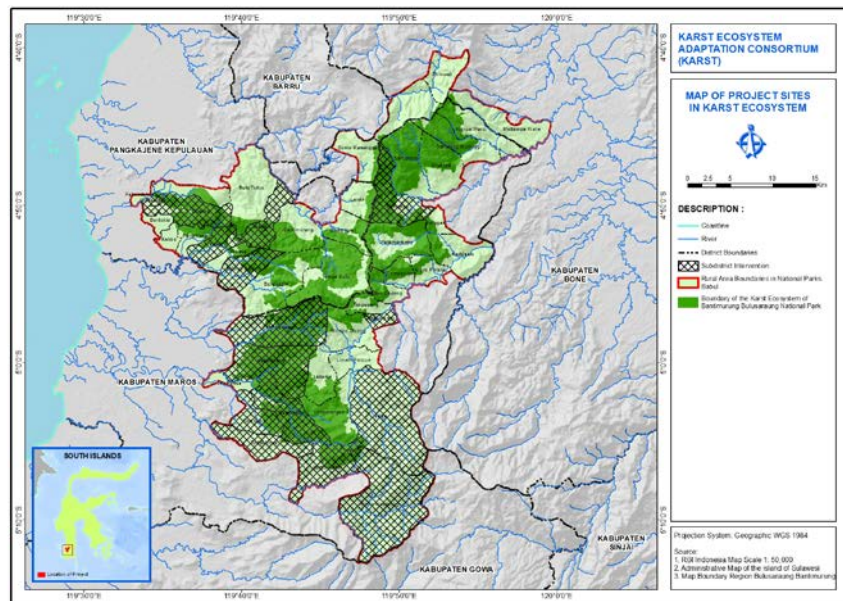


Figure 1. Map of the program's target locations

¹ Bantimurung Bulusaraung National Park

² LIPI Press Confirmation, <https://nasional.kompas.com/read/2012/02/15/02452399/selvation.vegetasi.karst.strategy>

This karst region extends from north to south in the administrative area of Maros, Pangkep and Bone Regency. In terms of formation, this karst region is made up of forests on limestone with forest formations of cliffs and slopes. The karst area is an area that is home to a natural habitat and is unique in terms of biodiversity conservation², a region known as the "The Kingdom of Butterfly".

The karst area of **43,433.85 ha** is located in the Regency Administrative Region of Maros, with 28,532.39 ha (65,691%) in the Kab region. Pangkep covers an area of 14,445.75 ha (33,259%) and Kab. Bone 455.69 ha (1.049%). **These karsts are located in 8 watersheds, which serve a total of 15,879 households** comprising 11,790 households in 5 sub-districts of Maros (Bantimurung, Simbang, Tompobulu, Cenrana and Mallawa) and 4,089 households in 3 districts of Pangkep District. (Balocci, Minasatene and Tondong Tallasa) **meet basic water supply needs and at least 26 604 ha of agricultural land and 6 658 ha of plantations.** (See *Annex 5. Maps*)

1. Environmental Context and Climate Change Impact



Figure 2. Flood occurrence on paddy fields in the community of Maros Regency in 2018

The Karst Maros-Pangkep and the Bulusaraung mountain complex are also watersheds and upstream areas of various rivers of Maros, Pangkep, including the rivers Puteh and Walannae / Lake Tempe. In addition, this region is also home to unique, endemic and rare flora and fauna, and only exists in this region³. Karst has a unique and strategic hydrological potential, particularly in the form of the karst region's ability to store large amounts of water. The water body is located below the surface in the form of a flow in the form of an underground river system.

The water found in the karst area of Maros-Pangkep should be properly used by the community to meet its daily water needs and help with irrigation for irrigation of rice fields and other needs in the area surrounding the Karst from Maros-Pangkep.

Biodiversity containing a variety of endemic living in the karst region of Maros-Pangkep. In the fauna, we find species of black monkeys (*Macaca maura*), cuscus bear (*Ailurops ursinus*), small cuscus (*Stigocuscus celebensis*), the smallest primata of the world (*Tarsius specter*) and Sulawesi Ranggong (*Rhyticeros Bird*). In addition, there are also about 103 types of butterflies, some of which are endemic and protected in the Bantimurung tourist forest. The types of endemic flora Sulawesi present in the karst region of Maros-Pangkep are black wood (*Dispyros celebica*)⁴.

The high biodiversity and dependence of the surrounding community on karstic ecosystems such as water and other livelihoods have been affected by climate change. Climate change is leading to a productivity decline of up to 50% for farmers⁵. served by the karst ecosystem of Maros-Pangkep. **This is seen in the production of 18 sacks of rice. Today, farmers can only get 9 bags in the region.** Previously, farmers could only harvest two or even three times, and only once a year during the rainy season. **This decline in productivity is caused by climate change during most of the year, increased plant pest attacks and damage to paddy crops from floods, and the difficulty of impacting climate change. Community agriculture. farmers dry yields of grain yields.** The water crisis is now a problem for local residents. This once dry area has now begun to experience a water crisis during the dry season⁶

Reduced water supply in the karst region of Maros-Pangkep also encourages farmers to practice shifting cultivation, by searching for potential water sources around the area that impact on the increasing encroachment of forests for the Agriculture. Another impact is the increased potential for fires due to rising temperatures. **In 2015, forest fires had devoured tens of hectares of forest in the Bantimurung National Park area⁷.**

³ LIPI Press Confirmation, <https://nasional.kompas.com/read/2012/02/15/02452399/selvation.vegetasi.karst.strategy>

⁴ Bantimurung Bulusaraung National Park

⁵ Mongabay

⁶ TLKM Survey Results (2017)

⁷ Mongabay



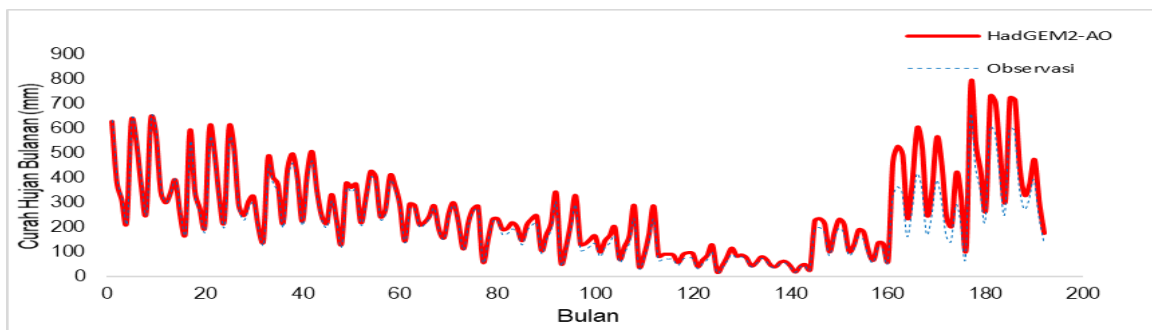
Figure 3. Flood events in community settlements in Pangkep Regency 2018

This situation can certainly cause flooding during the rainy season and drought during the dry season. Therefore, adaptation is necessary to overcome and minimize potential risks. In addition, in his press release, Makassar Region VI of the Center for Meteorology, Climatology and Geophysics (BBMKG) said that, in the face of climate change, people should be vigilant, especially those who were operating a farming or planting business because of the threat of a bad harvest⁸⁸. In the context of natural resources, climate uncertainty has also changed significantly. This ensures that the

vegetation around and within the karstic ecosystem does not flower and does not bear fruit, which has a derivative impact on the availability of food for animals living in this ecosystem. This causes conflicts over food needs between humans and animals in the karst ecosystem. **It was noted that meeting the community with wild animals from the forest due to the need for food represented 51% of the community meeting these animals in fields or gardens⁹.**

This ensures that the vegetation around and within the karstic ecosystem does not flower and does not bear fruit, which has a derivative impact on the availability of food for animals living in this ecosystem. This causes conflicts over food needs, between humans and animals in the karst ecosystem. **The intensity of encounter with the community with animals originating from the forest was recorded due to the need for food of 51% of the community meeting the monkeys in their fields or gardens, 32% of the people having met the wild boar in their fields or their gardens and 17% of people who did not encounter any animals in their fields or gardens¹⁰.**

In addition, it is expected that the average amount of rainfall in the Karst Maros-Pangkep region will increase by 17% in the future. The precipitation trend corresponds to the 8.56% increase in surface flow and flow of the Karts River in Maros-Pangkep. Rainfall changes in the future also have an impact on the hydrological conditions of a region. This indicates that a 1% increase in precipitation can increase from 1% to 4% of runoff.



The climate change projection scenario from 2018 to 2050 shows an increase in average precipitation of 17% over the next 33 years compared to the average effective rainfall from 1981 to 2013. This indicates that over the next 33 years, the losses due to changes the climate in the Maros-Pangkep go-kart region will be even better, particularly in the agricultural sector¹¹.

⁸ Merdeka.com (2018)

⁹ Conflict assessment report of TN. Babul (2014)

¹⁰ Conflict assessment report of TN. Babul TN. Babul (2014)

¹¹ Results of Global Weather Data Analysis as baseline / observation data (<http://globalweather.tamu.edu/>), using 27 Global Weather stations located around the area that affect the Saddang watershed area, 2017

Table 1. Disaster Intensity by Type

Type of Disaster	Disaster Location (District)	Disaster Intensity
Flood	Maros	5 time
	Pangkep	5 time
	Bone	17 time
Drought	Maros	2 time
	Pangkep	4 time
	Bone	8 time
Tornado	Maros	10 time
	Pangkep	24 time
	Bone	15 time
Landslide	Maros	0 time
	Pangkep	1 time
	Bone	2 time

Source: bnpb.go.id

The table above presents data on disasters over the past ten years, from 2009 to 2018. Disasters in the Karos Maros-Pangkep region were not only landslides, floods and droughts, but also appearance of a growing potential for tornadoes.

Figure 1 (mean mm / yr) of the Bantimuring Bulusaraung National Park region, based on the RCP 4.5 scenario, presents the projection of the above rainfall variations based on the spatial distribution model. in 2030 (d) HadGEM2-AO model, compared to precipitation from the RCP 4.5 scenario model. The color gradation shows that the drier the blue zone, the more humid the zone will be.

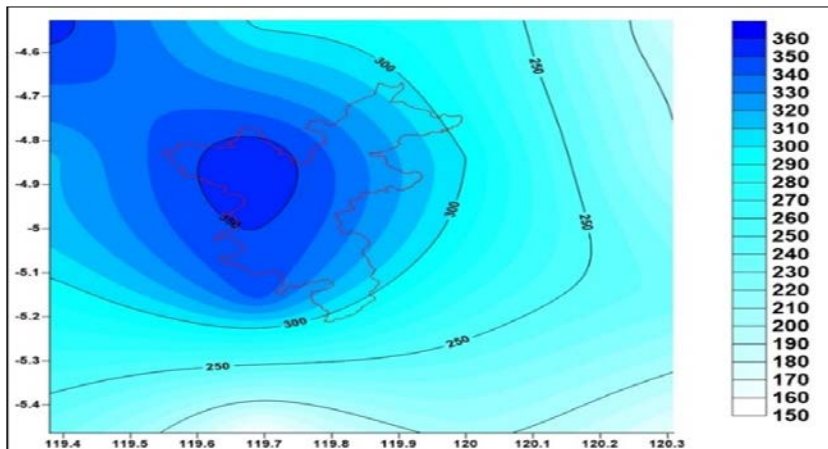


Figure 4. Scenario 4.5 of the HadGEM-AO Model

The situation of the karst region of Maros-Pangkep in the face of projected changes in rainfall above may cause drought. As a result, during the dry season, water availability suffers from a fertility deficit in the land cultivated by the community. Farmland (paddy fields) flooded people cause heavy losses **to the population due to poor harvests and force the community to reduce its sources of income.** This has led to **an increase in the number of poor people in the Karos Maros-Pangkep region.**

The above will be even more worrying if you look at the level of regional risk associated with climate change associated with the level of disasters in the Karst region. From there, it shows that 15 villages in Karst Maros and Pangkep regions are vulnerable to climate change. Ten villages are in a rather vulnerable condition and five relatively vulnerable villages are scattered throughout the project area (based on the results of the exposure index analysis and the sensitivity to 'adaptability')¹².

¹² Region Vulnerability Data was obtained from the Vulnerability Index Data Information System developed by KLHK in 2015

Table 2. Project intervention areas

Districts	Intervention Area (Village)	
Maros	Bireng Leang – Leang Samangki Labuaja Bonto Manai	Bonto Manurung Toddolimae Baji pa mai Laiya Mallawa
Pangkajene dan Kepulauan	Balocci Baru Kassi Biraeng	Minasatene Malaka

2. Socio-Economic Context

The majority of the inhabitants of Maros-Pangkep Karst region **work as farmers and have a low level of education**¹³. The number of people in the target area represents 34.71% of the total population of the regency of Maros-Pangkep. The number of heads of households (KK) in 10 Intervensi villages of the regency of Maros amounted to 11,790 households and the villages of Pangkep 5 to 4,089 households¹⁴. These communities make their living as farmers and are classified as poor families.

The main livelihoods of the people of the Karst Maros-Pangkep region are farmers. The area of agricultural land in the Regency of Maros is 26,071 ha and the area of Pangkep District is 6,870 ha, with a total area of 43,433.85 ha.

The impact of climate change has consequences for reducing the income of people who use the land to live their lives. The average total income of inhabitants of the karst **region of Maros-Pangkep is Rp. 3,836,367 / year and up to 65% of the population lives below the poverty line. The community's average level of dependency on the region is 37.97%. The income obtained is classified as low, which is lower than the regional minimum wage (UMR) of the province of South Sulawesi**¹⁵.

In the regency of Maros, there is local wisdom that influences the socio-economic context, especially when entering the season of sowing and harvesting. Some traditional rituals practiced by the community through the adat leader are called "Pinatia". For the community, Pinatia is known to have more knowledge to predict the weather. Thus, when the initial planting of "Apalili" rice is done by "Pinatia" (customary president) in the customary paddy fields, all farmers will plant in each of their fields simultaneously. **This is in fact done to reduce the impact on pest attacks, besides the fact that the community also keeps the rice planted together because it is also planted at the same time. However, because of climate change and the speed with which we adapt pests, community rice paddies also continue to be affected by pests, floods and droughts that lead to lower productivity in the food sector.** Climate change has a significant impact on the availability of water used for domestic and productive tasks. **The increase in the frequency of floods and droughts has had additional consequences, especially for vulnerable groups,** especially women responsible for water management at the household level. In addition, it is the responsibility of women to provide adequate nutrition to the family. **Therefore, the participation of women is indispensable in the project, as a form of empowerment of women.**

3. Project Context

The effectiveness of the fight against climate change also depends heavily on policies and measures at all levels (international, regional, national and subnational). **The Indonesian Change Management Program is included in the 2014 National Action Plan for Adaptation to Climate Change (RAN - API).** The implementation of the policy is serious enough to address the vulnerability to climate change that has a significant and lasting impact. **Vulnerability to high climate change makes the inhabitants of the Karst region vulnerable to impacts. Vulnerability to high climate change makes people in the Karst region vulnerable. Climate change in the Karst region is causing drought and flooding community farms.**

¹³ Bantimurung Bulusaraung National Park

¹⁴ Badan Pusat Statistik (2018)

¹⁵ TLKM Survey Results (2017)

Most of the inhabitants of the Karst region of Maros-Pangkep earn their living mainly as farmers whose economic conditions are unfavorable and who suffer heavy losses as a result of climate change. The conversion of forest areas in the Karst region is also one of the impacts of increasing disaster potential. In addition, the regional government will find it increasingly difficult to address these issues if human resource capacity is not yet qualified. The effects on natural resource damage will be even more severe and will lead to a slowdown in the economy and regional development.

Program "Sustainable Livelihood and Ecoenterprise in Karst Ecosystem for Adapting to Climate Change" is an effort that will encourage community adaptation actions in the Karst Region and can be easily replicated. If this adaptation program is not implemented, the community in the area as a vulnerable community with economic conditions in the pre-prosperous category will have a greater impact than the current impact.

Project / Programme Objectives

The entire of project intervention is intended to reduce the potential impact of disasters and decrease the environmental carrying capacity of the karst ecosystem in the National Park due to climate change will described through productive activity interventions, such as: integrated land management in relation to food security, establishing product differentiation so that it is expected to boost community income. In addition, interventions on human resource development in local community are also very important points to accelerate climate change adaptation. Depretiation reates of productivity caused by land degradation and the potential for recurring disasters makes the livelihoods of local communities more very difficult. Through the project's main objective, the Adaptation Fund will help accelerate economic growth to support other sources of community income as part of the adaptation of local communities to support their families. **This local adaptation we call "from subsistence to sustainance".**

In addition to strengthening at the grassroots level, project interventions also focus on strengthening regulations to binding the government's role in the accelerating agenda: adaptation climate change. Besides to encouraging sustainable management, the intervention also intended as a trigger for **competitive regional development** that is implemented through facilitating partnership with the private sector, research institutions (universities), and other stakeholders through agendas that strengthen each other (mutualism) between the government and the local community. Then, all learning from the results of the project intervention will be recorded and documented through knowledge management agendas. In our commitment it's very important to distribute knowledge so that the same adaptation actions can be reflected in different locations.

Based on consideration of the intervention, 3 main objectives of the project are outlined. The main objective of this program is to increase the adaptation efforts of people living in the world's largest karst ecosystem, which are part of climate change adaptation efforts focused on:

1. Enhance the accessibility of food security by **subsistence to sustenance adapting** for the impact of climate change on the karst ecosystem.
2. Strengthen regional planning and policy for climate change adaptation actions in the karst ecosystem;
3. Knowledge management and dissemination of climate change adaptation actions in the karst ecosystem.

Project / Programme Components and Financing

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Increased accessible food security in the sustenance adaptation of the impact of climate change in the karst ecosystem	1.1.1. Greater capacity of the parties to overcome climate change and low sustainable development. 1.1.2. The growing partisanship of the parties in overcoming climate change and low carbon sustainable development. 1.2.1. The existence of a Social Forestry scheme that embodies forest food security around the Karst Ecosystem. 1.2.2. Higher quality, quantity, added value and certainty of agricultural products. 1.2.3. Strengthening market systems for food products that are environmentally friendly	1.1 Increased capacity and partisanship of the parties to overcome climate change and sustainable development with low carbon in the Karst ecosystem 1.2. Accessed several schemes/ programs that could develop environmentally friendly and low-carbon food products by the community around the karst ecosystem.	\$ 687,607
2. Strengthening of regional planning and policy towards adaptation measures to climate change in the karstic ecosystem	2.1.1. The internalization of climate change adaptation actions towards regional policies 2.1.2. The existence of the RAD API and Roadmap of adaptation to climate change in the karst ecosystem. 2.1.3. Key and related national stakeholders are more informed on the project implementation and the project is registered	2.1. The internalization of climate change adaptation actions through planning documents and policies to adapt to climate	\$ 120,621
3. Strengthening information systems from the knowledge management and learning of climate change adaptation programs by the parties	3.1.1. The Climate Change Adaptation Program in the Karst Ecosystem was concluded	3.2. Knowledge management and learning about climate change adaptation programs by the parties	\$ 66,441
4. Project/Programme Execution cost			\$ 874,669
5. Total Project/Programme Cost			\$ 91,816
6. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			\$ 82,151
Amount of Financing Requested			\$ 1,048,636

Projected Calendar

Milestones	Expected Dates
Start of Project/Programme Implementation	June 2019
Mid-term Review (if planned)	January 2020
Project/Programme Closing	December 2021
Terminal Evaluation	March 2022

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Project Component

Component 1: Increased accessible food security in the sustenance adaptation of the impact of climate change in the karst ecosystem

Increasing the accessibility of food security to climate change adaptation through **Social Forestry** will have a direct impact on the improvement of ± 1000 ha forest governance system in the **National Park Area**. **Strengthening Policies** indirectly has an impact on improving forest management covering **43,750 ha in Bantimurung Bulusaraung National Park**. The program will be carried out on 7 villages located in Maros and Pangkep District in affected Ecosystem Karst. Through a sustainable forest management program, it will support the improvement of sustainable forest cover, increase incomes through optimal management of forest food, and ensure sustainability community institutions in Karst Ecosystem. The role of the project in strengthening the forestry sector is an alternative to supporting **forest food security**. On the other hand, improving the system of forest governance has an impact on strengthening the adaptation of diversity in the karst ecosystem. Through the Minister of National Development Planning (PPN), Bambang P.S. Brodjonegoro said that Indonesia is committed to the initiative that Indonesia's Low Carbon Development Planning (PPRK) will be outlined in the National Medium Term Development Plan (RPJMN) 2020-2024. The PPRK initiative is a strategy and approach to drafting the Policy Brief Adapting to Climate Change within the SDGs framework, which through this program will be strengthened through capacity building. This is based on an in-depth study to realize a balance between economic development targets, reducing poverty levels, and reducing GHG emissions complex.

The establishment of 15 schemes / programs for developing environmentally friendly and low carbon food products and 5 Social Forestry schemes namely Conservation Partnership as a pattern of climate change adaptation in the Karst Ecosystem based on food security. This is in line with **The Ministry of Environment and Forestry target of providing access to forest area management through Social Forestry which is targeted to be realized until 2021, which is 12.7 million ha.** To get legal access, the people in the affected villages will be facilitated to form a Forest Farmer Group (KTH) Based on P.83 of 2016 concerning Social Forestry. This Social Forestry Scheme will provide legal access to communities that have hereditary managed forest zones wisely and provide space to empower participatory sustainable forest management.

Efforts to realize food security through the intensification system program, also known as **System of Rice Intensification (SRI) in order to increase the quality, quantity, added value and certainty of agricultural products will be made 10 demonstration plots and agricultural insurance.** This program is a fundamental promising alternative in rice farming in Indonesia. Through this method, farmers are invited to have the view that with simple innovations and not too expensive economic costs, rice farming is able to produce optimal results even far better than the old farming method.

Food products from SRI will then be managed into a product and will be packaged so that it will become one of the additional incomes for community in KARST ecosystem. **Strengthening the market system for environmentally friendly food products is also a strategic program in producing products made from environmentally friendly materials.** The Ministry of Environment and Forestry at the 14th Conference Asia Pacific Roundtable for Sustainable Consumption and Production dan Indonesia Resource Efficiency Forum Expo 2018, **issued a scheme system for certification of environmentally friendly goods and services and became Indonesia's national standard.** In addition, the efforts of

community agricultural units will use agricultural insurance services as part of protecting community income sources that are often interrupted in the event of a flood and ultimately crop failure.

All products resulting from the project's impact will be geared towards greater absorption of the community's benefits as corporate actors, making it a fair and commercial business model. **Through the Making Labor Market for the Poor (M4P)** approach, local small business enterprise will be guided to become climate change adaptive entrepreneurs and to adapt to the dynamic market, so that business groups are not disrupted by uncertain market mechanisms, uncertainty, complexity and ambiguity).

Then, to encourage a sustainable social movement, **this component will also implement a tree adoption program in the karst ecosystem involving the participation of the parties, which will become a concrete action for the protection of forest and biodiversity.** Another effort during the project is that the community can provide **information / reports** on the phenomenon of climate change that occurs in the village through the **citizen journalism**. In this program, anyone can get involved in the treatment of news both in video and orally and secondly, the content broadcast contains elements of attractiveness for the public. The program is expected so that the community is sensitive to the facts or events that occur and can see all the possibilities for an event to become news.

The World Commission on the Economy and Climate, the Global Commission on the Economy and Climate (GCEC), explains that low-carbon development can provide stakeholders with information on developing a green economy. This is a particular aspect of increasing capacity and awareness of parties on climate change and low-carbon development as a model for climate change adaptation in the karst ecosystem. Through this program, we will also discuss the community business model that promotes inclusive development, low carbon development and climate change adaptation efforts. Through the Minister of National Development Planning (NPP), Bambang PS Brodjonegoro said that Indonesia is committed to the initiative that Indonesia's low-carbon development planning (PPRK) would be described in the National Medium-Term Development Plan (MUNNP) 2020-2024. The PPRK initiative is a strategy and approach for drafting the Policy Brief on Adaptation to Climate Change as part of the Sustainable Development Goals, which will be strengthened through this program through capacity building. This is based on a comprehensive study aimed at achieving a balance between economic development goals, reducing poverty levels and reducing GHG emissions in a complex way.

Development of social forestry as a model for climate change adaptation in the karst ecosystem based on food security. In line with the objective of the Ministry of Environment and Forests to provide access to forest management through social forestry, it is expected to be achieved by 2021, or 12.7 million hectares. This social forestry program will provide legal access to communities that have inherited forest areas wisely and will provide space for participatory sustainable forest management. Through a sustainable forest management program, it will support improved sustainable forest cover, increased income through optimal management of forest foods, and the sustainability of community institutions in the karst ecosystem. The role of projects in strengthening the forest sector is an alternative to supporting forest food security. On the other hand, the strengthening of forest resources has an impact on the strengthening of the adaptation of diversity in the karst ecosystem.

In addition, efforts have been made to achieve food security under the intensification program known as the Rice Intensification System (SRI). This program is a promising alternative in rice growing in Indonesia. With this method, farmers are encouraged to think that with simple innovations and low economic costs, rice cultivation is able to produce optimal results much better than the old farming methods. Strengthening the environmentally friendly food market system is also a strategic program for producing products made from environmentally friendly materials. At the 14th Asia-Pacific Roundtable Conference on Sustainable Consumption and Production and the Resource Efficiency Forum in Indonesia, Expo 2018 in Indonesia released a certification system for goods and services environmentally friendly and has become the Indonesian national standard. In addition, Community agricultural units will use agricultural insurance services as part of the protection of Community sources of income, which are often interrupted in the event of floods and, ultimately, poor harvesting.

Component 2: Strengthening of regional planning and policy towards adaptation measures to climate change in the karstic ecosystem

Strengthening regional and cross-sectoral policies, providing legal certainty on the sustainability of adaptation measures in the karst ecosystem. Stakeholders who play an important role in the sustainability of climate change adaptation actions in the karst ecosystem, ie local government. The certainty of sustainability is reflected in regional policies consistent with the government's national policies. Regional policies in the preparation of climate change adaptation actions are guided by the regulations of the Minister of Environment and Forests. P.33 / Menlhk / Setjen / Kum.1 / 3/2016 on the guidelines for the preparation of adaptation actions to climate change synchronized with the RAN-API by the National Agency for Development Planning (BAPPENAS).

Chair No. 59 of 2017 on the implementation of the Sustainable Development Goals, which contains the National Action Plan for the Sustainable Development Goal (SDG). This regulation will be one of the references for the preparation of the National Medium-Term Development Plan (NMRMP 2020-2024) for the implementation of green and low-carbon economic development. The existence of the RAN API (Pokja) Working Group as a forum for implementing climate change adaptation plans, so that each program can be integrated into the development of national and regional development plans regional. To maintain the sustainability of climate change adaptation plans, the Project Management Unit (PMU) will facilitate ongoing processes at each stage of implementation during the project.

Community conditions in the karst ecosystem are in disaster prone areas, this condition is influenced by climate change. The agricultural sector must be taken into account because it is very vulnerable to climate change. Food security can be one of the methods proposed for the process of adaptation to climate change. It is also one of the objectives of the Sustainable Development Goals (SDGs). In the joy of President Joko Widodo, food sovereignty is one of the priority programs. Another approach is reinforced by a national plan of action with a multisectoral approach to improve the food and nutrition conditions of the Indonesian people (National Plan of Action for Food and Nutrition (RAN-PG) 2015-2019.

At the district level, each local government apparatus related to the environment, agriculture and climate change, local NGOs and some university experts will be involved in each Regional Action Plans (RAD API) and roadmap for adaptation to climate change. At this stage, the risk formulation, dynamics and constraints related to climate change will be carried out in the karst ecosystem. The problem grouping will then become the main base of the RAD API POKJA team for the preparation of adaptation plans, which will then be integrated into the annual PJDM. The strategic plan (strategic plan) for each regional unit is a strategic plan (strategic plan) for each regional unit that will also serve as a benchmark for the integration of strategies and action plans to be formulated. In the short term, it can be controlled in the Regional Government Work Plan (RKPD), which is reviewed once a year.

Monitoring activities for each activity agreed with stakeholders will be monitored directly through the monitoring application. The application platform will simplify monitoring and measure the extent of the impact and constraints of project interventions during the walk. This application becomes a system that ensures the sustainability of climate change adaptation programs.

The activities section of this component should be an adhesive and binder for the sustainability and alignment of local governments to encourage multi-stakeholder collaboration and business ecosystems adapted to the impacts of climate change. In addition, this strategic product will also transform the government's role into a regulator into a facilitator and eventually become an accelerator for low-carbon sustainable development and leveraging regional competitiveness.

Component 3: Strengthening information systems from the knowledge management and learning of climate change adaptation programs by the parties.

All knowledge management and learning activities of the components of this project are carried out in order to ensure the sustainability of the climate change adaptation objectives in the karst ecosystem and to ensure that each element of learning this project can be replicated in the future. Dissemination and knowledge management is technology-based, so the project coverage will be wider in

the future, not only in the karst ecosystem of Maros-Pangkep, but also in some areas with karstic ecosystems and similar problems all over Indonesia. **This is also done so that it can lead to efforts to increase in the same cases in Indonesia.**

The main dissemination activities of this knowledge management component are the publication by writing a policy note to serve as advocacy material to encourage parties to implement climate change adaptation strategies. Successfully completing a school textbook Adaptation to climate change was conducted to document climate change adaptation measures and increase public awareness of climate change. In addition, other publishing materials such as computer graphics, flyers, posters, etc., are designed to encourage accelerated diffusion of learning. **The launch of short films and documentaries was conducted to document all components of the project and to capture stories of experience and learning in each of the completed project activities, which are the achievements of the adaptation fund program.**

Dissemination activities also include conducting a study of the impact of the program on the state of the landscape and the social landscape at the project intervention site. This activity will produce a climate change risk assessment document in the karst ecosystem landscape as a material to anticipate the threat of climate change in the future. Technology platform for the dissemination of all activities on project components, web-based or mobile applications operationalized by project management, to facilitate access to information for parties.

B. Economic, Social, and Environmental Benefits

The project "Sustainable Livelihood and Ecoenterprise in Karst Ecosystem for Adapting to Climate Change" has various positive economic, social and environmental impacts on direct and indirect beneficiaries. The direct beneficiaries in question are farmers and vulnerable groups who have a direct impact on climate change. The total beneficiaries of this project were 728,799 people in two regiments of maros and pangkep. While the total number of direct beneficiaries of 1,400 people representing 30% of the total population reaches 420 people in 8 sub-districts, with 15 selected villages included in the karst ecosystem area.

In the Karst Ecosystem Adaptation Consortium (KARST) project planning, three (3) components of the work will be implemented, including increasing the availability of food security for adaptation of the impact of the KARST. climate change on the karst ecosystem. and value-added of agricultural products. This will be done through social forestry and institutional strengthening programs, to indicate that the project is able to generate economic benefits in all areas of project intervention and financial and knowledge benefits for the project. the community in the project intervention area. Project activities will have a direct impact on the quality of natural resources and the environmental carrying capacity. Management in the karst ecosystem area will support increased forest cover in the project area. Indeed, project interventions will contribute to low carbon development.

The project also pays particular attention to vulnerable groups, dominated by women in the project area, through the participation of management activities in the food market system that is environmentally friendly. The involvement of women in each "project goal" becomes a priority in order to minimize the gender gap.

Gender mainstreaming in climate change adaptation efforts is part of the project intervention. 30% participation of women in various activities to support the achievement of project objectives. Local gender training on disasters and food security contributes to increasing women's capacities. This is a real effort to address the problem of gender inequality. Where women are the most vulnerable parties because of gender injustice.

C. Cost-Effectiveness

The project analyse cost effectiveness within two scenarios. First, project will analyse short term cost effectiveness, in this term during the project process (2 years). Second, project will analyse long term cost effectiveness, in this term it will take 10 years.

Table 3. Cost Effectiveness Analysis with 10-Year Operational Cost Approach

Alternative Intervention	Cost Effectiveness Ratio for 10 Year Projection (\$)	Cost Effectiveness Ratio during Project Period (\$)	Cost Effectiveness Incremental Ratio for 10 Year Projection (\$)	Cost Effectiveness Incremental Ratio during Project Period (\$.)
Without Project	1.352.370	1.352.370	159.151	795.756
With Project AF	576.778	1.981.142		

During the project period (the first two years), the value of cost effectiveness provides the “without project” is more effective than the “with project AF”. It is because the AF project more costly than regular funding by government. It is happened because there are additional activities with AF Fund, who intervene prevention sector such as internalization pro-climate change policies, strengthened institution, improving knowledge and practicing sustainable land activity. It is very active compared by government regular program who focus on repairing damage caused by the climate change impacts such as floods, avalanche, and unstable rainy season.

In the long term, the cost-effective value provides significantly change. The results show, project AF make it more cost effective \$1.404.364 (substraction between cost effective ratio 2 years’ condition and 10 years’ condition). The comparison, without project AF there are no change on climate treatment so the value provides no change too.

From the result above, we can conclude this project has a better cost-effectiveness compared to the current process. The project will provide change in many sectors than the previous and make more effective impacts in the future.

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

1. National Development Strategy

The project " Sustainable Livelihood and Ecoenterprise in Karst Ecosystem for Adapting to Climate Change" is based on (1) the 2015-2019 Medium-Term National Development Plan (RPJMN) in point 1 on food security and sustainable development. point 2 on greenhouse gas emissions and the quality of the environment Life as the main objective of the national program, (2) The priority agenda of the president (9 nawacita) is in point 3 Building Indonesia from the periphery and in the 7th point Achieving economic independence by moving strategic sectors of the national economy, (3) Law No.6 of 2016 concerning Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change Article 2 point (b) Increasing the ability of adaptation to the impacts of climate change and promoting climate resilience and carrying out development that is low in greenhouse gas emissions, without threatening food production, (4) Law 32 of 2009 concerning Environmental Protection and Management article 57 paragraph 4 climate change mitigation and adaptation efforts to preserve the function of the atmosphere, (5) Law No. 18 of 2012 on food, Article 3 states that the implementation of food is based on food sovereignty, food independence and food security that provide equitable, sustainable and sustainable benefits, (6) Law No. 32 of 2009 concerning the protection and management of the environment, Article 3 aims to protect and manage the environment to achieve sustainable development and anticipate global environmental problems, (7) Law No. 5 of 1990 Article 3

Achieving the preservation of living natural resources and the balance of its ecosystem can support efforts to improve the well-being of the community and the quality of human life, and (8) Law No. 14 of 2008 concerning the opening to public information.

In this project, the form of intervention is the realization of the sovereignty, independence and sustainability of food. This is in line with the objectives of the Food Resilience Agency's 2015-2019 Strategic Plan and the objectives of the Ministry of Environment and Forests 2015-2019 Strategic Plan for the Food Security Sub-Program to Enhance the Diversity of Food Security. food supply based on local resources and to reduce the food insecure population **and Nationally Determined Contribution (NDC) of the Republic of Indonesia on point 4 of the Strategic Approach and point 9 of the low-carbon and climate-resistant strategies** The Indonesian government considers climate change mitigation and adaptation as an integrated concept that is important for building resilience in maintaining food, water and energy resources. This is also supported by Government Regulation No. Article 25 of Article 17 of 2015 states that dietary diversification aims to increase the availability of diversified foods and relies on the potential of local resources. In addition, the form of intervention in this project will also support the National Action Plan for Adaptation to Climate Change (RAN-IPA) in the 2015-2019 Action Plan for Food Security, namely a development cluster. accelerated food diversification and a pole for the development of innovative and adaptive technologies. This form of intervention will also support the Action Plan for Achieving the Sustainable Development Goals of the 13th Ministry of Development Planning (BAPPENAS), which aims to strengthen regional policy planning for adaptation to change. climate change and to enhance the capacity and partiality of stakeholders to overcome. climate change and sustainable development with low carbon.

This project also supports the objectives of the Ministry of Environment and Forests in the 2015-2019 Strategic Plan of the Ministry of Environment and Forests, namely the allocation of 12.7 million hectares to the Social Forestry Program (PS) as Community Economic Equalization, while the POKJA Workshop on South Sulawesi Social Forests, the goal of accelerating social forestry is 200.95 thousand hectares in 2019. The Intervention is achieved by providing access to the use of state forests to the community through the Forest Partnership Program. In addition, the existence of an intervention by a city journalist as a facilitator of pihar alignments will support the government's disclosure action plan, mainly in the sense of point 1, namely to increase public participation, and strengthen it with Law No. 1. 14 of 2008 on transparency of information Chapter 2 Principles and objectives.

2. Sub-National and Regional Development Strategies

This project is based on (1) the South-South Sulawesi Province Long-Term Development Plan (RPJPD) for the period 2008-2028 (Article 4 (2) (d)), maximizing community participation and (e) ensuring the efficient, effective, equitable and sustainable use of resources. (2) South Sulawesi Province Land Use Plan for 2009-2029, Article 3, which defines South Sulawesi's role as a land of sustainable food production by guiding the development of agribusiness and agribusiness. industries, especially the highquality products of South Sulawesi, which are also a driving force of the popular economy and the development of Article 9 aquaculture activities with a power of anticipation and adaptation to disasters in exposed areas to disasters. (3) Objectives of the South-South Sulawesi Regional Environmental Agency Strategic Plan 2013-2018, namely increase in environmental carrying capacity and adaptation to and mitigation of climate change. (4) Purpose of the Strategic Environmental Assessment Report for the South Sulawesi Province PJMD Project, Year 2018-2023, Item 5 regarding the search for the most strategic sustainable development issues in South Sulawesi Province, as well as that the efforts made to solve them. (5) Regional Regulation of South Sulawesi Province No. 3 of 2014 concerning the protection and management of the seventh part of the Karst ecosystem maintenance article 108, namely the preservation of the function of the karst ecosystem carried out through adaptation to climate change.

At the regional level, the project interventions are part of the priorities of the Medium-Term Regional Development Plan (MMPR) for 2016-2021, such as increasing the productivity of food crops and forest products, the preservation of areas improve the quality of information on natural disasters, adaptation and mitigation of climate change. Intervincial also conforms to the spatial plan of the regency of Maros for the period 2012-2032, particularly with regard to the ecological preservation of the region, especially in protected forest areas, by preventing actions that could modify directly or indirectly the physical nature of

the environment to support sustainable development. forests as buffer zones, forest rehabilitation and development of industrial areas, particularly on the basis of commodity yields in the forest sector.

In addition, at the regional level, in the Pangkajene district and islands, the interventions carried out are also in line with the 2016-2023 Regional Development Plan (PJMD) for the 3rd mission, namely to improve the integrated management of natural resources by giving prioritizing spatial and environmental developments with the management of pollution control and environmental damage areas. At the same time, the 2012 regional spatial plan is also part of the project interventions, such as the development of agroforestry as a buffer zone around the forest, the encouragement of planting / rehabilitation activities of the forest. forest, skills and capacity building through formal and non-formal education for forestry workers, restitution of the hydrological function of forest areas damaged by reforestation, protected forest development plans located in the district of Minasa Te'ne, Balocci, Tondong Tallasa, Bungoro, Segeri and Mandalle with a total area of 7,701.71 ha, and developing The industrial areas of Pangkajene and Kepulauan district are mainly results of the forest sector based on basic products.

E. Compliance with National Technical Standards

Through the 2016 P.83 regulation on social forestry, this project will propose a forest partnership program that will then detail the discussion of the technical guidelines for conservation partnerships in the Perdirjen regulation. No. 6 of 2018. The technical proposal for a system of social forestry starts from the formation of the Tni Hutan group (KTH) via Perdirjen. No. 89 of 2018 concerning guidelines for the development of logging groups. In addition, this project will propose the scheme of climate village **through the regulation of the Minister of Environment and Forest P. 84 year 2016 about the climate village Program**, namely in article 2 paragraph 1 this ministerial regulation aims to provide guidance for implementing Program of the Climate Village (Proklim) and in article 7 paragraph 1 in order to strengthen the implementation of efforts to adapt and mitigation of climate change is determined by climate village.

Certainty of the sustainability of climate change adaptation measures at the regional level with the creation of the Climate Change Working Group (POKJA API), which will facilitate the updating of vulnerability studies, risks and impacts of climate change in accordance with the LHK **Regulation no. 7 of 2018** and the facilitation of regional climate change adaptation action plans refer to the technical guidelines for the preparation of the action plans for the Sustainable Development Goals of the Ministry of National Development Planning / Bappenas in 2017 and **Ministerial Regulation No. 33 of 2016 of the LHK** concerning guidelines for the preparation of climate change adaptation measures, involving planning.

In addition, this project proposes karst ecosystem rearing in reference to **Perdirjen KSDAE No. 12 of 2015** regarding guidelines for planting and type enrichment procedures for the restoration of continental ecosystems in the Mediterranean. Nature Reserves and Conservation Areas. To support the implementation of all project activities in accordance with applicable national standards, the team of experts will build on capacities such as the support of the Center for Research and Natural Heritage Development, Biodiversity and Climate Change. climate change and academic institutions.

F. Duplication of Project

Project Sustainable Livelihood and Ecoenterprise in Karst Ecosystem for Adapting to Climate Change is a new visible program that will be duplicated in the future with the same background.

G. Knowledge Management

This project is very focused on important knowledge and learning issues that are being implemented in the project activities. This knowledge management is further divided into four categories, namely: (1) factual knowledge of measured, observable and verifiable data; (2) conceptual knowledge related to perspective and system; (3) expectations of knowledge that are captured based on expectations, assumptions, or judgments made when learning the behavioral goals of the project; (4) methodological

knowledge related to decision making and problem solving. The four important elements of each activity will be recorded in the program section, including:

1. **Strengthen the capacity of field facilitators and other management units** that play a strategic role in disseminating information and valuing project achievements and impacts. This function is also a communication tool for actors considered to have a major influence on the program's achievements. All communication activities that have been successfully recorded will be documented as learning that can be adopted with other regions.
2. **Strengthening the system of monitoring, evaluation and management of program reports** to photograph the implementation of the results of the study carried out by the program by applying it at the level of the beneficiaries.
3. **Presentation of project achievements in the form of books, digital and non-digital** content as part of a campaign to invite more stakeholders to participate in supporting climate change adaptation programs that help accelerate achievements and the objectives of the project.
4. **Mediation of project activities in digital** and conventional media related to climate change adaptation. This is also supported by strengthening target capacity through the training of Internet journalists to reach a wider audience.
5. **Accelerate the POKJA API** as a representative of the regional government to upgrade the information and problems that develop at the site level and encourage it to become a joint effort to link the issue of adaptation to change climate change to the district work program and the provincial work program. This mechanism will also encourage stakeholders to simultaneously monitor and attract affiliates with support systems to ensure the success of the program.
6. **Involvement of universities and research institutes** among the main actors in the implementation of the project and reinforcement of the learning arguments acquired in the field. And to enrich the repertoire of knowledge and dissemination of these issues in the context of universities and research institutes. Thus, this effort should be able to disseminate information about the project's achievements, which will then serve as references and knowledge products for the wider community.

H. Consultative Process

In the early stages of the project, through the analysis of a team of experts or specialists who will focus on identifying direct beneficiaries, in this case, farmers and vulnerable groups who will directly receive the impact of the project. **“Sustainable Livelihood and Ecoenterprise in Karst Ecosystem for Adapting to Climate Change”**.



Figure 5. Identification of women's groups

Figure 6. FGD with farmer groups

The consultation process will directly involve the Bantimurung Bulusaraung National Park Office, BAPPEDA, BPS, BPBD, social services and unions, village governments and local groups or community leaders. The personalities that will be chosen have a strong influence at the community level as working partners in the implementation of the program, such as adat leaders, regional sons, leaders of women's groups and other community leaders. The consultation process involves all key figures, both in

the form of group discussions and multi-stakeholder meetings, to determine the interests of each beneficiary so that they can be taken into account in a meaningful way. optimal in the implementation of the project. The stakeholder consultation process in the early stages of writing the note:

No	Stakeholder	Issue
1	Bantimurung Bulusaraung National Park	Data baseline, Beneficiaries & Intervention Site Project Conservation Partnership
2	BAPPEDA	Planning Maros & Field Site Project interventions
3	BPS	Planning Maros & Field Site Project interventions
4	BPBD	Disaster vulnerability Disaster Baseline
5	Office of Social & Labor	Poverty Beneficiaries Intervention Site Project
6	Village government	Status of Forest Farmers, Women and Vulnerable Groups Community Dynamics Community income Project Component
7	Public	Identification of farmer groups Identification of vulnerable groups

I. Justification for Funding Requested

This project will intervene policies, institution, knowledge and tenurial activity. It is conduct to increase climate change adaptation in Karst Ecosystem at Maros-Pangkep. All of the intervenes based on problem analysis conducted by this consortium. The funds will be very helpful to realize climate change adaptation actions in the Karst Ecosystem.

No.	Program Component	Baseline	Additionally (with AF)
1	Increased food security for adaptation to climate change in the Karst Ecosystem	<ol style="list-style-type: none"> Climate change threat to food security in Karst Ecosystem is high Forest encroachment for the agriculture because of shifting cultivation that driven by lack of water supply 	<ol style="list-style-type: none"> Increased capacity and partisanship to overcome climate change and sustainable development with low carbon emmissions in Karst Ecosystem Accessed several schemes or programs that could develop food products that are environmentally friendly and low carbon by the community around the Karst Ecosystem
2	Strengthening Regional Planning and Adaptation Policy climate change in the karst ecosystem	Climate change issue in Maros and Pangkep (Karst Ecosystem Area) has lack of interest from the government. Paradox with the reality above that climate change already give impact to community around the Karst Ecosystem. The underdeveloped Karst Ecosystem Management will lead to an increase number of poor people around the Karst Ecosystem	The internalization of climate change adaptation actions through planning documents and policies to climate change adaptation
3	Knowledge management and dissemination of climate change adaptation actions in Karst ecosystem	Public awareness of climate change threats is very low, in the absence of publications	Publishing and promote products of knowledge management.

Component 1 want to conduct climate change adaptation by increased food security in Karst Ecosystem. Based on our research there are two major threats in climate change issues at Karst Ecosystem. First, an unconsistent rainy season leading to productivity decline of community

agriculture. Second, reduced water in dry season encourages farmers practice shifting cultivation and it is increase encroachment of forest for the agricultural uses. All of these threats without support from AF will trigger forest degradation in Karst Ecosystem. With the AF support, we will give knowledge and promote action to overcome climate change. To complete the action, the funds will provide legal access to community to manage forest that environmentally friendly. All these actions will ensure food security by climate change adaptation.

Componen 2 want to strengthened regional planning and policy to adapt from the climate change in the Karst Ecosystem. Based on our research, the interest of local government (Maros and Pangkep) still focus on fix the impact of climate change than to prevent the impact. Without AF fund, climate change will cause costly in the long term for the government and increase number of poor people for the farmers around the Karst Ecosystem. With AF Funds, we will bring prevention actions through policies and planning documents.

Componen 3 want to manage climate change adaptation actions knowledge and disseminate it to public. Based on our research there are lack of of public awareness of climate change threats especially publications. Without AF Funds, the process of dissemination and knowledge management in support of previous activity will not work optimally. The level of public awareness of climate change threats will remain at a low level, with no publication of this project. AF support is a dissemination effort to ensure program alignment and expand the scope of benefits from the adaptation program.

J. Sustainability

The project interventions will bring improvements and improvements in the areas of ecology (environment), finance (financial) and well-being and social (society) that will ultimately strengthen the community in the landscape of project interventions aimed at to adapt to climate change and to be more attentive to future disasters, the risk of impact will be reduced.

In the context of the sustainable project, the unit cost of all components that support the project objectives is considered a sustainable investment. It should also be a system that can have a broader and adoptable impact on other vulnerable areas. The following is a description of the sustainability aspects of the project to be achieved:

1. Ecological sustainability

Activities related to ecological improvements implemented in projects such as tree planting, community building and climate change enhancement Adaptation policies are long-term achievements that contribute to the functioning of sustainable development. the karst ecosystem as part of the process of adapting communities around the ecosystem to climate change. Ecological sustainability is seen as an integral part of fundamental changes in policies related to economic growth and lifestyles of people in the karst ecosystem. Through this project, the protection of the ecology of the community's economic growth (livelihoods) model and consumption-based lifestyles will be addressed through the implementation of ecological approaches to livelihoods. communities and a way of life that is more respectful of the environment. Thus, with the intervention of the project, it does not eliminate the existing livelihoods of communities but transforms these patterns into an effort able to adapt to climate change and be environmentally sustainable. Thus, the goal of success will be measured economically rather than ecologically, that natural resources are well managed and equitable.

2. Individual sustainability of finances and well-being

Financial viability is also an important element of production at the end of the project. This project will ensure the sustainability of climate change adaptation program funding through delegation of roles to local governments (districts / provinces) and other support networks included in local government regulations (regional regulations). and who will be accompanied by working groups. (POKJA) then ensures that the regional development agenda is in synergy with climate change adaptation efforts in the karst ecosystem.

In addition, the financial sustainability of the project beneficiaries will be guaranteed in the project interventions by strengthening the community economy in the downstream production (supply) process (demand). This reinforcement program is similar to strengthening the financial literacy

capacity of enterprise groups, designing management of the activities of community-based business groups, and linking protection mechanisms (insurance) to disaster-vulnerable agriculture. so that the community's right to an income can be protected as a form of adaptation to climate change. The project interventions will ensure the existence of a beneficiary market system for beneficiaries in the implementation of fair trade in the Community business entities. This entity will have the appropriate technologies to produce market-oriented processed products. For there to be economic sustainability for the beneficiaries after the project.

3. Social sustainability

The expected social and social sustainability of the individual beneficiaries is the continuation of the joint efforts initiated by the project through groups formed through the intervention of researchers, agricultural groups, social forestry groups and other social groups who have increased their capacities through project capacity building activities. In addition, community participation in the project's distribution of benefits is also an important element in ensuring public participation to encourage the achievement of the project's main objectives, which should eventually become an inherent sustainability system. to the lifestyle of everyday life. Knowledge management, which is a tool for recording community habits, will be incorporated into local policies as an important element in regulating a social order more adaptable to climate change and equitable in the distribution of economic benefits. Thus, **this social license to operate will be a force that will guarantee the "return" in the future**, especially in the program of strengthening regional competitiveness oriented towards the objectives of sustainable development with a wider impact.

K. Environmental and Social Impact and Risk

This project has been evaluated and classified as a project with no environmental and social impact based on the ESP guidance document and falling into category C. Certain activities with an impact on the environment are classified as not significant or have a negative impact on the environment. impact that is not very detrimental to the environment and the social. Some project activities are related to the third and fifth principles of environmental and social principles. Screening and Management of Environmental and Social Impacts (ESMP) are provided separately and can be found in **Annex 7**.

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

PART III: IMPLEMENTATION ARRANGEMENTS

A. Arrangements for Project Implementation

This project is being carried out by several consortium member institutions as the Karst Ecosystem Adaptation Consortium (KARST). This consortium is composed of 4 institutions, namely CSOs, research organizations and local organizations. The institutions in this consortium are (1) Balang Institute as the main consortium, (2) a community forest services team (TLKM), (3) Payau Payau and (4) LOKUS Research & Consulting. Balang Institute was officially founded in February 2010 and its initial idea was to "guarantee public access to equitable and sustainable management of natural resources". In its infancy, the idea was then realized by helping rural communities in Bantaeng District, namely, the creation and education of forest farmers' groups. In keeping with the vision of Promoting community rights to equitable and sustainable management of natural resources, the Balang Institute actively promotes the concept of village forest management, community forestry and wildlife conservation in the four districts from South Sulawesi. Balang is very active in community conservation Anoa. In addition, he became the initiator of the publication of the regional regulation (Perda) regarding the recognition of indigenous peoples in the Bulukumba district. To date, some of Balang's institutional partners include: Sulawesi Community Foundation (SCF), Tim Layanan Kehutanan Masyarakat (TLKM), Global Environment Facility, CIFOR, ICRAF and Rainforest Alliance (RA).

The Community Forestry Team (TLKM) was established in 2010 with a vision of managing the sustainable management of social forestry in Sulawesi. Since TLKM's inception, the TN Cooperation Agreement has made a significant contribution to the sustainable management of Sulawesi's forests of 1,105.25 ha in the Maros and Bone districts. Babul with Community, 4,000 ha in the regency of Mamuju, Western Sulawesi with IUPHHBK, and currently offers 3,000 ha in the districts of Enrekang and Toraja through the UUPHKm. In addition, TLKM is also part of the POKJA Forest Acceleration Team in South Sulawesi, becoming the initiator of forest-related conflict resolution, particularly in the Bantimurung Bulusarung National Park, in the Regency. Maros, and weighs heavily on studies specifically on hate around the forest area (Enrekang, Toraja, North Toraja, Pinrang and Mamasa). Several TLKM partners at the national and international levels to date, such as: Sulawesi Community Foundation (CFS), Community Forestry Communication Forum (FKKM), Shamdana Institute, Perkumpulan Inisiatif, Adimitra, PT. PLN Persero Sulselrabar, Recoft, WWF and MCAI.

The project management implementation structure is formed according to the needs of the program and is occupied by each member of the consortium with knowledge and curriculum-based experience. In addition, in order to avoid conflicts of interest in the implementation of the project, a committee will be composed of each of the consortium representatives so that strategic decisions can be jointly agreed and executed on behalf of the consortium. (see **Annex 8**. for Structure of Project Implementing Unit)

The project will also take the form of a POKJA API team at the provincial level to ensure policy direction, program planning and action plans in the project, so that correspond to the level of the national implementing entity. The team includes the Food Resilience Service, the Environmental Management Service, the Forest Service, the Office for the Empowerment of Women and Child Protection, the Agriculture Department, Agency of Culture and Tourism, Office of Cooperatives and Industry, Office of Health, Forest Management Agency and Regional Disaster Management Agency. In addition, at the site level, the Forestry Partnership Group will be formed as an institution providing protection and participation in climate change action plans, while supporting the participating media actively disseminating information on climate change adaptation issues will encourage parties to partisanship and participation in the action plan. climate change.

B. Financial and Project Risk Management

All risks related to the implementation of the project were analyzed during the participatory planning phase. Strategies to minimize risk have been included in the project planning to ensure that managed risks can be handled properly. The description of the risks and levels of risk and the strategies envisaged is presented in the following table.

Type of Risk	Description of Risk	Risk category (H/M/L)	Risk Mitigation Strategy
Institution	Changes in project implementing personnel will affect project implementation and competent staff	Low	In establishing working relationships with PMU, the Consortium applies a recruitment system with output of work contracts during the project. With this mechanism, the attachment of personnel to the consortium in achieving project objectives will be the legal basis.
Finance	Delays in disbursing funds, procurement, and a long process of approval will delay the implementation of the project	Medium	Build active communication with funders and carry out all activities in accordance with applicable financial procedures. On the other hand, the consortium leadership will play a role and be responsible in anticipating if at any time there is a delay in disbursing funding that can hamper the course of the project
Social	The possibility of women's involvement in the project will be lacking, this is due to the culture of women in Sulawesi who require women to take care of the household or kitchen matters	Medium	Provide understanding to target communities in the form of group discussions by field facilitators. In addition, women's groups will also be involved in disaster gender training and food security activities
	Communities are less aware of change and less enthusiastic about responding to disasters. If that happens, it is difficult to get commitment in food development and climate change adaptation it is difficult for beneficiaries and communities to receive knowledge and methods in implementing environmentally friendly forest management and agriculture	Low	This project will implement methods that are participatory in nature so that the community can be given an understanding of the impact of climate change. In addition, the mentoring process will continue to take place by utilizing field facilitators in the target locations.

C. Environmental and Social Risk Management

The overall scope of the project is related to the adaptation of livelihoods in the karst ecosystem. Some of the proposed adaptation measures will have an impact on environmental and social principles. The detailed explanation of impact and environmental management and assessment. (See **Annex 7**)

D. Monitoring and Evaluation

Project monitoring plan "Sustainable Livelihood and Ecoenterprise in Karst Ecosystem for Adapting to Climate Change" **It will be done to see and measure** : 1. Obedience (compliance), M & E to determine if the actions of administrators, staff and all involved follow established standards and procedures; 2. The audit, M & E to determine if the sources and services destined to certain parts (objectives) have reached them; 3 Reports (countable), M & E produces information that helps to "calculate" the results of social change and society as a result of the implementation of policies after a certain period of time.

Although the evaluation of the evaluation activities plan to "Sustainable Livelihood and Ecoenterprise in Karst Ecosystem for Adapting to Climate Change" It is carried out in an integral, transparent and responsible manner when comparing the realization of inputs, products and results with the indicators of the achievements of the project plan through the adjustment based on the monitoring schedule. With the initial stages of carrying out a baseline survey to measure the initial indicators, the results will increase based on the results of the program interventions. Next, the intermediate and annual survey is presented, to measure the degree of progress and the process of achieving indicators according to the goal and can be achieved well. Each of these stages will be disseminated to the administration to see the scope of progress, the restrictions and the strategies that will then be used to achieve the indicators and processes as expected. (see **Annex 3**. Monitoring and evaluation of activities and budget.)

E. Result Framework

See **Annex 1** for detail project result framework (including milestones, targets, and indicators)

F. Alignment with Adaptation Fund Result Framework

Alignment with AF result framework attached on **Annex 6. Alignment with Adaptation Fund Result Framework**

G. Budget

Amount of financing requested is \$946,659, with project execution costs are \$81,990 of the total budget. (see **Annex 4. for detailed budget**).

H. Disbursement Schedule

The disbursement procedure is performed quarterly (every three months), the first quarter is disbursed at the beginning of the program and the next disbursement is made every three months for each quarter. The parties involved in the disbursement procedure are Program Responsible, Project Manager and Finance Manager. The form for the disbursement is the budgeting plan, photocopy of the bank account book and request to send funds. Disbursement schedule and time-bound quarterly *attached on **Annex 2. Disbursement Schedule***

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

A. Record of endorsement on behalf of the government¹⁶

Prof. Dr. Ir. H.M. Nurdin Abdullah, M. Agr Governor of South Sulawesi Head of Government of South Sulawesi	Date : December, 17, 2018
H. Syamsuddin A. Hamid S.E. Regent of Pangkajene dan Kepulauan Head of Government of Pangkajene dan Kepulauan	Date : December, 13, 2018
Ir. Yusak Mangetan, M.AB. Plh. Office Manager Bantimurung Bulusaraung National Park	Date : December, 20, 2018

^{6.} Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.



GUBERNUR SULAWESI SELATAN

SURAT REKOMENDASI

No. 557/RSR/Gub

Yang bertanda tangan di bawah ini:

Nama : Prof. Dr. Ir. H.M. Nurdin Abdullah, M.Agr.,
Jabatan : Gubernur Provinsi Sulawesi Selatan
Instansi : Pemerintah Provinsi Sulawesi Selatan

Memberikan rekomendasi dan dukungan penuh kepada **Konsorsium Adaptasi Ekosistem KARST (KARST)**, sebagai lembaga yang aktif dalam mendorong pengelolaan hutan berkelanjutan, di mana saat ini mengajukan usulan Proposal kepada **Adaptation Fund** dengan judul **"Adaptasi Nafkah di Ekosistem Karst Sebagai Bentuk Adaptasi Terhadap Perubahan Iklim."**

Demikian surat dukungan ini dibuat dan diberikan untuk dipergunakan sebagaimana mestinya.

Makassar, 17 Desember 2018

Gubernur Sulawesi Selatan



Prof. Dr. Ir. H.M. Nurdin Abdullah, M.Agr., IPU



BUPATI PANGKAJENE DAN KEPULAUAN

SURAT REKOMENDASI

No : 503/207/umum

Yang bertanda tangan di bawah ini :

Nama : H. Syamsuddin A. Hamid, S.E
Jabatan : Bupati Pangkajene dan Kepulauan
Instansi : Pemerintahan Kabupaten Pangkajene dan Kepulauan

Memberikan rekomendasi dan dukungan penuh kepada **Konsorsium Adaptasi Ekosistem Karst (KARST)**, sebagai lembaga yang aktif dalam mendorong pengelolaan hutan berkelanjutan di Sulawesi Selatan. Dimana saat ini mengajukan usulan Proposal kepada **Adaptation Fund** dengan judul "**Adaptasi Nafkah Pada Ekosistem Karst Sebagai Bentuk Adaptasi Terhadap Perubahan Iklim**".

Demikian surat rekomendasi ini dibuat dan diberikan untuk dipergunakan sebagaimana mestinya.

Pangkajene, 13 Desember 2018

Bupati Pangkajene dan Kepulauan



H. Syamsuddin A. Hamid, S.E



KEMENTERIAN LINGKUNGAN HIDUP DAN KEHUTANAN
DIREKTORAT JENDERAL KONSERVASI SUMBER DAYA ALAM DAN EKOSISTEM
BALAI TAMAN NASIONAL BANTIMURUNG BULUSARAUNG
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SURAT REKOMENDASI
No. S. 709/T.46/TU/PE6/12/2018

Berdasarkan surat Tim Layanan Kehutanan Masyarakat Nomor: 066/B/TLKM/XII/2018 tanggal 9 Desember 2018 perihal permohonan Surat Rekomendasi dengan ini menerangkan bahwa:

Yang bertanda tangan di bawah ini :

Nama : Ir. Yusak Mangetan, M.A.B
Jabatan : Kepala Balai
Instansi : Taman Nasional Bantimurung Bulusaraung

Memberikan rekomendasi dan dukungan penuh kepada **Yayasan Tim Layanan Kehutanan Masyarakat (TLKM)** yang merupakan bagian dari Konsorsium Adaptasi Ekosistem Karst (KARST) dimana saat ini mengajukan Proposal kepada Lembaga donor **Adaption Fund** dengan judul "**Adaptasi Nafkah pada Ekosistem Karst Terbesar**".

Demikian surat dukungan ini diberikan untuk dipergunakan sebagaimana mestinya.

Bantimurung, 20 Desember 2018
Kepala Balai



Yusak Mangetan, M.A.B
NIP. 19641224 199203 1 004

B. Implementing Entity Certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (.....list here.....) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social 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.



Monica Tanuhandaru

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

Implementing Entity Coordinator

Date: 5 August 2019

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ANNEX 1: RESULT FRAMEWORK

Outcome/ Output	Indicator	Baseline	Goal	Source Of Verification
Component I. Increased accessible food security in the sustenance adaptation of the impact of climate change in the karst ecosystem				
Outcome 1.1 Increased capacity and partisanship of the parties to overcome climate change and sustainable development with low carbon in the Karst ecosystem	275 people increased their capacity and disaster surveillance.	0	275 people in 2020	Questionnaire, report, Documentation
Output 1.1.1 Greater capacity of the parties to overcome climate change and low sustainable development.	150 people increased their understanding and awareness. 125 people have availability in disaster	0 0	150 people have increased their understanding and awareness (2019) 125 people increased their understanding and awareness (2019 = 75 people, -2020 = 25 people)	Questionnaire, report, Documentation
Output 1.1.2 The growing partisanship of the parties in overcoming climate change and low carbon sustainable development.	2 The party bias scheme as a way to adapt to climate change. 100 trees have been adopted 20 news / information on climate change are neutralized by the community 5 climatic villages were successfully formed	0	2 bias schemes (2020) 100 trees (2020) 20 news / information (2019) 5 towns	Report, Documentation Decree
Outcome 1.2 Accessed several schemes / programs that could develop food products that are environmentally friendly and low carbon by the community around the karst ecosystem.	15 schemes / programs to develop environmentally friendly and low carbon food products	0	15 schemes / programs 2020	Report, Documentation
Output 1.2.1 The existence of a social forestry scheme that embodies forest food security throughout the Karst ecosystem.	5 conservation associations	0	5 conservation associations (2019)	Cooperative cooperation manuscript.

Output 1.2.2 Higher quality, quantity, added value and certainty of agricultural products.	10 Demo plot and agricultural insurance.	0	10 Demo plot and agricultural insurance. (2020)	Report, Documentation
Output 1.2.3 Strengthening market systems for food products that are environmentally friendly.	1 Smart Outlet that works and sells agricultural products friendly to the environment.	0	1 Smart Outlet runs (2020)	Report, Documentation
Component II. Strengthening of regional planning and policy towards adaptation measures to climate change in the karstic ecosystem.				
Outcome 2.1 The internalization of climate change adaptation actions through planning documents and policies to adapt to climate change.	3 regional planning and policy products that promote actions to adapt to climate change.	Regional planning products and policies that previously contained adaptation to climate change.	3 policy on product planning and policy (2020) products that support adaptation to climate change until the end of the project	Copy of planning documents and policies, Report
Output 2.1.1 The internalization of adaptation actions to climate change towards regional policies.	1 Product policies that internalize adaptation actions to climate change.	0	1 Product policies (2020)	Copy of planning documents and policies, Report
Output 2.1.2 The existence of the RAD API and the Roadmap of adaptation to climate change in the karst ecosystem	RAD API and Roadmap API in the Karst ecosystem are available	0	RAD API & Roadmap API Ecosystem Karst (2020)	Copy of planning documents, Report
Component III. Strengthening information systems from the knowledge management and learning of climate change adaptation programs by the parties.				
Outcome 3.1 Knowledge management and learning about climate change adaptation programs by the parties.	6 knowledge management products are shared learning with the parties.	0	6 knowledge management products become joint learning of the parties (2020)	-
Output 3.1.1 The Adaptation to Climate Change Program in the Karst Ecosystem was concluded.	6 published products of knowledge management.	0	6 published products of knowledge management (2020).	-

Project/Programme Components	Output	Activities	Information about financing
1. Increased accessible food security in the sustainance adaptation of the impact of climate change in the karst ecosystem	1.1.1. Greater capacity of the parties to face climate change and low carbon sustainable development	<ol style="list-style-type: none"> 1. Local training on climate adaptation at the village level. 2. Climate Adaptation Workshop at the district level 3. Regional workshop on adaptation to climate change. 4. Low-carbon sustainable development workshop at the district level 5. Workshop on sustainable development with low-carbon at the regional level 6. Preparation of the brief police adaptation to climate change in the framework of the SDGs 7. Local training Disasters of basic education. 8. Local training. Management of emergency response and early warning. 9. Place of simulation training and disaster plan. 10. The localism of gender in the disaster. 11. Training in food security in disaster management. <ol style="list-style-type: none"> 12. Locate diseases related to climate control. 	<p>7x 2x 1x 1x 1x 1x 1x 1x 1x 5x 2x Design and printing services. 1x</p>
	1.1.2 The growing partisanship of the parties in overcoming climate change and low carbon sustainable development.	<ol style="list-style-type: none"> 1. Preparation of a Participatory Climate Change Adaptation Program Master Plan 2. Facilitation Mapping of the distribution of trees to be adopted. 3. Provide information system for the tree adoption program. 4. Facilitation of FGD 5. Tree Adaptation Program Workshop to support the adaptation of livelihoods. 6. Facilitation of the elaboration of infographic leaves and posters for the adoption of trees. 7. Provision of print media and online promotion. 8. Participatory action for formative training 9. Basic training of journalists 10. Training of online journalists and management of social networks. 11. Train journalists in environmental effectiveness and low carbon development. 12. Facilitation of the strengthening of local action through the Establishment of Climate Villages. 	<p>1x 1x 1x 1x 1x 1x 1x 1x 1x 1x 1x 5x</p>
	1.2.1 The existence of a social forestry scheme that embodies forest food security throughout the Karst ecosystem.	<ol style="list-style-type: none"> 1. Meetings at village level initiating the establishment of forest association groups. 2. Facilitation of drafting proposals for groups of forest associations. 3. Workshop on the formation of social forestry groups in forestry associations. 4. Strengthening the capacity of forest association groups. 5. Facilitation of the preparation of the RKT and RPP group. 6. Facilitation of the strengthening of the development of local businesses based on forest foods. 7. Facilitation of the acquisition and sowing of seeds for the restoration of ecosystems. 8. Operationalization of escorts in the town. 	<p>10x 5 the group 2x 4x 2x 4x 5. 000 seeds 18x</p>

	<p>1.2.2 Higher quality, quantity, added value and certainty of agricultural products.</p>	<ol style="list-style-type: none"> 1. Training in the elaboration of organic fertilizer. 2. Training of the System Rice Intensification (SRI). 3. Mina Padi training. 4. Training in diversification of agricultural products. 5. Post-harvest training. 6. Provision of Mina Padi demonstration plots with precision agriculture models. 7. Facilitating Demplot SRI 8. Facilitate the development of local seed huts friendly to the environment. 9. Provision of agricultural insurance. 10. Facilitation of efficient and ecological production equipment. 11. Facilitation of Production Houses for Food Dissection Products. 12. Provision of materials and equipment for the packaging of local food products. 13. Facilitation of making integrated sowing calendar applications. 	<p>5x 5x 5x 5x 5x 5 demonstration plot 5 demonstration plot 8 seed huts 10 times 10 packages 10 packages 10 packages 5 packages</p>
	<p>1.2.3 Strengthening market systems for food products that are environmentally friendly.</p>	<ol style="list-style-type: none"> 1. Management study of the supply chain. 2. Facilitation of commercial agreements for ecological models of agricultural and forestry products. 3. Facilitation of the preparation of Operations Management (MoP). 4. Multi-stakeholder meetings internalize the market system in village programs. 5. Facilitate the licensing of community products of MSMEs. 6. Facilitation of making documents of offer of community products with potential buyers. 7. Facilitation of product promotion (online and offline) 8. Facilitation of outputs. 9. Facilitation of meetings of MSMEs with financial institutions through innovative financing schemes. 	<p>2 study 5 business model 5 MoP 10x 5 license 2 document 5 product 1 outlet 3x</p>
<p>2. Strengthening of regional planning and policy towards adaptation measures to climate change in the karstic ecosystem.</p>	<p>2.1.1 The internalization of adaptation actions to climate change towards regional policies.</p>	<ol style="list-style-type: none"> 1. Workshop on the start of the formation of the API Working Group. 2. Facilitation of the routine meeting of the API Working Group 3. Workshop on the role of regional development in adapting to climate change. 4. Study of low carbon regional development in the framework of adaptation to climate change. 5. Preparation of Monitoring Plans for the Parties in strengthening the climate change adaptation framework. 6. Facilitation of the review of regional planning documents to strengthen the climate change adaptation framework. 7. Meeting on the internalization of climate change adaptation at the village level. 	<p>1x 6x 1x 1x *a 1x *a 1x *a 10x</p>
	<p>2.1.2 The existence of the RAD API and the Roadmap of adaptation to climate change in the KARST ecosystem</p>	<ol style="list-style-type: none"> 1. Study and preparation of the SULSEL RAD API. 2. API compilation of road map in the karstic ecosystem. 3. RAD API Sulsel Consultation Workshop 4. Workshop on RAD API Sulsel. 	<p>1x *a 1x *a 1x 1x</p>

<p>3. Strengthening information systems from the knowledge management and learning of climate change adaptation programs by the parties .</p>	<p>3.1.1. The Adaptation to Climate Change Program was concluded in the largest Karst ecosystem in the world.</p>	<ol style="list-style-type: none"> 1. Establishment of police crimes. 2. Make books: success stories and comics. 3. Realization of infographics of the program. 4. Creation and operationalization of the program's website. 5. Study the impact of the program on the condition of the landscape and the social landscape. 6. Making short films and documentaries. 7. Monitoring and evaluation. 	<p>2 police brief 3 books 6 infographics 1 time 1 time 1 time 1 time</p>
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ANNEX 3: MONITORING AND EVALUATION

Monitoring and Evaluation Activities and Budget

Activities	Frekuensi	Sasaran	Biaya (\$)	Waktu
Baseline Survey	1	Monitoring and evaluation	\$ 3500	The first month of the project
Dissemination Movev	1	Management	\$ 1000	Third month of the Project
Mid Year Survey	2	Implementation Process	\$ 3500	Sixth month of the project
Dissemination Mid Year Movev	2	Management	\$ 1000	Sixth month of the project
Evaluation Survey	1	Implementation Process	\$ 3500	3 Months End of project
Dissemination Evaluation Survey	1	Management	\$ 1000	3 Months End of project
Audit Independent	1	Management	\$ 5000	3 Months End of project

Project Monitoring and Evaluation Plan

Project Results	Indicators	Frequency	Responsible	Monitoring Methods & Tools
Goal	<ol style="list-style-type: none"> 1. Increased capacity and stakeholderism to address climate change and sustainable low-carbon development in the Karst ecosystem 2. Greater accessible food security in adapting the impact of climate change on the karst ecosystem. 3. Strengthening regional planning and policy towards actions to adapt to climate change in the karst ecosystem. 	Average and final projects	Monev Expert	Review of the Annual Report
Outcome				
Outcome 1.1 Increased capacity and partisanship of the parties to overcome climate change and sustainable development with low carbon in the Karst ecosystem	275 people increased their capacity and disaster surveillance.	Quarterly	Monev Expert	Review of the Annual Report
Outcome 1.2 Accessed several schemes / programs that could develop food products that are environmentally friendly and low carbon by the community around the karst ecosystem.	15 schemes / programs to develop environmentally friendly and low carbon food products	Quarterly	Monev Expert	Review of the Annual Report

Outcome 2.1 The internalization of climate change adaptation actions through planning documents and policies to adapt to climate change.	3 regional planning and policy products that promote actions to adapt to climate change.	Quarterly	Expert MONEV	Review of quarterly reports
Outcome 3.1 Knowledge management and learning about climate change adaptation programs by the parties.	6 knowledge management products are shared learning with the parties.	Quarterly	Expert MONEV	Review of quarterly reports
Output				
Output 1.1.1 Greater capacity of the parties to overcome climate change and low sustainable development.	150 people increased their understanding and awareness. 125 people have availability in disaster	Monthly	Expert MONEV	Review of monthly reports
Output 1.1.2 The growing partisanship of the parties in overcoming climate change and low carbon sustainable development.	2 The party bias scheme as a way to adapt to climate change. 100 trees have been adopted 20 news / information on climate change are neutralized by the community 5 climatic villages were successfully formed	Monthly	Expert MONEV	Review activity reports
Output 1.2.1 The existence of a social forestry scheme that embodies forest food security throughout the Karst ecosystem.	5 conservation associations	Monthly	Expert MONEV	Review activity reports

Output 1.2.2 Higher quality, quantity, added value and certainty of agricultural products.	10 demonstration plots and agricultural insurance.	Monthly	Expert MONEV	Review activity reports
Output 1.2.3 Strengthening market systems for food products that are environmentally friendly.	1 Smart Outlet that works and sells agricultural products friendly to the environment.	Monthly	Expert MONEV	Review activity reports
Output 2.1.1 The internalization of adaptation actions to climate change towards regional policies.	1 Product policies that internalize adaptation actions to climate change.	Monthly	Expert MONEV	Review activity reports
Output 2.1.2 The existence of the RAD API and the Roadmap of adaptation to climate change in the KARST ecosystem	RAD API and Roadmap API in the Karst ecosystem are available	Monthly	Expert MONEV	Review activity reports
Output 3.1.1 The Adaptation to Climate Change Program in the Karst Ecosystem was concluded.	6 published products of knowledge management.	Monthly	Expert MONEV	Review activity reports

ANNEX 4: BUDGET

Program	Activity description	Detail Budget						Total cost	USD
		Cost / Unit	Unit	Satuan	Frequency	unit			
Component 1: Increased accessible food security in the sustenance adaptation of the impact of climate change in the karst ecosystem							Rp	9,970,300,000	\$ 687,607
Outcome 1.1 Increased capacity and partisanship of the parties to overcome climate change and sustainable development with low carbon in the Karst ecosystem							Rp	1,498,400,000	\$ 103,338
Output 1.1.1: Greater capacity of the parties to overcome climate change and low sustainable development.							Rp	887,050,000	\$ 61,176
Activity 1.1.1.1: Workshop-Training on Climate Change Adaptation at the village level							Rp	138,550,000	\$ 9,555
Full Board Meeting		Rp 450,000	29	Person	7	Time	Rp	91,350,000	\$ 6,300
Local Transport for Participants		Rp 150,000	20	Person	7	Time	Rp	21,000,000	\$ 1,448
Local Transport for speakers/trainers		Rp 150,000	2	Person	7	Time	Rp	2,100,000	\$ 145
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	7	Time	Rp	2,100,000	\$ 145
Fee for speakers/trainers		Rp 1,500,000	2	Person	7	Time	Rp	21,000,000	\$ 1,448
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	20	Person	1	Package	Rp	1,000,000	\$ 69
Activity 1.1.1.2: District level Climate Change Adaptation Workshop							Rp	85,200,000	\$ 5,876
Full Board Meeting		Rp 450,000	60	Person	2	Time	Rp	54,000,000	\$ 3,724
Local Transport for Participants		Rp 150,000	60	Person	2	Time	Rp	18,000,000	\$ 1,241
Local Transport for Speakers		Rp 150,000	2	Person	2	Time	Rp	600,000	\$ 41

Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	2	Time	Rp 600,000	\$ 41
Fee for speakers		Rp 1,500,000	2	Person	2	Time	Rp 6,000,000	\$ 414
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	60	Person	2	Package	Rp 6,000,000	\$ 414
Activity 1.1.1.3: Regional level Climate Change Adaptation Workshop							Rp 70,250,000	\$ 4,845
Full Board Meeting		Rp 450,000	100	Person	1	Time	Rp 45,000,000	\$ 3,103
Local Transport for Participants		Rp 150,000	100	Person	1	Time	Rp 15,000,000	\$ 1,034
Local Transport for Speakers		Rp 150,000	3	Person	1	Time	Rp 450,000	\$ 31
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	1	Time	Rp 300,000	\$ 21
Fee for speakers		Rp 1,500,000	3	Person	1	Time	Rp 4,500,000	\$ 310
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	100	Person	1	Package	Rp 5,000,000	\$ 345
Activity 1.1.1.4: District-level Sustainable Low Carbon Development Workshop							Rp 42,600,000	\$ 2,938
Full Board Meeting		Rp 450,000	60	Person	1	Time	Rp 27,000,000	\$ 1,862
Local Transport for Participants		Rp 150,000	60	Person	1	Time	Rp 9,000,000	\$ 621
Local Transport for Speakers		Rp 150,000	2	Person	1	Time	Rp 300,000	\$ 21
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	1	Time	Rp 300,000	\$ 21
Fee for speakers		Rp 1,500,000	2	Person	1	Time	Rp 3,000,000	\$ 207
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	60	Person	1	Package	Rp 3,000,000	\$ 207
Activity 1.1.1.5: Regional-level Sustainable Low Carbon Development Workshop							Rp 70,250,000	\$ 4,845
Full Board Meeting		Rp 450,000	100	Person	1	Time	Rp 45,000,000	\$ 3,103
Local Transport for Participants		Rp 150,000	100	Person	1	Time	Rp 15,000,000	\$ 1,034
Local Transport for Speakers		Rp 150,000	3	Person	1	Time	Rp 450,000	\$ 31
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	1	Time	Rp 300,000	\$ 21

Fee for speakers		Rp 1,500,000	3	Person	1	Time	Rp 4,500,000	\$ 310
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	100	Person	1	Package	Rp 5,000,000	\$ 345
Activity 1.1.1.6: Preparation of a Brief Police Adaptation to Climate Change within the framework of the SDGs							Rp 95,900,000	\$ 6,614
Honor Drafting Team/Fee		Rp 1,000,000	2	Person	30	Day	Rp 60,000,000	\$ 4,138
Honor Reviewer/Fee		Rp 1,500,000	1	Person	10	Day	Rp 15,000,000	\$ 1,034
Consumption	Lunch + Snack	Rp 50,000	3	Person	6	Time	Rp 900,000	\$ 62
Printing cost		Rp 100,000	200	Eksamplar	1	Time	Rp 20,000,000	\$ 1,379
Activity 1.1.1.7: Training for disaster basic education							Rp 107,700,000	\$ 7,428
Full Board Meeting		Rp 450,000	30	Person	4	Day	Rp 54,000,000	\$ 3,724
Local Transport for Participants		Rp 150,000	30	Person	4	Time	Rp 18,000,000	\$ 1,241
Local Transport for Speakers		Rp 150,000	5	Person	4	Time	Rp 3,000,000	\$ 207
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	4	Day	Rp 1,200,000	\$ 83
Fee for speakers		Rp 1,500,000	5	Person	4	Day	Rp 30,000,000	\$ 2,069
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	30	Person	1	Package	Rp 1,500,000	\$ 103
Activity 1.1.1.8: Workshop-Training Emergency response management and early warning							Rp 71,250,000	\$ 4,914
Full Board Meeting		Rp 450,000	30	Person	3	Day	Rp 40,500,000	\$ 2,793
Local Transport for Participants		Rp 150,000	30	Person	3	Time	Rp 13,500,000	\$ 931
Local Transport for Speakers/trainers		Rp 150,000	3	Person	3	Time	Rp 1,350,000	\$ 93
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	3	Day	Rp 900,000	\$ 62
Fee for speakers/trainers		Rp 1,500,000	3	Person	3	Day	Rp 13,500,000	\$ 931
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	30	Person	1	Package	Rp 1,500,000	\$ 103

Activity 1.1.1.9: Simulation and disaster plan Training								Rp	71,250,000	\$ 4,914
Full Board Meeting		Rp	450,000	30	Person	3	Day	Rp	40,500,000	\$ 2,793
Local Transport for Participants		Rp	150,000	30	Person	3	Time	Rp	13,500,000	\$ 931
Local Transport for trainers		Rp	150,000	3	Person	3	Time	Rp	1,350,000	\$ 93
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	3	Day	Rp	900,000	\$ 62
Fee for trainers		Rp	1,500,000	3	Person	3	Day	Rp	13,500,000	\$ 931
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp	50,000	30	Person	1	Package	Rp	1,500,000	\$ 103
Activity 1.1.1.10: Workshop-Training Gender in disaster management								Rp	44,700,000	\$ 3,083
Full Board Meeting		Rp	450,000	30	Person	2	Day	Rp	27,000,000	\$ 1,862
Local Transport for Participants		Rp	150,000	30	Person	2	Time	Rp	9,000,000	\$ 621
Local Transport for Speakers/trainers		Rp	150,000	2	Person	2	Time	Rp	600,000	\$ 41
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	2	Day	Rp	600,000	\$ 41
Fee for speakers/trainers		Rp	1,500,000	2	Person	2	Day	Rp	6,000,000	\$ 414
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp	50,000	30	Person	1	Paket	Rp	1,500,000	\$ 103
Activity 1.1.1.11: Workshop-training on food security in disaster								Rp	44,700,000	\$ 3,083
Full Board Meeting		Rp	450,000	30	Person	2	Day	Rp	27,000,000	\$ 1,862
Local Transport for Participants		Rp	150,000	30	Person	2	Time	Rp	9,000,000	\$ 621
Local Transport for Speakers/trainers		Rp	150,000	2	Person	2	Time	Rp	600,000	\$ 41
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	2	Day	Rp	600,000	\$ 41
Fee for speakers/trainers		Rp	1,500,000	2	Person	2	Day	Rp	6,000,000	\$ 414
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp	50,000	30	Person	1	Package	Rp	1,500,000	\$ 103

Activity 1.1.1.12: Workshop-training in controlling climate-related diseases							Rp	44,700,000	\$ 3,083	
Full Board Meeting		Rp	450,000	30	Person	2	Day	Rp	27,000,000	\$ 1,862
Local Transport for Participants		Rp	150,000	30	Person	2	Time	Rp	9,000,000	\$ 621
Local Transport for Speakers/trainers		Rp	150,000	2	Person	2	Time	Rp	600,000	\$ 41
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	2	Day	Rp	600,000	\$ 41
Fee for speakers/trainers		Rp	1,500,000	2	Person	2	Day	Rp	6,000,000	\$ 414
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp	50,000	30	Person	1	Package	Rp	1,500,000	\$ 103
Output 1.1.2: The growing partisanship of the parties in overcoming climate change and low carbon sustainable development.								Rp	611,350,000	\$ 42,162
Activity 1.1.2.1: Preparation of a Participatory Climate Change Adaptation Program Master Plan								Rp	55,750,000	\$ 3,845
Honor Drafting Team/Fee		Rp	1,000,000	2	Person	20	Day	Rp	40,000,000	\$ 2,759
Honor Reviewer/Fee		Rp	1,500,000	1	Person	10	Day	Rp	15,000,000	\$ 1,034
Consumption	Lunch + Snack	Rp	50,000	3	Person	5	Time	Rp	750,000	\$ 52
Activity 1.1.2.2: Facilitation of mapping the distribution of trees to be adopted								Rp	65,000,000	\$ 4,483
Honor Survey Team/Fee		Rp	15,000,000	1	Team	1	Time	Rp	15,000,000	\$ 1,034
Honor Mapping Team/Fee		Rp	45,000,000	1	Team	1	Time	Rp	45,000,000	\$ 3,103
Consumption of Discussion		Rp	5,000,000	1	Package	1	Time	Rp	5,000,000	\$ 345
Activity 1.1.2.3: Providing information systems for tree adoption programs								Rp	10,000,000	\$ 690
System manufacturing services		Rp	10,000,000	1	Package	1	Time	Rp	10,000,000	\$ 690
Activity 1.1.2.4: Facilitating FGD								Rp	24,300,000	\$ 1,676
Full Board Meeting		Rp	450,000	40	Person	1	Time	Rp	18,000,000	\$ 1,241
Local Transport for Participant		Rp	150,000	40	Person	1	Time	Rp	6,000,000	\$ 414

Perdiem for the team /committee	Perdiem for Fullday	Rp 150,000	2	Person	1	Time	Rp 300,000	\$ 21
Activity 1.1.2.5: Workshop of Tree Adaptation Program in supporting livelihood adaptation							Rp 70,250,000	\$ 4,845
Full Board Meeting		Rp 450,000	100	Person	1	Time	Rp 45,000,000	\$ 3,103
Local Transport for Participants		Rp 150,000	100	Person	1	Time	Rp 15,000,000	\$ 1,034
Local Transport for Speakers		Rp 150,000	3	Person	1	Time	Rp 450,000	\$ 31
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	1	Time	Rp 300,000	\$ 21
Fee for speakers		Rp 1,500,000	3	Person	1	Time	Rp 4,500,000	\$ 310
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	100	Person	1	Package	Rp 5,000,000	\$ 345
Activity 1.1.2.6: Facilitation of making leaf leats and infographic posters for tree adoption							Rp 58,750,000	\$ 4,052
Honor Designer/Fee		Rp 5,000,000	1	Team	1	Time	Rp 5,000,000	\$ 345
Leafleat Printing Cost	1000 copies	Rp 10,000	1000	Eksamplar	1	Time	Rp 10,000,000	\$ 690
Poster Printing Cost	1000 copies	Rp 10,000	1000	Eksamplar	1	Time	Rp 10,000,000	\$ 690
Banner Printing Cost	750 copies	Rp 45,000	750	Eksamplar	1	Time	Rp 33,750,000	\$ 2,328
Activity 1.1.2.7: Facilitation of print and online media promotion							Rp 50,000,000	\$ 3,448
Promotion Cost		Rp 50,000,000	1	Package	1	Time	Rp 50,000,000	\$ 3,448
Activity 1.1.2.8: Participatory Action Research Training							Rp 44,700,000	\$ 3,083
Full Board Meeting		Rp 450,000	30	Person	2	Day	Rp 27,000,000	\$ 1,862
Local Transport for Participants		Rp 150,000	30	Person	2	Time	Rp 9,000,000	\$ 621
Local Transport for trainers		Rp 150,000	2	Person	2	Time	Rp 600,000	\$ 41
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	2	Day	Rp 600,000	\$ 41
Fee for trainers		Rp 1,500,000	2	Person	2	Day	Rp 6,000,000	\$ 414
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	30	Person	1	Package	Rp 1,500,000	\$ 103

Aktivitas 1.1.2.9: Basic Journalist Training							Rp	44,700,000	\$ 3,083	
Full Board Meeting		Rp	450,000	30	Person	2	Day	Rp	27,000,000	\$ 1,862
Local Transport for Participants		Rp	150,000	30	Person	2	Time	Rp	9,000,000	\$ 621
Local Transport for trainers		Rp	150,000	2	Person	2	Time	Rp	600,000	\$ 41
Perdiem for the team/committee	Perdiem untuk fullday	Rp	150,000	2	Person	2	Day	Rp	600,000	\$ 41
Fee for trainers		Rp	1,500,000	2	Person	2	Day	Rp	6,000,000	\$ 414
Workshop Kit	Terdiri dari Pulpen, Buku catatan, goodie bag	Rp	50,000	30	Person	1	Package	Rp	1,500,000	\$ 103
Activity 1.1.2.10: Training of Online Journalists and Social Media Management								Rp	23,100,000	\$ 1,593
Full Board Meeting		Rp	450,000	30	Person	1	Day	Rp	13,500,000	\$ 931
Local Transport for Participants		Rp	150,000	30	Person	1	Time	Rp	4,500,000	\$ 310
Local Transport for trainers		Rp	150,000	2	Person	1	Time	Rp	300,000	\$ 21
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	1	Day	Rp	300,000	\$ 21
Fee for trainers		Rp	1,500,000	2	Person	1	Day	Rp	3,000,000	\$ 207
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp	50,000	30	Person	1	Package	Rp	1,500,000	\$ 103
Activity 1.1.2.11: Workshop-training journalists in environmental effectiveness and low-carbon development								Rp	66,300,000	\$ 4,572
Full Board Meeting		Rp	450,000	30	Person	3	Day	Rp	40,500,000	\$ 2,793
Local Transport for Participants		Rp	150,000	30	Person	3	Time	Rp	13,500,000	\$ 931
Local Transport for speakers/trainers		Rp	150,000	2	Person	3	Time	Rp	900,000	\$ 62
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	3	Day	Rp	900,000	\$ 62
Fee for speakers/trainers		Rp	1,500,000	2	Person	3	Day	Rp	9,000,000	\$ 621
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp	50,000	30	Person	1	Package	Rp	1,500,000	\$ 103

Activity 1.1.2.12: Facilitation of Strengthening local actions through the establishment of climate villages								Rp	98,500,000	\$ 6,793
Full Board Meeting		Rp	450,000	25	Person	5	Time	Rp	56,250,000	\$ 3,879
Local Transport for Participants		Rp	150,000	25	Person	5	Time	Rp	18,750,000	\$ 1,293
Local Transport for speakers		Rp	150,000	1	Person	5	Time	Rp	750,000	\$ 52
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	5	Time	Rp	1,500,000	\$ 103
Fee for speakers		Rp	1,500,000	2	Person	5	Time	Rp	15,000,000	\$ 1,034
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp	50,000	25	Person	5	Package	Rp	6,250,000	\$ 431
Outcome 1.2 Accessed several schemes / programs that could develop food products that are environmentally friendly and low								Rp	8,471,900,000	\$ 584,269
Output 1.2.1: The existence of a Social Forestry scheme that embodies forest food security around the Karst Ecosystem.								Rp	3,676,400,000	\$ 253,545
Activity 1.2.1.1: Village level meetings initiating the establishment of forestry partnership groups								Rp	127,500,000	\$ 8,793
Consumption + Snack		Rp	55,000	50	Person	10	Time	Rp	27,500,000	\$ 1,897
Participant Local Transport		Rp	200,000	50	Person	10	Time	Rp	100,000,000	\$ 6,897
Activity 1.2.1.2: Facilitation of draft preparation of proposals for forestry partnership groups								Rp	250,000,000	\$ 17,241
Facilitation Costs		Rp	50,000,000	1	Package	5	Time	Rp	250,000,000	\$ 17,241
Activity 1.2.1.3: Workshop on the formation of social forestry groups in forestry partnerships.								Rp	72,200,000	\$ 4,979
Full Board Meeting		Rp	450,000	50	Person	2	Time	Rp	45,000,000	\$ 3,103
Local Transport for Participants		Rp	150,000	50	Person	2	Time	Rp	15,000,000	\$ 1,034
Local Transport for speakers		Rp	150,000	2	Person	2	Time	Rp	600,000	\$ 41
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	2	Time	Rp	600,000	\$ 41
Fee for speakers		Rp	1,500,000	2	Person	2	Time	Rp	6,000,000	\$ 414

Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	50	Person	2	Package	Rp 5,000,000	\$ 345
Activity 1.2.1.4: Strengthening the capacity of forestry partnership groups							Rp 150,100,000	\$ 10,352
Full Board Meeting		Rp 450,000	50	Person	4	Time	Rp 90,000,000	\$ 6,207
Local Transport for Participants		Rp 150,000	50	Person	4	Time	Rp 30,000,000	\$ 2,069
Local Transport for speakers		Rp 150,000	4	Person	4	Time	Rp 2,400,000	\$ 166
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	4	Time	Rp 1,200,000	\$ 83
Fee for speakers		Rp 1,500,000	4	Person	4	Time	Rp 24,000,000	\$ 1,655
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	50	Person	1	Package	Rp 2,500,000	\$ 172
Activity 1.2.1.5: Facilitation of group RKT & RPP preparation.							Rp 244,000,000	\$ 16,828
Drafting Fee		Rp 30,000,000	4	Package	2	Time	Rp 240,000,000	\$ 16,552
Consumption		Rp 50,000	8	Person	10	Time	Rp 4,000,000	\$ 276
Activity 1.2.1.6: Facilitation of strengthening the development of local forest-based business enterprises							Rp 150,100,000	\$ 10,352
Full Board Meeting		Rp 450,000	50	Person	4	Time	Rp 90,000,000	\$ 6,207
Local Transport for Participants		Rp 150,000	50	Person	4	Time	Rp 30,000,000	\$ 2,069
Local Transport for speakers		Rp 150,000	4	Person	4	Time	Rp 2,400,000	\$ 166
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	4	Time	Rp 1,200,000	\$ 83
Fee for speakers		Rp 1,500,000	4	Person	4	Time	Rp 24,000,000	\$ 1,655
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	50	Person	1	Package	Rp 2,500,000	\$ 172
Activity 1.2.1.7: Facilitation of Implementation and planting of seeds for ecosystem restoration							Rp 1,197,500,000	\$ 82,586
Honorarium of the planting area survey team		Rp 2,500,000	5	Person	1	Time	Rp 12,500,000	\$ 862
Seeds cost		Rp 85,000	10000	seedlings	1	Time	Rp 850,000,000	\$ 58,621

Distributing seeds to the field cost		Rp 15,000,000	1	Package	1	Time	Rp 15,000,000	\$ 1,034
Planting costs		Rp 25,000	10000	seedlings	1	Time	Rp 250,000,000	\$ 17,241
Maintenance cost		Rp 50,000,000	1	Package	1	Time	Rp 50,000,000	\$ 3,448
Planting equipment costs		Rp 20,000,000	1	Package	1	Time	Rp 20,000,000	\$ 1,379
Activity 1.2.1.8: Operationalization of facilitators of social forestry in the village		Rp 5,500,000	15	Person	18	Time	Rp 1,485,000,000	\$ 102,414
Output 1.2.2: Higher quality, quantity, added value and certainty of agricultural products							Rp 3,818,250,000	\$ 263,328
Activity 1.2.2.1: Training on making organic fertilizer							Rp 132,000,000	\$ 9,103
Full Board Meeting		Rp 450,000	30	Person	5	Time	Rp 67,500,000	\$ 4,655
Local Transport for Participants		Rp 150,000	30	Person	5	Time	Rp 22,500,000	\$ 1,552
Local Transport for trainers		Rp 150,000	4	Person	5	Time	Rp 3,000,000	\$ 207
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	5	Time	Rp 1,500,000	\$ 103
Fee for trainers		Rp 1,500,000	4	Person	5	Time	Rp 30,000,000	\$ 2,069
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	30	Person	5	Package	Rp 7,500,000	\$ 517
Activity 1.2.2.2: Training System of Rice Intensification (SRI).							Rp 140,250,000	\$ 9,672
Full Board Meeting		Rp 450,000	30	Person	5	Time	Rp 67,500,000	\$ 4,655
Local Transport for Participants		Rp 150,000	30	Person	5	Time	Rp 22,500,000	\$ 1,552
Local Transport for trainers		Rp 150,000	5	Person	5	Time	Rp 3,750,000	\$ 259
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	5	Time	Rp 1,500,000	\$ 103
Fee for trainers		Rp 1,500,000	5	Person	5	Time	Rp 37,500,000	\$ 2,586
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	30	Person	5	Package	Rp 7,500,000	\$ 517

Activity 1.2.2.3: Training Mina Padi (Agrofishery)								Rp 132,000,000	\$ 9,103
Full Board Meeting		Rp 450,000	30	Person	5	Time	Rp 67,500,000	\$ 4,655	
Local Transport for Participants		Rp 150,000	30	Person	5	Time	Rp 22,500,000	\$ 1,552	
Local Transport for trainers		Rp 150,000	4	Person	5	Time	Rp 3,000,000	\$ 207	
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	5	Time	Rp 1,500,000	\$ 103	
Fee for trainers		Rp 1,500,000	4	Person	5	Time	Rp 30,000,000	\$ 2,069	
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	30	Person	5	Package	Rp 7,500,000	\$ 517	
Activity 1.2.2.4: Agricultural Product Dissertation Training							Rp 140,250,000	\$ 9,672	
Full Board Meeting		Rp 450,000	30	Person	5	Time	Rp 67,500,000	\$ 4,655	
Local Transport for Participants		Rp 150,000	30	Person	5	Time	Rp 22,500,000	\$ 1,552	
Local Transport for trainers		Rp 150,000	5	Person	5	Time	Rp 3,750,000	\$ 259	
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	5	Time	Rp 1,500,000	\$ 103	
Fee for trainers		Rp 1,500,000	5	Person	5	Time	Rp 37,500,000	\$ 2,586	
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	30	Person	5	Package	Rp 7,500,000	\$ 517	
Activity 1.2.2.5: Post-harvest training							Rp 123,750,000	\$ 8,534	
Full Board Meeting		Rp 450,000	30	Person	5	Time	Rp 67,500,000	\$ 4,655	
Local Transport for Participants		Rp 150,000	30	Person	5	Time	Rp 22,500,000	\$ 1,552	
Local Transport for trainers		Rp 150,000	3	Person	5	Time	Rp 2,250,000	\$ 155	
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	5	Time	Rp 1,500,000	\$ 103	
Fee for trainers		Rp 1,500,000	3	Person	5	Time	Rp 22,500,000	\$ 1,552	
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	30	Person	5	Package	Rp 7,500,000	\$ 517	
Activity 1.2.2.6: Facilitation of Mina Padi Demonstration plot							Rp 100,000,000	\$ 6,897	
Minapadi Demonstration plots build cost		Rp 20,000,000	1	Package	5	Demonstration Plot	Rp 100,000,000	\$ 6,897	

Activity 1.2.2.7: Facilitating the SRI Demplot							Rp	150,000,000	\$ 10,345
SRI Demonstration plots bulid cost		Rp 30,000,000	1	Package	5	Demonstration Plot	Rp	150,000,000	\$ 10,345
Activity 1.2.2.8: Facilitate the construction of environmentally friendly local nursery huts							Rp	400,000,000	\$ 27,586
Building costs		Rp 50,000,000	1	Package	8	Nursery	Rp	400,000,000	\$ 27,586
Activity 1.2.2.9: Facilitation of Agricultural Insurance							Rp	200,000,000	\$ 13,793
Insurance costs		Rp 20,000,000	1	Package	10	Time	Rp	200,000,000	\$ 13,793
Activity 1.2.2.10: Facilitation of appropriate and environmentally friendly production equipment							Rp	750,000,000	\$ 51,724
The cost of procuring production equipment		Rp 75,000,000	1	Package	10	Time	Rp	750,000,000	\$ 51,724
Activity 1.2.2.11: Facilitation of Food Disversion Product Production Houses							Rp	600,000,000	\$ 41,379
Cost of making a production house		Rp 60,000,000	1	Package	10	Time	Rp	600,000,000	\$ 41,379
Activity 1.2.2.12: Facilitation of materials & equipment for packaging local food products							Rp	800,000,000	\$ 55,172
Procurement costs		Rp 80,000,000	1	Package	10	Time	Rp	800,000,000	\$ 55,172
Activity 1.2.2.13. Facilitation of making integrated planting calendar applications							Rp	150,000,000	\$ 10,345
The cost of creating an integrated planting calendar application		Rp 150,000,000	1	Application	1	time	Rp	150,000,000	\$ 10,345
Output 1.2.3: Strengthening market systems for food products that are environmentally friendly								Rp 977,250,000	\$ 67,397
Activity 1.2.3.1: Supply chain management study							Rp	96,000,000	\$ 6,621
Honor Survey Team		Rp 2,000,000	3	Person	10	Day	Rp	60,000,000	\$ 4,138
Honor Study Result Analysis Team		Rp 3,000,000	2	Person	6	Day	Rp	36,000,000	\$ 2,483

Activity 1.2.3.2: Facilitate the preparation of business models for each MSME product							Rp	161,500,000	\$ 11,138
Honor Drafting Team/Fee		Rp 10,000,000	2	Person	5	Time	Rp	100,000,000	\$ 6,897
Honor Reviewer		Rp 12,000,000	1	Person	5	Time	Rp	60,000,000	\$ 4,138
Consumption	Makan siang+Snack	Rp 50,000	3	Person	10	Time	Rp	1,500,000	\$ 103
Activity 1.2.3.3: Facilitate the preparation of the Management of Operations (MoP)							Rp	161,500,000	\$ 11,138
Honor Drafting Team/Fee		Rp 10,000,000	2	Person	5	Time	Rp	100,000,000	\$ 6,897
Honor Reviewer		Rp 12,000,000	1	Person	5	Time	Rp	60,000,000	\$ 4,138
Consumption	Makan siang+Snack	Rp 50,000	3	Person	10	Time	Rp	1,500,000	\$ 103
Activity 1.2.3.4: Multistakeholder meetings internalize the market system into village programs.							Rp	112,500,000	\$ 7,759
Consumption + Snack		Rp 55,000	50	Person	10	Time	Rp	27,500,000	\$ 1,897
Local Participant Transport		Rp 150,000	50	Person	10	Time	Rp	75,000,000	\$ 5,172
Building cleaning costs		Rp 1,000,000	1	Package	10	Time	Rp	10,000,000	\$ 690
Activity 1.2.3.5: Facilitate licensing of community MSME products							Rp	125,000,000	\$ 8,621
License preparation fees		Rp 25,000,000	1	Package	5	Time	Rp	125,000,000	\$ 8,621
Activity 1.2.3.6: Facilitate the making of community product offer documents with potential buyers.							Rp	40,000,000	\$ 2,759
Compilation fees		Rp 20,000,000	1	Package	2	Time	Rp	40,000,000	\$ 2,759
Activity 1.2.3.7: Facilitation of product promotion (online & offline)							Rp	50,000,000	\$ 3,448
Facilitation costs		Rp 10,000,000	1	Package	5	Time	Rp	50,000,000	\$ 3,448
Activity 1.2.3.8: Facilitate the creation of outlets							Rp	200,000,000	\$ 13,793
Outlet build costs		Rp 200,000,000	1	Package	1	Time	Rp	200,000,000	\$ 13,793

Activity 1.2.3.9: Facilitation of MSME meetings with financial institutions through innovative financing schemes.							Rp	30,750,000	\$ 2,121	
Consumption		Rp	55,000	50	Person	3	Time	Rp	8,250,000	\$ 569
Local Participant Transport		Rp	150,000	50	Person	3	Time	Rp	22,500,000	\$ 1,552
Component 2: Strengthening of regional planning and policy towards adaptation measures to climate change in the karstic ecosystem								Rp	1,756,242,000	\$ 120,621
Outcome 2.1 The internalization of climate change adaptation actions through planning documents and policies to adapt to climate change.								Rp	1,756,242,000	\$ 120,621
Output 2.1.1: The internalization of adaptation actions to climate change towards regional policies.								Rp	809,500,000	\$ 55,828
Activity 2.1.1.1: Workshop initiates the formation of the API Working Group								Rp	70,250,000	\$ 4,845
Full Board Meeting		Rp	450,000	100	Person	1	Time	Rp	45,000,000	\$ 3,103
Local Transport for Participants		Rp	150,000	100	Person	1	Time	Rp	15,000,000	\$ 1,034
Local Transport for speakers		Rp	150,000	3	Person	1	Time	Rp	450,000	\$ 31
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	1	Time	Rp	300,000	\$ 21
Fee for speakers		Rp	1,500,000	3	Person	1	Time	Rp	4,500,000	\$ 310
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp	50,000	100	Person	1	Package	Rp	5,000,000	\$ 345
Activity 2.1.1.2: Facilitate the API Working Group Routine Meeting								Rp	61,500,000	\$ 4,241
Consumption + Snack		Rp	55,000	50	Person	6	Time	Rp	16,500,000	\$ 1,138
Local Participant Transport		Rp	150,000	50	Person	6	Time	Rp	45,000,000	\$ 3,103
Activity 2.1.1.3: Workshop The role of regional development in climate change adaptation								Rp	70,250,000	\$ 4,845
Full Board Meeting		Rp	450,000	100	Person	1	Time	Rp	45,000,000	\$ 3,103
Local Transport for Participants		Rp	150,000	100	Person	1	Time	Rp	15,000,000	\$ 1,034
Local Transport for speakers		Rp	150,000	3	Person	1	Time	Rp	450,000	\$ 31
Perdiem for the team/committee	Perdiem for Fullday	Rp	150,000	2	Person	1	Time	Rp	300,000	\$ 21
Fee for speakers		Rp	1,500,000	3	Person	1	Time	Rp	4,500,000	\$ 310

Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	100	Person	1	Package	Rp 5,000,000	\$ 345
Activity 2.1.1.4: Study of Low Carbon Regional Development within the framework of climate change adaptation							Rp 320,000,000	\$ 22,069
Implementation cost		Rp 320,000,000	1	Package	1	Time	Rp 320,000,000	\$ 22,069
Activity 2.1.1.5: Preparation of Monitoring Plans for Parties in strengthening the climate change adaptation framework							Rp 100,000,000	\$ 6,897
Compilation fees		Rp 100,000,000	1	Package	1	Time	Rp 100,000,000	\$ 6,897
Activity 2.1.1.6: Facilitation of Review of Regional Planning Documents to strengthen the climate change adaptation framework							Rp 85,000,000	\$ 5,862
Facilitation Costs		Rp 85,000,000	1	Package	1	Time	Rp 85,000,000	\$ 5,862
Activity 2.1.1.7: Meeting internalisation of climate change adaptation at the village level							Rp 102,500,000	\$ 7,069
Consumption + Snack		Rp 55,000	50	Person	10	Time	Rp 27,500,000	\$ 1,897
Local Participant Transport		Rp 150,000	50	Person	10	Time	Rp 75,000,000	\$ 5,172
Output 2.1.2: The existence of the RAD API and the Roadmap of adaptation to climate change in the karst ecosystem							Rp 794,500,000	\$ 54,793
Activity 2.1.2.1. Study and Preparation of the South Sulawesi API RAD							Rp 570,000,000	\$ 39,310
Study cost		Rp 570,000,000	1	Package	1	Time	Rp 570,000,000	\$ 39,310
Activity 2.1.2.2: Compilation of Road Map APIs in the Karst ecosystem							Rp 84,000,000	\$ 5,793
Honor Drafting Team/Fee		Rp 1,000,000	2	Person	30	Day	Rp 60,000,000	\$ 4,138
Honor Reviewer		Rp 1,500,000	1	Person	15	Day	Rp 22,500,000	\$ 1,552
Consumption	Lunch + Snack	Rp 50,000	3	Person	10	Time	Rp 1,500,000	\$ 103
Activity 2.1.2.3: South Sulawesi RAD API Consultation Workshop							Rp 70,250,000	\$ 4,845
Full Board Meeting		Rp 450,000	100	Person	1	Time	Rp 45,000,000	\$ 3,103
Local Transport for Participants		Rp 150,000	100	Person	1	Time	Rp 15,000,000	\$ 1,034

Local Transport for speakers		Rp 150,000	3	Person	1	Time	Rp 450,000	\$ 31
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	1	Time	Rp 300,000	\$ 21
Fee for speakers		Rp 1,500,000	3	Person	1	Time	Rp 4,500,000	\$ 310
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	100	Person	1	Package	Rp 5,000,000	\$ 345
Activity 2.1.2.4: Workshop of RAD API South Sulawesi							Rp 70,250,000	\$ 4,845
Full Board Meeting		Rp 450,000	100	Person	1	Time	Rp 45,000,000	\$ 3,103
Local Transport for Participants		Rp 150,000	100	Person	1	Time	Rp 15,000,000	\$ 1,034
Local Transport for speakers		Rp 150,000	3	Person	1	Time	Rp 450,000	\$ 31
Perdiem for the team/committee	Perdiem for Fullday	Rp 150,000	2	Person	1	Time	Rp 300,000	\$ 21
Fee for speakers		Rp 1,500,000	3	Person	1	Time	Rp 4,500,000	\$ 310
Workshop Kit	Consisting of pens, notebooks, goodie bags	Rp 50,000	100	Person	1	Package	Rp 5,000,000	\$ 345
Output 2.1.3: Key and related national stakeholders are more informed on the project implementation and the project is registered							Rp 145,600,000	\$ 10,000
Component 3: Strengthening information systems from the knowledge management and learning of climate change adaptation programs by the parties							Rp 963,400,000	\$ 66,441
Outcome 3.1 Knowledge management and learning about climate change adaptation programs by the parties.							Rp 963,400,000	\$ 66,441
Output 3.1.1: The Adaptation to Climate Change Program in the Karst Ecosystem was concluded.							Rp 963,400,000	\$ 66,441
Activity 3.1.1.1: Establishment of Steady Police							Rp 122,250,000	\$ 8,431
Honor Drafting Team/Fee		Rp 1,000,000	2	Person	30	Person	Rp 60,000,000	\$ 4,138
Honor Reviewer		Rp 1,500,000	1	Person	20	Person	Rp 30,000,000	\$ 2,069
Consumption	Lunch + Snack	Rp 50,000	3	Person	15	Person	Rp 2,250,000	\$ 155
Printing cost		Rp 60,000	500	Eksamplar	1	Eksamplar	Rp 30,000,000	\$ 2,069

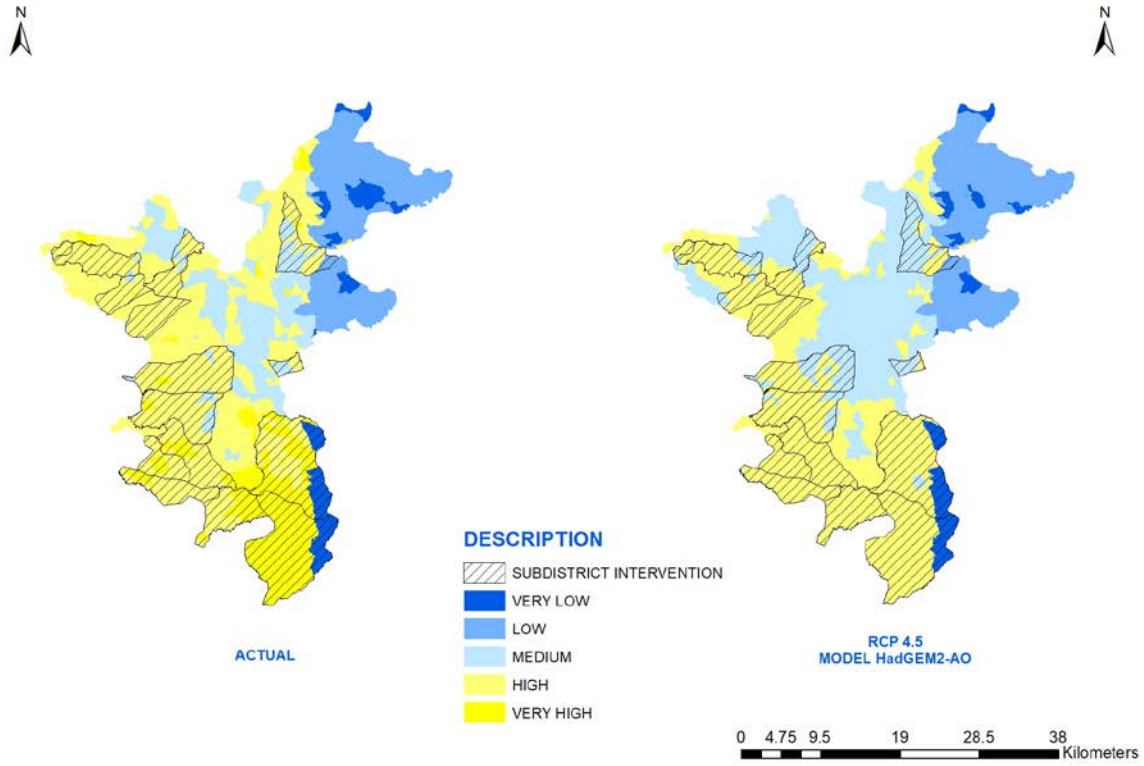
Activity 3.1.1.2: Book creation: success story, and							Rp	261,950,000	\$ 18,066	
Sub activity 3.1.1.2.1: Preparatory Meeting (Team Formation and Content / Material Content Discussion)	Team formation and discussion of content (material)						Rp	5,400,000	\$ 372	
Fullday Meeting		Rp	250,000	10	Person	1	Person	Rp	2,500,000	\$ 172
Local Participant Transport		Rp	200,000	10	Person	1	Person	Rp	2,000,000	\$ 138
Perdiem Participants		Rp	90,000	10	Person	1	Person	Rp	900,000	\$ 62
Sub activity 3.1.1.2.2: Book Compilation							Rp	83,250,000	\$ 5,741	
Honor Writer		Rp	1,000,000	2	Person	30	Person	Rp	60,000,000	\$ 4,138
Honor Reviewer		Rp	1,500,000	1	Person	15	Person	Rp	22,500,000	\$ 1,552
Consumption	Lunch + Snack	Rp	50,000	3	Person	5	Person	Rp	750,000	\$ 52
Sub activity 3.1.1.2.3: Book Printing	Printing of 200 copies of books and 200 copies of journals						Rp	132,100,000	\$ 9,110	
Book Printing cost		Rp	180,000	500	Eksamplar	1	Eksamplar	Rp	90,000,000	\$ 6,207
Journal Printing costs		Rp	70,000	500	Eksamplar	1	Eksamplar	Rp	35,000,000	\$ 2,414
Distribution costs		Rp	7,100,000	1	Package	1	Package	Rp	7,100,000	\$ 490
Sub activity 3.1.1.2.4: Launching Books	Held in Makassar and attended by 75 participants						Rp	41,200,000	\$ 2,841	
Fullday Meeting		Rp	250,000	75	Person	1	Person	Rp	18,750,000	\$ 1,293
Local Participant Transport		Rp	200,000	75	Person	1	Person	Rp	15,000,000	\$ 1,034
Perdiem Participants		Rp	90,000	75	Person	1	Person	Rp	6,750,000	\$ 466
Tim's local transport		Rp	200,000	2	Person	1	Person	Rp	400,000	\$ 28
Perdiem Team		Rp	150,000	2	Person	1	Person	Rp	300,000	\$ 21
Activity 3.1.1.3: Making Program Infographics							Rp	90,000,000	\$ 6,207	
Cost of making		Rp	15,000,000	1	Package	6	Package	Rp	90,000,000	\$ 6,207
Activity 3.1.1.4: Making and Operationalizing a Program Website							Rp	85,000,000	\$ 5,862	

Cost of making		Rp 85,000,000	1	Package	1	Package	Rp 85,000,000	\$ 5,862
Activity 3.1.1.5: Study of the impact of the program on the condition of the landscape and social landscape							Rp 150,000,000	\$ 10,345
Costs for conducting studies		Rp 150,000,000	1	Package	1	Package	Rp 150,000,000	\$ 10,345
Activity 3.1.1.6: Making short films and documentaries							Rp 111,200,000	\$ 7,669
Honor Film Maker		Rp 70,000,000	1	Team	1	Team	Rp 70,000,000	\$ 4,828
Sub activity 3.1.1.6.1: Lauching Film							Rp 41,200,000	\$ 2,841
Fullday Meeting		Rp 250,000	75	Person	1	Person	Rp 18,750,000	\$ 1,293
Local Participant Transport		Rp 200,000	75	Person	1	Person	Rp 15,000,000	\$ 1,034
Perdiem Participants		Rp 90,000	75	Person	1	Person	Rp 6,750,000	\$ 466
Tim's local transport		Rp 200,000	2	Person	1	Person	Rp 400,000	\$ 28
Perdiem Team		Rp 150,000	2	Person	1	Person	Rp 300,000	\$ 21
Activity 3.1.1.7: Supervision Monitoring and Evaluation		Rp 143,000,000	1	Package	1	Package	Rp 143,000,000	\$ 11,000
Total Implementing Cost							Rp 12,537,700,000	\$ 864,669
Program Excecution Cost								
Monev Specialist		Rp 3,000,000	1	Person	18	month	Rp 54,000,000	\$ 3,724
Conservation specialist		Rp 3,000,000	1	Person	18	month	Rp 54,000,000	\$ 3,724
Gender Specialist		Rp 3,000,000	1	Person	18	month	Rp 54,000,000	\$ 3,724
Social and economic spesialist		Rp 3,000,000	1	Person	19	month	Rp 57,000,000	\$ 3,931
Project PIC		Rp 6,000,000	1	Person	18	month	Rp 108,000,000	\$ 7,448
Project Manager		Rp 10,000,000	1	Person	18	month	Rp 180,000,000	\$ 12,414
Finance Manager		Rp 5,000,000	1	Person	18	month	Rp 90,000,000	\$ 6,207
Assiten Finance Manager		Rp 4,000,000	1	Person	18	month	Rp 72,000,000	\$ 4,966
Program Officer		Rp 6,500,000	3	Person	18	month	Rp 351,000,000	\$ 24,207
Office boy		Rp 1,000,000	2	Person	18	month	Rp 36,000,000	\$ 2,483
Office Rent		Rp 1,300,000	2	Unit	18	month	Rp 46,800,000	\$ 3,228
Stationary		Rp 6,353,120	1	Paket	1	Once	Rp 6,353,120	\$ 438
Communication		Rp 2,700,000	1	Paket	1	Once	Rp 2,700,000	\$ 186

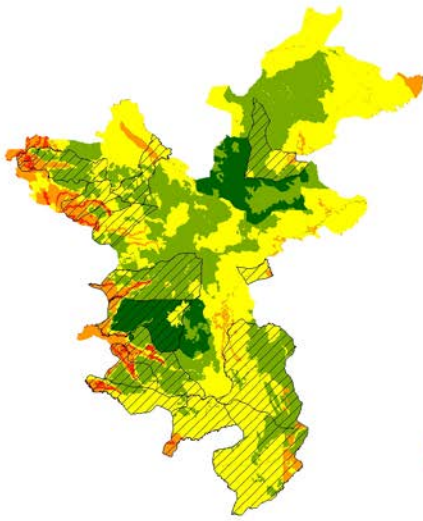
Electricity, WIFI, Water		Rp 1,500,000	1	Paket	18	month	Rp 27,000,000	\$ 1,862
Audit Program		Rp 50,000,000	1	Paket	1	Once	Rp 50,000,000	\$ 3,448
Total Project/Program Excecution Cost							Rp 1,188,853,120	\$ 81,990
Grand Total Project Cost							Rp 13,726,553,120	\$ 946,659

ANNEX 5: MAPS

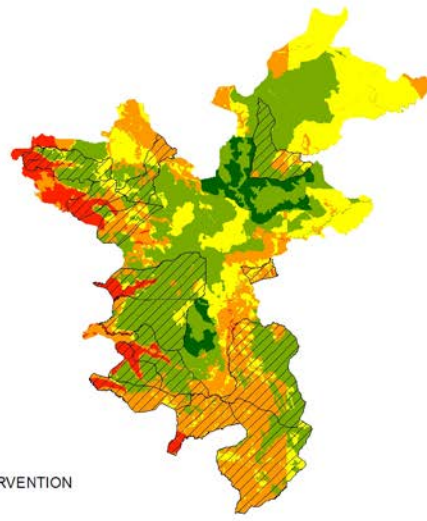
MAP HAZARD TOO DRY THE AREA KARST OF BANTIMURUNG BULUSARAUNG NATIONAL PARK



MAP PRONE TO FLOODING THE AREA KARST OF BANTIMURUNG BULUSARAUNG NATIONAL PARK









ACTUAL



RCP 4.5
MODEL HadGEM2-AO

DESCRIPTION

-  SUBDISTRICT INTERVENTION
-  VERY LOW
-  LOW
-  MEDIUM
-  HIGH
-  VERY HIGH



ANNEX 6: ALIGNMENT WITH ADAPTATION FUND RESULT FRAMEWORK

Project Objective(s) ¹⁷	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. Increased accessible food security in the sustenance adaptation of the impact of climate change in the karst ecosystem	15 schemes / programs that are being implemented to improve food security as a way to adapt life.	<p>Outcome 6. Diversification and strengthening of livelihoods and sources of income for vulnerable people in specific areas</p> <p>Outcome 3. Greater awareness and ownership of the processes of climate risk reduction at the local level</p>	<p>6.1 Percentage of communities that have more secure (higher) access to subsistence assets</p> <p>6.2. Percentage of target population with sustainable livelihoods resistant to climate</p> <p>3.1. Percentage of the target population aware of expected adverse impacts of climate change, and of appropriate answers</p>	\$ 687,607
2. Strengthening of regional planning and policy towards adaptation measures to climate change in the karstic ecosystem	3 product planning and local government policies that internalize adaptation to climate change	Outcome 7. Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	\$ 110,621
3. Strengthening information systems from the knowledge management and learning of climate change adaptation programs by the parties	6 knowledge management products that increase awareness and the importance of adapting to climate change	Outcome 3. Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	\$ 66,441
Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Outcome 1.1. Increased capacity and partisanship of the parties to overcome climate change and sustainable development with low carbon in the Karst ecosystem	15 villages are aware of the effects of climate change and participate in programs to adapt to climate change.	Outcome 3. Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	<p>3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses</p> <p>3.2. Modification in behavior of targeted population</p>	\$103,338
Outcome 1.2 Accessed several schemes / programs	15 schemes / programs to develop environmentally friendly and low carbon	Output 6: Targeted individual and community	6.1.1. No. and type of adaptation assets (tangible and	\$ 584,269

that could develop food products that are environmentally friendly and low carbon by the community around the karst ecosystem.	food products	livelihood strategies strengthened in relation to climate change impacts, including variability	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	
Outcome 2.1 The internalization of climate change adaptation actions through planning documents and policies to adapt to climate change.	3 regional planning and policy products that promote actions to adapt to climate change.	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)	\$ 110,621
Outcome 3.1 Knowledge management and learning about climate change adaptation programs by the parties.	6 knowledge management products are shared learning with the parties.	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.2 No. of news outlets in the local press and media that have covered the topic	\$ 66,441

ANNEX 7: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

1. INTRODUCTION

Overall this project aims to improve the adaptation efforts of the people in the world's largest karst ecosystem that is part of the climate change adaptation efforts that focus on:

- 1.1. Strengthening accessibility of food security through livelihood adaptation to the effects of climate change in the karst ecosystem;
- 1.2. Strengthening regional planning and policy towards climate change adaptation actions in the karst ecosystem;
- 1.3. Management of knowledge and dissemination of actions for climate change adaptation in the karst ecosystem.

2. PROJECT DESCRIPTION

The scope of project activities is related to capacity building, encouraging policies and increasing food security in the Karst area of Bantimurung Bulusaraung National Park.

3. PROJECT COMPONENT

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes
1. Increased accessible food security in the sustenance adaptation of the impact of climate change in the karst ecosystem	1.1.1. Greater capacity of the parties to overcome climate change and low sustainable development. 1.1.2. The growing partisanship of the parties in overcoming climate change and low carbon sustainable development. 1.2.1. The existence of a Social Forestry scheme that embodies forest food security around the Karst Ecosystem. 1.2.2. Higher quality, quantity, added value and certainty of agricultural products. 1.2.3. Strengthening market systems for food products that are environmentally friendly	1.1 Increased capacity and partisanship of the parties to overcome climate change and sustainable development with low carbon in the Karst ecosystem 1.3. Accessed several schemes/ programs that could develop environmentally friendly and low-carbon food products by the community around the karst ecosystem.
2. Strengthening of regional planning and policy towards adaptation measures to climate change in the karstic ecosystem	2.1.1. The internalization of climate change adaptation actions towards regional policies 2.1.2. The existence of the RAD API and Roadmap of adaptation to climate change in the karst ecosystem	2.1 The internalization of climate change adaptation actions through planning documents and policies to adapt to climate

3. Strengthening information systems from the knowledge management and learning of climate change adaptation programs by the parties	3.1.1. The Climate Change Adaptation Program in the Karst Ecosystem was concluded	3.1. Knowledge management and learning about climate change adaptation programs by the parties
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1. ENVIRONMENTAL & SOCIAL RISK SCREENING AND MANAGEMENT

a. Compliance with the Law

This project complies with applicable laws such as: Perdirjen KSDAE No. 12 of 2015 concerning Guidelines for Procedures for Planting and Enriching Types in the Framework of Restoration of Mainland Ecosystems in Natural Reserve Areas and Nature Conservation Areas, Regulation of the Minister of Environment and Forestry No. 7 of 2018, Technical Guidelines for Preparing Action Plans for the Sustainable Development Goals of the Ministry of National Development Planning / Bappenas in 2017, LHK Ministerial Regulation No.33 of 2016 concerning Guidelines for Preparing Climate Change Adaptation Actions, regulation P.83 of 2016 concerning Social Forestry, appropriate conservation partnership technical guidelines Regulation of Perdirjen No. 6 of 2018, Perdirjen No. 89 of 2018 concerning Guidelines for the Development of Forest Farmers' Groups.

b. Access and Equity

By design, this project will ensure fair and equitable access to all beneficiaries. The project has been designed in such a way that it will not hinder the access of any group to services and important rights mentioned in the principle so it does not require further measurement and assessment of compliance. This project also does not exacerbate existing injustices, especially those relating to marginalized and vulnerable groups.

c. Marginalized and Vulnerable Groups

This project will involve the majority of beneficiaries from marginalized and vulnerable groups. The assessment of vulnerable groups that will be involved in the project is identified by several categories such as age, employment, income, and family dependents. The classification data will then be chosen fairly for group involvement in each project activity. This activity will also ensure that children and parents will not be involved in any training program activities which will then be included in periodic monitoring and evaluation

Management :

The impact of the project on marginalized and vulnerable segments was assessed and it was observed that this project would open up new livelihood opportunities and ensure an increase in their income and welfare. This project uses the community's participatory approach actively and sustainably. This project is also planned to provide capacity benefits by involving them in the process.

The process of selecting beneficiaries is intended to address the problem of marginalized and vulnerable groups. The consultation process begins with the PRA (Participatory Rural Appraisal) method by involving representation from marginalized and vulnerable groups such as women and (30%), farmers who do not own land / have a land area of less than 2 ha (70%)

d. Human Rights

This project must respect and if possible promote international human rights. Human rights promotion in projects / programs will be achieved by creating awareness with all people involved in all activities, including design, implementation, monitoring and evaluation, related to the Universal Declaration of Human Rights as the overall principle of the project.

This project does not affect the lives and freedoms of any individual or group. The project also does not discriminate against certain communities or groups or people for reasons of gender, caste, ethnicity, or ability. This project upholds fulfillment of human rights in intervention villages and target groups. So that it can be said that it does not require further assessment of compliance.

e. Gender Equity and Woman's Empowerment

This project is designed so that woman and men have equal opportunities to participate in accordance with gender policy and receive comparable social and economic benefits. The project will actively involve equal participation in project / program activities and stakeholder consultation. The project also ensures that positions in the program are accessed effectively by men and women fairly, and that women are encouraged to implement and take positions, basically, the design and implementation of projects / programs will ensure equal access for men and women. women as beneficiaries.

Management :

Gender involvement is assessed / measured through the proportion of work in the household so that it can support their livelihoods. Activities related to beneficiaries, for examples training and capacity building through local gender training activities in disasters, involving 30% of women as beneficiaries. Planned interventions will have a positive impact on women's empowerment and will ensure gender equality because of certain livelihoods.

The principle of gender equality and women's empowerment in project activities is designed using the (Gender Integrated Plan) as a safeguard that looks at as much as possible the proportion of involvement between men and women in all project activities.

f. Core Labour Rights

This project / program meets core labor standards as identified by the International Labor Organization. ILO core labor standards. The core ILO labor standards are listed in the Declaration of the Principles of LO and Fundamental Rights in 1998. The Declaration covers four basic principles and rights, which were further developed in eight human rights conventions:

- Freedom of association and protecting the right to organize and collective bargaining conventions (ILO conventions 87 and 98);
- Elimination of forced labor conventions (ILO conventions 29 and 105)
- The worst forms of child labor conventions (ILO Conventions 138 and 182);
- Discrimination Conventions (work and employment) (ILO Conventions 100 and 111).
- The project / program will combine ILO core labor standards in the design and implementation of projects / programs and create awareness with all involved about how the standards are implemented.

Labor rights in the context of the project include: employment and compliance with payment of minimum wages and time; working hours and their time based on season; rest and work place facilities; participation in planning; avoidance of child labor; and the complaints & recovery system.

This project will work within the applicable labor law framework. Note the work carried out for each workforce involved will be maintained and the wages will be paid. Working hours and work hours will be determined in consultation with workers and practitioners in the area. Positive discrimination that benefits women will be used to provide justice and equality of opportunity for women who seek employment as workers and benefit from the wages received. All forms of negative discrimination relating to work will be eliminated. The project will not involve child labor in any activity and all forms of forced or compulsory labor will be eliminated.

In essence, all activity activities are not related to violations of workers' core rights

g. Indigenous Peoples

This project is not related to Indigenous Peoples or Indigenous Peoples' Rights and other international instruments that apply to indigenous peoples. This project also does not involve indigenous peoples in project design and implementation

So, basically does not require further assessment of compliance.

h. Involuntary Resettlement

This project is not related to resettlement or relocation activities / activities or loss of residence and / or economic movement (loss of assets or access to assets resulting in loss of income or other subsistence methods). So that no further assessment of compliance is needed.

i. Protection of Natural Habitats

Objectively, the project views livelihood adaptation activities Ecoenterprise in Karst Ecosystem as an integral part of restoration and promotion of natural habitats as a form of strategy for greater resilience and adaptive capacity in the future. So that no further assessment of compliance is needed.

j. Conservation of Biological Diversity

This project is not related to biodiversity conservation activities or relationships that have an impact on the degradation of habitat around the KARST ecosystem area, including those protected by law so, it does not require further assessment of compliance.

k. Climate Change

Basically, this project to increase the adaptive capacity of people living around Bantimurung Bulusaraung National Park and the KARST Ecosystem to fulfill their livelihoods against the negative impacts of climate change and not significantly contribute to a significant increase in GHG emissions or other climate change. So, no further assessment is needed for compliance.

l. Pollution Prevention and Resources Efficiency

There are not proposed adaptation activities have an impact on increasing pollutants. The use of material resources is also limited, for example in the construction of nursery houses, of course using polybags made from plastic, but not in large quantities.

Nonetheless, the project has been designed in such a way as to develop a plastic waste disposal mechanism that is included as part of the project strategy.

m. Public Health

The project is not focus on activities related to efforts to avoid significant negative impacts on public health, access to medical care and health facilities, so it does not require further compliance assessments.

n. Physical and Cultural Heritage

The project is also not concerned with efforts to change, destroy or erase physical cultural resources, cultural sites and locations with unique traits such as at the community, national or international level which are World Cultural Heritage, so that no further assessment of compliance is required.

Because of the project, physical / resource cultural heritage at the community level will not be affected.

o. Lands and Soil Conservation

In the implementation of the project, all activities will not have an impact on soil damage and other activities that can cause land loss and land degradation, so that further compliance assessment is not needed.

2. PUBLIC DISCLOSURE

The project management plan will be disseminated to all stakeholders and the document will be in the public domain to facilitate stakeholder references. Apart from this, the project performance report including the status of implementing environmental and social actions will be available for stakeholder reviews. In addition to implementing entities, the community and other stakeholders will be intimidated about significant changes in the project plan. Monitoring: NIE / Partnership will monitor the processes related to public consultation and disclosure of the ESMP.

3. COMPLAINTS MECHANISM / GRIEVANCE MECHANISM

Complaints arising from stakeholders and the general public involved in the Executing Entity (EE) to be submitted to the Implementing Activities to be discussed together to find a way out. If consensus is not reached, a complaint can be submitted to the National Entity (NE) using the form. Complaints that will be processed with the Complaint Mechanism are only those relating to all project activities. Complaints and complaints information must be submitted in writing via email or letter sent or delivered directly during the visit. Other channels such as text messages / SMS, or oral / telephone complaints can be rejected as official complaints or asked to be distributed in writing. EE and NE must ensure the confidentiality of the complaint. In registering a complaint, the complainant must fill out and attach the Complaint Form. Registered complaints that deserve to be followed up through the Complaint Settlement Plan. The following is an example of a complaint form :

COMPLAINTS FORM
Grievance Form
Karst Ecosystem Adaptation Consortium (KARST)

Diisi oleh KARST /Filled by KARST

No. Pengaduan/ <i>Grievance No.</i>		
Nama yang mendaftarkan / <i>Name of register</i>		Date:
Sumber/ <i>Source</i>	sms / e-mail / surat / fax / telepon / kunjungan / lainnya: *) sms / email / letter / fax / phone / visit / others:..... *)	

*) Lingkari yang cocok/*Circle the appropriate*

Diisi oleh pelapor/Filled by complainant

Data Pelapor/Complainant Data		
Nama/ <i>Name</i>		
Alamat/ <i>Address</i>		
Nomor Telepon/ <i>Phone No.</i>		
Fax		
E-mail		
Informasi Pengaduan/Grievance Information		
Lokasi/ <i>Location</i>		
Program/ <i>Program</i>		
Pihak yang dilaporkan/ <i>Parties was reported</i>		
Tanggal Kejadian/ <i>Date of occurence</i>		
Isi pengaduan/ <i>Detail grievance</i> :		
<p>(lengkapi dengan bukti atau dokumen terkait/<i>Completed with related evidence or documents</i>) (jika bagian ini tidak cukup dapat menggunakan kertas tambahan/ <i>if this part is insufficient, then allowed to use additional paper</i>)</p>		
Nama dan Tanda Tangan Pelapor/ <i>Complainant Name and Signature</i>		Date:

Nama dan Tanda Tangan Penerima Pengaduan/Receiver <i>name and signature</i>		Date:
---	--	-------

Keterangan/Notes:

Formulir dibuat rangkap 2 lembar: 1 untuk pelapor dan lembar 2 untuk arsip./The form must be made 2 copy: 1 copy for complainant, and 1 copy for archives.

4. MONITORING AND REPORTING

The implementation Schedule of the ESMP will be as follows:

Activities	Time											
	Year 1				Year 2				Year 3			
	Q₁	Q₂	Q₃	Q₄	Q₁	Q₂	Q₃	Q₄	Q₁	Q₂	Q₃	Q₄
Capacity Building of Management Project												
ESMP of Sub Projects												
Monitoring and Reporting of ESMP												
Environmental and Social Audit												

5. COST for ESI SCREENING AND ESMP

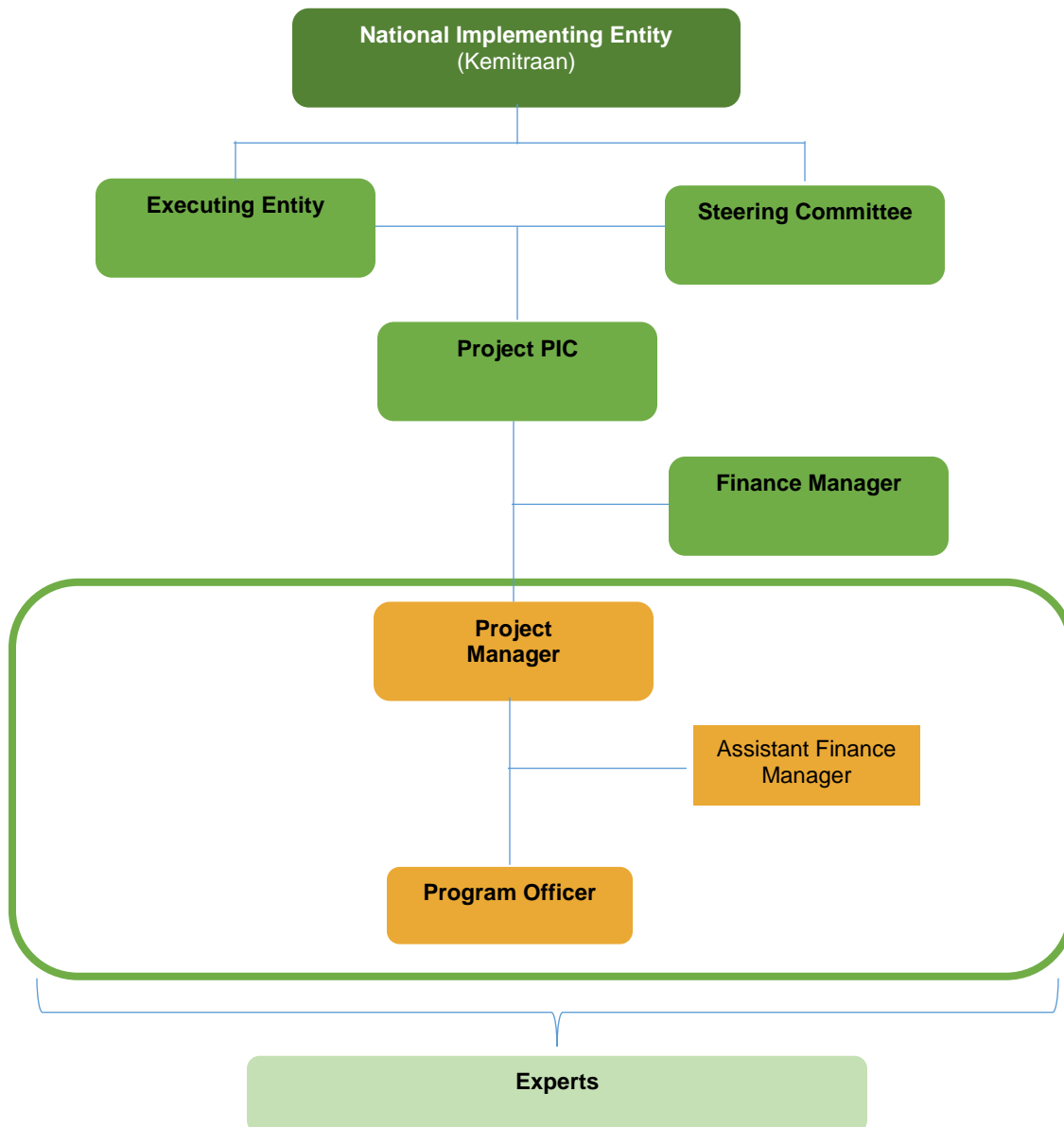
Esi Screening/ESMP Related Activity	Source Cost
Capacity Building for Management Project	Will be absorbed in the Programme Management Cost
ESMP of Sub Projects	Built in the Programme Execution Cost
Monitoring and Reporting of ESMP	Built in the Programme Execution Cost
Environmental and Social Audit	Built in to Project Annual Report

6. Management and Monitoring Plan (ESMP Plan)

The SMPN plan activity is filled in as follows:

1	Activity Component (Source of Impact)	Filled in for each type of ESMP activity	
2	Impact and Risk	Filled with impacts and risks in accordance with 15 principle Environmental and Social Risk	
3	Management Plan and Impact and Risk Monitoring Plan	Management (filled in with the plan / management effort)	Monitoring (filled in with the Monitoring Activity Plan)
		1. 2. 3.	1. 2. 3.
4	Implementation of Management and Monitoring of Impacts and Risks	Management (filled with management efforts that have been carried out to minimize the impact and risk and are complemented by pictures).	Monitoring (filled with monitoring efforts that have been carried out to determine the effectiveness of the impact and risk management and completed with pictures).
		1. 2. 3.	1. 2. 3.
5	Obstacles	Management (filled if the management efforts that have been carried out are not in accordance with the management plan in the ESMP, field conditions, budget constraints, etc.).	Monitoring (filled in if the monitoring efforts carried out are not in accordance with the monitoring plan in the ESMP matrix, field conditions, budget constraints, etc.).
6	Handling Plan	Management (filled in with a plan for handling the management constraints mentioned in point 5).	Monitoring (filled in the plan for handling the monitoring constraints mentioned in point 5).

ANNEX 8: PROJECT IMPLEMENTATION STRUCTURE





GUBERNUR SULAWESI SELATAN

SURAT REKOMENDASI

No. 557/RSR/Gub

Yang bertanda tangan di bawah ini:

Nama : Prof. Dr. Ir. H.M. Nurdin Abdullah, M.Agr.,
Jabatan : Gubernur Provinsi Sulawesi Selatan
Instansi : Pemerintah Provinsi Sulawesi Selatan

Memberikan rekomendasi dan dukungan penuh kepada **Konsorsium Adaptasi Ekosistem KARST (KARST)**, sebagai lembaga yang aktif dalam mendorong pengelolaan hutan berkelanjutan, di mana saat ini mengajukan usulan Proposal kepada **Adaptation Fund** dengan judul "**Adaptasi Nafkah di Ekosistem Karst Sebagai Bentuk Adaptasi Terhadap Perubahan Iklim.**"

Demikian surat dukungan ini dibuat dan diberikan untuk dipergunakan sebagaimana mestinya.

Makassar, 17 Desember 2018

Gubernur Sulawesi Selatan



Prof. Dr. Ir. H.M. Nurdin Abdullah, M.Agr., IPU



BUPATI PANGKAJENE DAN KEPULAUAN

SURAT REKOMENDASI

No: 503/207/umum

Yang bertanda tangan di bawah ini :

Nama : H. Syamsuddin A. Hamid, S.E
Jabatan : Bupati Pangkajene dan Kepulauan
Instansi : Pemerintahan Kabupaten Pangkajene dan Kepulauan

Memberikan rekomendasi dan dukungan penuh kepada **Konsorsium Adaptasi Ekosistem Karst (KARST)**, sebagai lembaga yang aktif dalam mendorong pengelolaan hutan berkelanjutan di Sulawesi Selatan. Dimana saat ini mengajukan usulan Proposal kepada **Adaptation Fund** dengan judul "**Adaptasi Nafkah Pada Ekosistem Karst Sebagai Bentuk Adaptasi Terhadap Perubahan Iklim**".

Demikian surat rekomendasi ini dibuat dan diberikan untuk dipergunakan sebagaimana mestinya.

Pangkajene, 13 Desember 2018

Bupati Pangkajene dan Kepulauan



H. Syamsuddin A. Hamid, S.E



KEMENTERIAN LINGKUNGAN HIDUP DAN KEHUTANAN
DIREKTORAT JENDERAL KONSERVASI SUMBER DAYA ALAM DAN EKOSISTEM
BALAI TAMAN NASIONAL BANTIMURUNG BULUSARAUNG

Jl. Poros Maros Bone Km. 12 Bantimurung, Maros Sulawesi Selatan 90561
Telp. (0411) 3880252 Fax. (0411) 3880139 E-Mail : tn.babul@gmail.com Website : www.tn-babul.org

SURAT REKOMENDASI

No. S. 709/T.46/TU/PEG/12/2018

Berdasarkan surat Tim Layanan Kehutanan Masyarakat Nomor: 066/B/TLKM/XII/2018 tanggal 9 Desember 2018 perihal permohonan Surat Rekomendasi dengan ini menerangkan bahwa:

Yang bertanda tangan di bawah ini :

Nama : Ir. Yusak Mangetan, M.A.B
Jabatan : Kepala Balai
Instansi : Taman Nasional Bantimurung Bulusaraung

Memberikan rekomendasi dan dukungan penuh kepada **Yayasan Tim Layanan Kehutanan Masyarakat (TLKM)** yang merupakan bagian dari Konsorsium Adaptasi Ekosistem Karst (KARST) dimana saat ini mengajukan Proposal kepada Lembaga donor **Adaption Fund** dengan judul **"Adaptasi Nafkah pada Ekosistem Karst Terbesar"**.

Demikian surat dukungan ini diberikan untuk dipergunakan sebagaimana mestinya.

Bantimurung, 20 Desember 2018
Kepala Balai



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