



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	Building Climate Resilient District in Indonesia: Case of Sigi District
Type of Implementing Entity	National Implementing Entity
Implementing Entity	Kemitraan (Partnership)
Executing Entity/ies	Konsorsium Lingkungan Adaptif, Berketahanan, Inovatif, dan Partisipatif (KOLABORASI) Koaksi Indonesia, Lingkar Temu Kabupaten Lestari (LTKL), Earth Innovation Institute (EII), Alliance for Water Stewardship Indonesia in partnership with the District of Sigi, Central Sulawesi.
Amount of Financing Requested	998,868 (in U.S Dollars Equivalent)

Project / Programme Background and Context:

1) General context: Climate Change and Adaptation

- Indonesia is ranked in the top-third of countries in terms of climate risk, with high exposure to all types of flooding and extreme heat. The intensity of these hazards is expected to grow as the climate changes. Without effective adaptation, population exposure will also rise. For example, the population exposed to an extreme river flood could grow by 1.4 million by 2035–2044¹.
- Sigi District, based on the Index and Vulnerability Data Information System (Sistem Informasi Data Indeks dan Kerentanan/SIDIK), is an area that is quite vulnerable to the impacts of climate change. Based on SIDIK, 66% of the villages are considered to have a moderate vulnerability to climate change. Villages located further from the district capital in the Sigi Biromaru sub-district tend to have a higher vulnerability to climate change. Figure 1 illustrates the vulnerability at village level (Source: SIDIK²).
- According to the head of Sigi Disaster Management Agency, almost all area of Sigi District is vulnerable to disaster, mainly flood and landslide³. Based on the result of the rainfall analysis in the past 37 years, there is an increasing trend in the number of rainy days >50 mm/day (extreme) per year. This

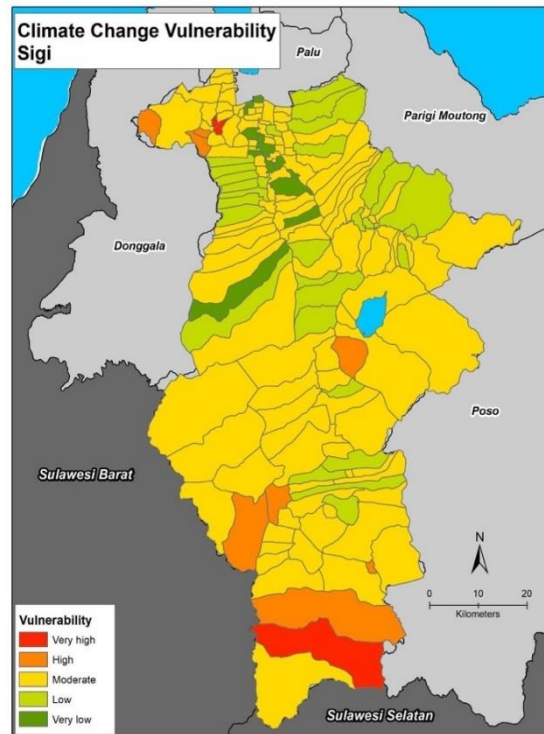


Figure 1 Vulnerability to climate change map of Sigi District in 2018 (Source: SIDIK)

¹Climate Risk Profile: Indonesia (2021): The World Bank Group and Asian Development Bank

²https://inarisk.bnpb.go.id:6443/arcgis/rest/services/SIDIK/Kerentanan_Iklim/MapServer

³<https://nasional.tempo.co/read/1358522/pemkab-sigi-tingkatkan-masyarakat-waspada-cuaca-ekstrem>

indicates that there is a threat of increasing rains with extreme intensity in the future, which would cause floods and landslides that could submerge houses and agricultural land, and damage other public infrastructure, such as roads, fresh water, and electricity.

4. In 2020, flash floods hit the Omu and Tuva Villages in the Gumbasa District. The disaster had disabled the Palu-Kulawi route for two days. Apart from these two villages, there were also a number of villages in Kulawi and South Dolo sub-districts, which had been frequently hit by flash floods. Therefore, people who live along the river need to be vigilant and evacuate immediately if there are signs of flood. It is evident that climate variability has increased the risk of floods and landslides, and other types of climate-related disasters in Sigi District.

Disaster	Number of people				Number of residential unit				Number of unit damaged		
	Number of events	Loss of life	Injured	Relocated	Severe damaged	Damaged	Little damaged	Submerged	Health facilities	Religious facilities	Education facilities
Flood	15	10	28	5,039	235		122	1,011	2	8	11
Earthquake and liquefaction	1	405	1,112	76,835	8,342	5,960	13,850	0	35		267
Landslide	5		10	384	8	0	10	46	0	1	0
Extreme weather	1	0	2	0	0	0	0	0	0	0	0

Table 1. Disaster Incidents in Sigi District 2010-2019. Source: 2019 Disasters in Indonesia Data and Information

2) Climate change threats to Sigi District

2.a. Water-related Strategic Issues in Sigi District

i) Catchment Water Balance to Sustain Livelihood and Energy Production

5. Catchment water balance takes into account the total inflows of water entering the catchment, the total outflows of water leaving the catchment, and the capacity of the catchment to store water. One of the significant impacts of climate change and variability is the changing water cycle in the catchment, disrupting the catchment water balance that could further increase the risks related to conflict over water among different users in the catchment⁴.
6. Sigi District is located in the Palu-Lariang river basin or *Wilayah Sungai Palu-Lariang*, a trans-provincial river basin comprising 52 smaller surface catchments. Two of the Palu-Lariang river basin's largest catchments are located in Sigi, which are called DAS Lariang and DAS Palu. Understanding the catchments' water balance allows the district government to better plan a resilient fresh water supply for the upcoming industrial and agricultural centers in Sigi, as a part of the KAPET-PALAPAS National Strategic Area.
7. Currently, the study on the impact of climate change at the district level is not available and is expected to be made available through the implementation of this proposal.

ii) River and Borewell Water Quality

8. The resilience of water supply to sustain livelihood and energy production also depends on the quality of available water sources. The Sigi Information on Environmental Management Performance in 2018 mentioned that maintaining good quality of water resources is considered as one of the district strategic development issues.
9. Regular surface water quality monitoring by the district government is done at six subsidiaries of Lariang river. Monitoring in 2018 showed that both the physical and chemical parameters of Lariang river are not suitable for the district's drinking water supply. On the other hand, the groundwater quality monitoring in 2018 in nine sampling locations indicated that the district's groundwater is still suitable for fresh water supply for domestic purposes with prior treatments.
10. The district government has identified the lack of centralized domestic and industrial wastewater treatment plants and poor solid waste management as the significant causes for the declining of surface water quality.

⁴A Chalid and A Mulyadi 2021 IOP Conf. Ser.: Earth Environ. Sci. 930 012074; and T.V.Reshmidevia, D.Nagesh KumarbcR. Mehrotrad A.Sharmad, Estimation of the climate change impact on a catchment water balance using an ensemble of GCMs

iii) Access to Safe Water, Sanitation, and Hygiene (WASH)

11. While water sources availability is in abundance year-long in Sigi, only 3% of households are connected to the district water company (PDAM Donggala) piping system. As many as 70% of total households get their domestic water supply from individual bore wells (Statistik Kesejahteraan Rakyat Kabupaten Sigi 2021). While the total number showed that more than 70% of Sigi households already have access to clean water, SDG 6 targets, and national development targets required to be in a **decent and/or safe state**. However, information related to the quality of the individual bore wells are limited. The level of proneness to water quality contamination and resiliency towards natural disaster should be assessed, and the spatial distribution of the high-risk population in terms of access to decent or safe clean water.
12. Once collected and assessed, this information should be fed into the district's development targets and planning.

iv) Water-related Disaster: Flood and Landslide

(1) Flood

13. The flooding events in Sigi are mostly triggered by high-intensity rains that can be classified into two sub-categories, i.e.: local rain and flash flood due to the propagation of peak runoff from high-intensity rain in the upstream of the catchment. The topography of Sigi, which is dominated with highland-mountainous areas, leads to higher threat of flash flood to low-lying areas along the river systems. Several rivers with frequent floodings include 1) Miu river (Gumbasa sub-district), Salui river, Kalangga river; 2) Palindo river (South Dolo sub-district), Wewe River, Magila River, Sadaunta River; 3) Salua River (Kulawi sub-district); and Manggalapi River (Palolo sub-district).
14. High intensity rainfall generally occurs in the southern part of Sigi. This region is both classified as the upstream part of Palu catchment and Lariang Hulu catchment. The region includes Kulawi sub-district, Southern Lindu sub-district, South Kulawi sub-district and Pipikoro sub-district.
15. The high flooding incidence in Sigi is caused by several factors, including 1) local weather and climate, 2) Madden Julian Oscillation (MJO) - Global Atmospheric Phenomenon, 3) rock and soil conditions, 4) topographic, and 5) land cover changes.

(2) Landslide

16. In general, Sigi has an Oldemen climate type, which has seven to nine wet months in a year. High intensity rainfall generally occurs in the southern part of Sigi, ranging from 1500 to 2300 mm per year, i.e.: Kulawi sub-district, Southern Lindu sub-district, South Kulawi sub-district, and Pipikoro sub-district. Due to climate change conditions, the risk of higher rainfall intensity and flooding would increase and trigger landslides and flash floods in several areas, mainly along the Palu Valley.
17. The 2022 to 2030 projection of change in flooding risk in Sigi, using current trend scenario, by WWF Water Risk Filter showed an increasing trend with risk change class of +0.8. This projection indicates that areas, currently identified by BNPB with high flood and flash flood hazard, would be further exposed to higher risk of flooding events.

2. b. Strategic Issues on Energy in Sigi District

i) Access to Electricity

18. Indonesia's compliance of energy needs has not yet evenly distributed and still faces many challenges. As experienced in several regions in Indonesia, especially with conditions tend to be difficult, Central Sulawesi with total of 3,010,440 people or 811,927 households has 91.93% electrification ratio. Zooming out to Sigi, the district's electrification ration is 83% with 43 villages in four sub-districts have limited access to PLN's grid (State-Owned Electricity Company). These sub-

districts are Lindu, Kulawi, South Kulawi, West Dolo, and Pipikoro. PLN has difficulty reaching to these areas because the distance from the capital of Sigi is about 50 km. On average, PLN can only manage to expand 2 km of the grid in each expansion point per year (ESDM, 2017), and remote villages are located 25 km outside the grid. Connecting the most outlying villages of Kulawi and Pipikoro to the grid will not be happening within five to ten years.

19. Due to the challenge of energy access, the Central Sulawesi Provincial Government pushes forward energy development in their Regional General Energy Plan (RUED) and Regional Electricity General Plan (RUKN). The rural electricity development plan prioritizes using renewable energy by utilizing hybrid technology while still paying attention to social, economic, and environmental safety aspects. Energy development is adjusted to the local potentials, where the availability of micro-scale water and solar energy is the highest potential. Several villages in Kulawi and Pipikoro have developed microhydro on a limited scale. However, they are not sufficient for productivity uses to increase their local economy, for example, to run food processing and other production machineries to improve livelihoods as a part of an effective climate change adaptation.

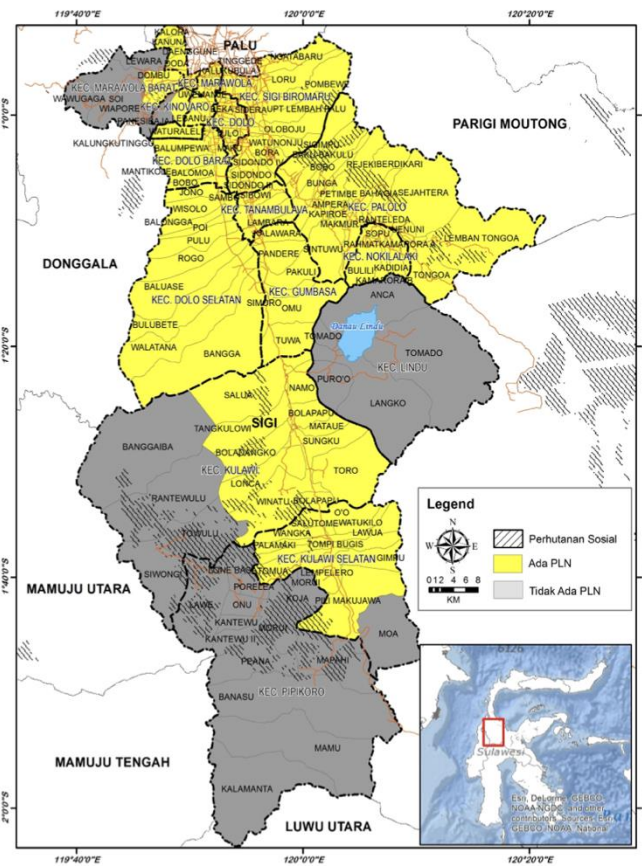


Figure 2 The availability of electricity access from PLN at Sigi District (Source: BPS, 2018)

ii) Energy Sources in Sigi Impacted by Climate Change

20. Renewable energy plants in remote areas is not only fulfilling electrification needs to the communities, but also giving access to basic essential services, for example fresh water and sanitation, information and education, health and security, and economy. Sigi District with highest water and solar potentials can utilize its river flows as the source microhydro and communal solar power plants. The level of water discharge and elevation would significantly affect the capacity of the microhydro power plant. This information should be assessed and incorporated in a feasibility study prior to the development of power plants to determine energy capacity produced. The Ministry of Energy and Mineral Resources stated that the average capacity factor in microhydro power plant is 60%, ranging between 40-80%, due to hydrological analysis. Hence, if there is a sudden hydrological change at one time, it will affect the energy output of the power plant.
21. Climate change is one of the causes of hydrological change, as simulated by international researchers in 1970 to 2010. Climate change affects river conditions through uncertain rainfall patterns. If the rainfall is sporadic, the river will become dry and would not be able to drive the turbine generators. On the contrary, if the rain is abundant, it will cause damage to power plant's system due to the exorbitant water discharge. Therefore, uncertain natural conditions would result in an improper design to the power plant.
22. Limited or no access to electricity will undoubtedly impact the livelihoods and resiliency of rural communities to the impact of climate change, especially since the Covid-19 pandemic. The local community has the rights to access better health facilities and updated information on the related issues, with better fresh water supply and sanitation. Their limitation would shut their opportunity to better education and economic improvements based on the local communities. Most importantly, limited access to communication would hinder them when it is necessary to build an early warning system and reinforcements in the event of a disaster and to distribute aid quickly.

2. c. Strategic Issues on Food Security and Agriculture in Sigi District

Decrease in agricultural productivity

23. Based on the Ministry of Environment and Forestry's spatial data⁵, the land use in Sigi District is dominated by forest cover as shown in. In 2019, 71% of the land was covered by forests, while only 17% or equal to 92,128 hectares was used as agricultural land, which has been constantly increased compared to the agricultural land in 1990 – 11% or equal to 60,597 hectares. According to the Ministry of Environment and Forestry Regulation No. 734/2014, the area available for non-forest use, including agricultural activities and urban development, is only 25% of the total area of Sigi. The rest of the area is designated for forest-related land use, including production forest (25%), protection forest (27%), and national park (23%). These figures are also consistent with the district's latest spatial planning for the 2021-2041 period (Regional Regulation No. 1/2021 on Sigi District Spatial Plan).
24. Two main staple food crops produced in the district are rice and corn. The total production of corn and rice in 2020 was 56,173 tons and 64,949 tons and the productivity of each of the commodities was 4.6 tons/hectares and 4.5 tons/hectares, which was lower than the national average productivity at 5.4 tons/hectares and 5.2 tons/hectares. The low productivity could be attributed to the lack of irrigation for agriculture.
25. Currently, most of agricultural practices still rely on rainfall patterns due to the major earthquake and soil liquefaction occurred in 2018, which damaged agricultural infrastructures and reduced soil fertility. If the dry season is longer than predicted, the productivity of rice and corn would decrease, as happened in 2021.
26. The 2018's earthquake and soil liquefaction also caused landslides in hilly forested areas, which has reduced the capacity of the landscape to prevent flash floods in villages in the lowlands. Flash floods are one of the main threats not only to the local community houses but also to their agricultural and livestock activities. The 2019's flash floods in Bangga Village, Dolo Selatan sub-district submerged many parts of the village, which forced 580 households to relocate to other villages.
27. Most of the villages in Sigi are moderately vulnerable to climate change impacts as shown in Figure 6. The main livelihoods of the people residing in these vulnerable villages is farming, and some of the major products are cocoa and coffee, with the primary determinants of agricultural yield are temperature and rainfall patterns. Rising in temperatures would drastically reduce humidity and increase vulnerability of cacao trees and threaten the chocolate industry. As for coffee, the area suitable for growing coffee could be reduced by up to 50% by 2050 due to longer and heavy rain as well as drought cycles caused by rising temperatures.

3. Socio Economic Context

3. a. Population

28. Over the last ten years, the population number in Sigi District has been steadily increasing, from 215,030 in 2010 to 257,580 in 2021, showing approximately 1% annual growth rate⁶. The highest percentage of population (22,54%) resides in its capital, Sigi Biromaru, while the lowest percentage lives in Nokilalaki, a sub-district located 52 kilometers away from the district's administrative capital.
29. In 2020, the population density in Sigi is 50 people per km², only a third of the average Indonesia population density. However, the access to civil registration is still considered as a challenge due to the district's vast area. Since 2014, Sigi has implemented an online civil administration information system, but the number of National Registry ID Card (KTP) ownership is only 75% in 2017, and only 40 out of 1,000 people have birth certificates⁷. This condition has worsened since 2018, where a

⁵<https://dbgis.menlhk.go.id/arcgis/rest/services/KLHK>

⁶BPS, 2021, Kabupaten Sigi Dalam Angka 2021.

⁷Kabupaten Sigi, 2019, Rencana Kerja Perangkat Daerah Kabupaten Sigi 2019.

large number of residents lost their civil registry documents due to the major earthquake and liquefaction⁸.

30. Bolepapu and Lonebasa, which are selected as the target villages in this project, have a combined population of 3,434 people (1,731 males and 1,699 females), who mostly identified themselves as the indigenous people of To Kulawi and To Kaili. *These two indigenous groups have been formally recognized by Sigi through the Head of District Decree No.189.1-521 in 2015.*⁹ Moreover, there are existing *Lembaga Adat (Adat Institution)* in sub-district and village levels alongside the formal sub-district and village administration.

3. b. Poverty level

31. Main livelihoods in Sigi Districts is agriculture. In 2020, 52,132 (45%) of people of productive age work as farmers or farm workers, and 44,276 (38%) work in the service industry. Minimum wage in Sigi district according to Central Sulawesi Governor Decree No. 561/399/Dis.Nakertrans.6.ST/2021 is Rp 2,390,739, while the regional poverty line is at Rp 370,788.

32. The poverty level in Sigi fluctuates in the past five years. Currently, Sigi District is categorized into Desil 1 Category District with **extreme poverty** based on the National Household Data (Bappeda Sulteng, 2022). There are 153,000 poor people in Sigi, including in Kulawi and Pipikoro sub-districts¹⁰ According to Social and Welfare Office Data 2022, **49,5% of the Bolapapu residents and 70,8% of Lonebasa residents are in the extremely poor and vulnerable category**. The poverty rate in Sigi is 13,05% against its entire population¹¹. Meanwhile, the national target of poverty rate is at 8,5 to 9% in 2022.

33. Out of this poverty number in Sigi District, 38.16% are unemployed and 55.63% are informal workers, who mostly work in the agricultural sector. More than half (54.5%) of the population under poverty has healthcare insurance (BPJS) and up to 83% has home ownership¹².

3. c. Education and Local Wisdom

34. The average years of schooling in Sigi District throughout 2016 to 2020 is 8,4 years, which is relatively low compared to the national policy on twelve years of compulsory education. However, the expected years of schooling has increased from 12.31 in 2016 to 12.87 in 2020, indicating that Sigi provides access to formal education up to high school level.

35. In Sigi, nature and forest protection are considered as customs and traditions that have been passed down between generations, especially for the indigenous people living alongside the forests. There is a local wisdom called **Taolo**¹³, a forest zone status that prohibits land opening in specific areas with steep slopes to prevent erosion and landslides. The indigenous law also forbids and gives out sanctions for people committing forest encroachment and environmental pollution¹⁴.

3. d. Health

36. Life expectancy in Sigi District has significantly improved from 68.69 in 2016 to 69.99 in 2020. Public health services has also improved with health facilities and workers (doctors, nurses, midwives, and pharmacists) spreading evenly across all 15 sub-districts. In 2020, 98.72% of childbirth were assisted by doctors and midwives. Child vaccination is accessible in every public health center. However, number of children (12.46%) have not yet had a Child Identity Card (KIA) and their vaccinations were not well documented. This is a challenge as database and documentation is imperative in healthcare access and improvements.

⁸<https://sulteng.antaranews.com/berita/44616/banyak-warga-sigi-kehilangan-dokumen-kependudukan>

⁹ https://www.aman.or.id/wp-content/uploads/2016/02/SK-Bupati-Sigi-ttg-PPMHA_-To-Kulawi-dan-To-Kaili.pdf

¹⁰ <https://dtk.kemensos.go.id/> DTKS Kabupaten Sigi 2022 <https://sulteng.antaranews.com/berita/238661/pemerintah-kabupaten-sigi-verifikasi-data-terpadu-kesejahteraan-sosial>

¹¹ <https://bappeda.sultengprov.go.id/musrenbang-penyusunan-rkpd-kabupaten-sigi-tahun-2022/>

¹² BPS, 2021, Statistik Penduduk Miskin Kabupaten Sigi Tahun 2020

¹³ <https://jaring.id/antara-bukti-konservasi-dan-batas-di-atas-kertas/>

¹⁴ <https://sulteng.antaranews.com/berita/179460/upaya-komunitas-adat-lindu-jaga-kualitas-lingkungan>

3. e. Gender

37. According to the 2021 data published by the Statistics Bureau of Sigi District, the population of the district in 2020 is 239,430 people with gender ratio of 112.91, meaning that there were 113 men for every 100 women. The male and female population comparison in 2010 and 2020 for each sub-district is presented in Table 4.

Sub-District	2010 Population		2020 Population	
	Male	Female	Male	Female
Pipikoro	4,024	3,796	4,445	4,275
Kulawi Selatan	4,456	4,014	4,945	4,495
Kulawi	7,325	6,845	8,098	7,712
Lindu	900	790	2,774	2,476
Nokilalaki	2,870	2,760	3,176	3,084
Palolo	14,409	12,981	15,945	14,495
Gumbasa	6,065	5,615	6,725	6,285

Sub-District	2010 Population		2020 Population	
	Male	Female	Male	Female
Dolo Selatan	7,503	6,947	8,312	7,768
Dolo Barat	6,383	6,197	7,074	6,936
Tanambulava	4,050	3,820	4,492	4,278
Dolo	10,691	9,899	11,853	11,077
Sigi Biromaru	21,850	21,010	24,208	23,502
Marawola	10,547	10,443	11,680	11,680
Marawola Barat	3,222	3,158	3,568	3,532
Kinovaro	4,828	4,642	5,348	5,192

Table 4. Population of Sigi District in 2010 and 2020 based on gender. Source: Kabupaten Sigi dalam Angka 2021

4. Current Enabling Condition in Sigi District

38. The current efforts of Sigi District government to mitigate and adapt to the climate crisis are well-illustrated in the issuance of **Sigi Hijau**. It is a cross-sectoral policy breakthrough and the manifestation of Sigi's commitment to pursue jurisdictional sustainability achievable through several strategies that include climate change mitigation and adaptation including Regional Action Plans for Climate Change Mitigation and Adaptation as the extension of the national and provincial action plans to the district level. This proposed project aims to support Sigi District develop its own regional action plans for climate change adaptation. Sigi Hijau showcases the district's commitment further and will ensure effective implementation and access to funding from government fiscal incentives or private and non-profit.
39. Since the issuance of Green Sigi Vision in 2019, the district government has established its roadmap towards prepping the implementation pillars, including the availability of a **multi-stakeholders forum**. It was still conducted despite their post-disaster condition. By June 2022, following to the slow recovery, the district had revived their efforts. In parallel, through the Sustainable District Platform (Lingkar Temu Kabupaten Lestari/LTKL) secretariat - a district association under the Association of Districts Government in Indonesia (APKASI), the district has conducted stakeholders mapping and assessment in Sigi and across Palu City to identify core groups for Green Sigi implementation and ensure inclusivity of the multi-stakeholders platform, from architectural, disaster prevention, youth empowerment, women group, indigenous community, literacy, and community business development working groups. The Green Sigi multi-stakeholders platform is targeted to be established by end of 2022. Prior to the establishment, the government has committed resources to support the process through district planning agency (Bappeda).
40. Jurisdictions with significant forest and conservation areas generally issue more regulations related to sustainable land use than the smaller ones. Sigi District, with relatively smaller size forest and conservation land, has published regulations on five topics of sustainable land use, including forest and peat protection and conservation, green growth planning, sustainable commodities, disaster/environmental management, and indigenous people and customary law.
41. As the proportion forest and conservation area against the total area of Sigi District is more than 70%, Sigi District relies heavily on their forest area for its ecosystem services, particularly on water and soil quality, resulting into a strong Jurisdictional Approach commitment to protect of the forest and conservation area, social forestry, and agrarian reform. Focusing on environmentally sound development and sustainable land use, Sigi will use its natural assets to increase its economic growth through sectors, such as ecotourism, forestry, and agriculture. Sigi has issued a local regulation on Regional Action Plan (Rencana Aksi Daerah/RAD) for sustainable development in Sigi District. There are also several initiatives on Lore Lindu National Park that involve all villages, including formal agreement for indigenous community surrounding the national park to utilize the forest sustainably.

5. Project Context

42. Sigi District has developed its disaster risk assessment in 2020. The assessment has not covered many types of disasters and will need to be detailed down to be able to provide critical recommendations for mitigation and adaptation strategy. Mitigation and adaptation are the two strategies for addressing climate change. Mitigation is an intervention to reduce the emissions sources or enhance the sinks of greenhouse gasses. Adaptation is an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (IPCC 2001)¹⁵.
43. As climate risks are increasing, Sigi government should be aware of which risks can be mitigated and which risks are not possible and will need to be approached through adaptation framework. In terms of adaptation, there are several basic elements as the basis of developing a comprehensive adaptation strategy, which are water and air. Due to the intensive climate variability occurrences in the region, the water cycle in many regions are changing drastically. These changes are impacting the catchment water balance, which further affecting the irrigation regime, energy production through hydropower dams, distribution of goods and services through the river networks, and other economic and development activities. In addition, the increasing occurrences of floods and long periods of droughts would be more threatening to the livelihoods of local communities, and business and economic continuity in the region.
44. Based on the context above, this proposal is focused on building a climate resilient district through water-energy-food nexus with Sigi District as the pilot. Below are the brief descriptions of the project components.

5.a. Climate Change Vulnerability Assessment and Climate Modeling

45. Effective planning and implementation of climate change adaptation at the jurisdictional level require an understanding of the current climate vulnerability levels across the jurisdictions and accurate projection of future changes and impacts. To be able to reach complete understanding, a climate change vulnerability assessment will be conducted, using an indicator-based approach that incorporates climate exposure, sensitivity, and adaptive capacity indicators relevant to the local context and to different groups, based on gender, age, and other social identities. General indicators may include population size, population density residing in disaster-prone areas, income sources, poverty level as well as health and education-related indicators. As this project will have a strong emphasis on adaptation on water-energy-food nexus, indicators related to the three sectors will be included in the assessment. These may include, but are not limited to, access to electricity, water sources, agricultural areas, and main agricultural crops.
46. To ensure the longevity of the district's adaptivity to climate change, the climate change vulnerability assessment will be enhanced by climate modeling, aiming to simulate and predict short, medium and long-term changes in precipitation and surface temperature in the future that will impact the ecosystem, its services, and subsequently humans, through loss of lives, income sources, building damage, and many others. Projection of future changes in these variables can advise appropriate measures that are highly adaptive in the long run.

5.b. Capacity Assessment

47. One of the critical issues of adaptation action plan is capacity of stakeholders at all levels. Understanding the gap of capacity will help Sigi District to formulate the most appropriate actions to be included in the plan. Capacity assessment in this project will focus on the organizational capacity, both at community and district level, and will be closely linked with the main role and function of the organizations based on its national and local mandate for adaptation actions, as well as direct or indirect influence to governance improvements based on influence level, power, and interest to governance improvements.
48. At the community level, capacity assessment will be directed to existing community-based

¹⁵Bruno Locatelli, Climate Change and Forests in the Congo Basin: Synergies between Adaptation and Mitigation: <https://www.cifor.org/fileadmin/fileupload/cobam/ENGLISH-Definitions&ConceptualFramework.pdf>

organizations that are relevant to adaptation and/or have been established by the local government in relation to the village resilience program (DESTANA) or other relevant government's programs. This is to ensure integration at the community level.

5.c. Development of Regional Action Plans for Climate Change Adaptation

49. A adaptation measures that appropriate and compatible with the local context should be developed and implemented to ensure regional resilience towards the inevitable climate change impacts. Regional jurisdictions, including district-level jurisdictions, are mandated by the Ministry of Environment and Forestry to develop Regional Action Plans for Climate Change Adaptation (Rencana Aksi Daerah Adaptasi Perubahan Iklim or RAD-API).

50. This project aims to support Sigi District developing RAD-API, by 1) incorporating a multi-pronged, technological, and multistakeholder participatory approach for assessing climate vulnerability, 2) identifying climate vulnerable areas within the district, and 3) formulating the appropriate adaptation measures that will focus on the water-energy-food nexus to increase the district's resilience towards threats to its water, energy, and food security, and to ensure that they will benefit the local economy. The anticipated measures are expected to be integrated into other regional plans, such as the Regional Medium-Term Development and Planning Document (Rencana Pembangunan Jangka Menengah Daerah or RPJMD), the Annual Regional Government Work plan (Rencana Kerja Pemerintah Daerah or RKPD) and/or Regional Spatial Planning Document (Rencana Tata Ruang Wilayah or RTRW).

5.d. Pilot Implementation at Villages Level

51. Many farmers in Indonesia have experienced the decline in agricultural and plantation yields, including Sigi District. In realizing an adaptive and climate-resilient district, collaborating with various institutions at all levels are required. The water-energy-food (WEF) nexus approach responds to various factors, such as climate change, population growth, and exploitation of natural resources. The proposed water-energy-food nexus approach provides a broad, multi-pronged approach that increases the livelihood of involvement and participation of, and generation of benefits for, different groups of different social identities that exist in the villages, including gender and age groups.

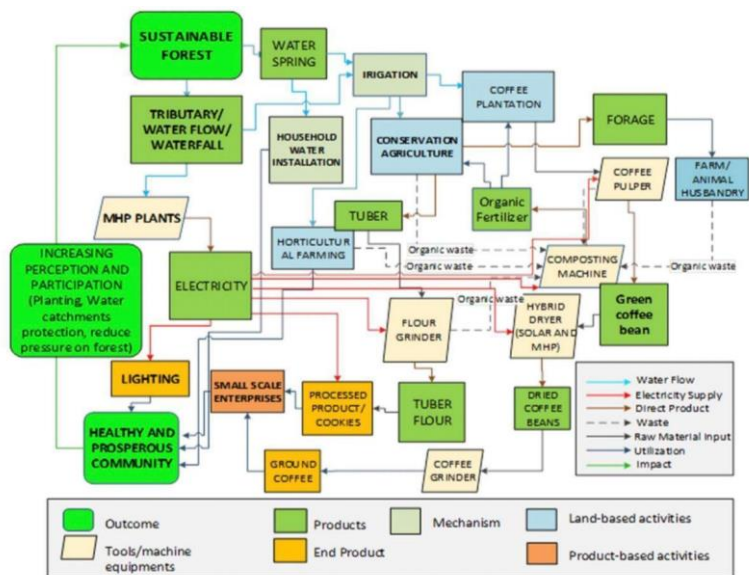


Figure 3. Modeling of Water-Energy-Food Nexus Applications in Indonesia

52. WEF interventions are relevant to encourage forest conservation in Sigi. A good water catchment area will maintain energy potential as the resource to develop the economy, for example, through food processing or other commodity-based industry. This WEF approach (Figure 8) will increase the community's capacity to be adaptive to impacts of climate change.

53. WEF assessment at the pilot villages to secure climate resilience:

- 1) Define the objectives and scope of the assessment
 - Identifying the problem at stake, specifying different problems experienced by different groups of social identities;
 - Selecting stakeholders who will participate in the assessment; and

- Defining the spatial boundaries and temporal scale of the assessment.
- 2) Assess the WEF system and its challenges
- The relevant components including actors, their assets/investments and in their interests;
 - The interactions between them; and
 - The context of the WEF nexus, including relevant natural resources, infrastructure, social resources of the communities, and institutions (policies, laws, formal or informal arrangements).
- 3) Develop scenarios of future WEF systems in the third step
- Develop plausible scenarios of WEF security in the region, accounting for the situation of different social groups in the mountains and their resilience. The scenarios are based on identified trends, expected investments, and consider future demands for water, energy and food, based on population growth, socio-economic changes, and urbanization, as well as climate change impacts and demands for ecosystem services from lowlands.
- 4) Create an enabling environment to facilitate transformative change
- Implementing jointly identified solutions requires widespread support and agreement to support from other relevant stakeholders.

5.e. Importance of Project

54. The consortium considered the above project components as critical for Sigi District. If the project is not available to be implemented, people living in climate vulnerable areas will suffer from a variety of risks, ranging from building damages and loss of income sources, to loss of lives.
55. Without proper assessment of climate change vulnerability, areas in the district that are highly vulnerable to the impacts of climate change will not be properly identified, which could lead to ineffective interventions. Climate modeling is also needed to assess changes in vulnerability levels projected in the future, which will enhance intervention options. In addition, capacity assessment is needed to identify the current institutional capacity level of local stakeholders in implementing climate change adaptation actions and improvements. These assessments will serve as the basis for the formalized RAD-API, which will be mainstreamed into regional planning for long-term actions. Without the development of RAD-API, Sigi District will not have adequate data and justification for pursuing regional sustainable development strategies that are climate-adaptive, and could limit the district's capacity and access to relevant funding needed for implementation.
56. Upon the development of effective and targeted action plans, the consortium considered the importance of showcasing how such action plans can be implemented on the ground. Implementation of small-scale projects specific to the needs of the focused vulnerable villages will help increase their resilience toward climate change. This pilot implementation will also serve as a demonstration for local stakeholders for replication in other areas facing similar challenges.

Project / Programme Objectives:

57. The main objective of the proposed project is to increase the economic, social and ecosystem resilience of Sigi District towards the detrimental impacts of climate change. The consortium will achieve this objective by focusing on:

1. Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with water-food-energy nexus approach
2. Showcasing an effective District's Action Plan for Climate Change Adaptation with on-the-ground implementation focusing on two vulnerable villages: Bolapapu Village in Kulawi sub-district and Lonebasa Village in Pipikoro sub-district.

Project / Programme Components and Financing:

Project/ Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with water-food-energy nexus approach	1.1.1. The establishment of a district-level working group for climate change adaptation	1.1. Improvement of institutional capacity local stakeholders in district-level climate change adaptation collaborative planning and interventions	537,915
	1.1.2. Carrying capacity assessment of local stakeholders for climate change adaptation planning and interventions		
	1.1.3. Institutional capacity building roadmap at district and community level developed		
	1.1.4. Increased capacity of local stakeholders in implementing climate change adaptation interventions		
	1.2.1. Climate change vulnerability assessment using district level data and indicators and climate modeling based on water-energy-food (WEF) nexus approach	1.2. Strengthened governance of cross-sectoral climate change adaptation policy with appropriate adaptation measures and systemic efforts	
	1.2.2. Key Recommendations based on district's climate change vulnerability assessment is mainstreamed and acknowledged in the district 2025-2030 Mid-Term Development Plan (RPJMD)		
	1.2.3. Co-Created District's Action Plan for Climate Change Adaptation (Rencana Aksi Daerah Adaptasi Perubahan Iklim Kabupaten Sigi - RAD-API)		
	1.2.4. Co-Created District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2021-2024 aligned with interventions under the RAD-API		
	1.2.5. Co-Created District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2025-2030 aligned with interventions under the RAD-API		
	1.3.1. Learning and Communication Tools targeted for replication co-created based on Monitoring, Evaluation & Learning (MEL) throughout the process	1.3. Establishment of knowledge sharing method for collaborative planning practice for climate change adaptation at district, provincial and national level	
1.3.2. Series of learning and communication activities to encourage replication at district, province and national level			
2. Showcasing an effective District's Action Plan for Climate Change Adaptation with	2.1.1. Delivery of analysis and action plan from the district level down to the village-level	2.1. Increased knowledge and capacity of the local community by adopting the District's Action Plan for Climate Change Adaptation	301,757
	2.1.2. Carrying capacity assessment of local stakeholders for climate change adaptation planning and interventions		
	2.1.3. Increased capacity of village institution to prepare and implement derivative programs from District's Action Plan for Climate Change Adaptation at the village-level		

on the ground implementation focusing on two vulnerable villages: Bolapapu Village in Kulawi sub-district and Lonebasa Village in Pipikoro sub-district	2.2.1. Climate change vulnerability assessment at the village-level based on water-energy-food nexus approach	2.2. Increased economic, social, and ecosystem resilience in the local community through the water-energy-food nexus approach to become a successful model for replication in other areas of the Sigi District	
	2.2.2. Participatory identification of local livelihood productivity improvement as a basis for the village-level action plan for climate change adaptation		
	2.2.3. Co-creation of village-level climate change adaptation action plan based on the water-energy-food potentials		
	2.2.4. Increased community’s capacity to access adaptive agricultural practice		
	2.2.5. Increased community’s capacity in water management for agricultural needs and as energy source		
	2.2.6. Increased community's capacity to access inclusive and sustainable energy		
	2.2.7. Water-energy-food nexus to support business model of village-level climate adaptation action plan		
3. Project/Programme Execution Cost (9.5%)			80,944
4. Total Project/Programme Cost			839,672
5. Project/Programme Cycle Management Fee charged by the Implementing Entity (8.5%)			78,252
Amount of Financing Requested			998,868

Projected Calendar :

Milestones	Expected Dates
Start of Project/Programme Implementation	June 2024
Mid-term Review (if planned)	May 2025
Project/Programme Closing	February 2026
Terminal Evaluation	March 2026

Project Timeline 2024 - 2026 :

Activity	2024												2025												2026			
	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3						
Project management Unit establishment & mobilization of resources																												
Development of Inception Report and Inception Workshop																												
Establishment of District Working Group for Climate Adaptation under the Green Sigi Multistakeholders Platform																												
Development of agreed project timeline with District Working Group																												
Co-creation: Vulnerability & Capacity assessment																												
Institutional Strengthening/Capacity Building Roadmap development																												
Co-creation: Sigi District Climate Risk Profile Development and socialization																												
Co-creation: Policy brief on Priority Recommendation of Adaptation Actions in the Mid-Term Regional Development Plan (RPJMD)																												
Integration process Priority Recommendation of Adaptation Actions in the Mid-Term Regional Development Plan (RPJMD) during the drafting process																												
Parallel Process Priority recommendations integration process into District Government Work Plan (RKPD) and District Agencies Work Plan (Renja) based on RPJMD 2021-2026																												
Parallel Process Priority recommendations integration process into District Government Work Plan (RKPD) and District Agencies Work Plan (Renja) based on RPJMD 2025-2030																												
Decision for pilot location by Working Group (2 villages)																												
Implementation of village pilot projects																												
Workshop on result of pilot implementation																												
Final workshop on project result + project handover																												

A. Project Component

58. This project aims to improve Sigi District government resilience towards climate risk through the adaptation programming efforts. The project will support the Sigi district government by developing climate vulnerability and capacity assessment on water-energy-food security nexus, which will be the basis for the government to develop the Climate Change Adaptation Action Plan (RAD-API) as mandated by the national government.
59. The result of the Climate Vulnerability & Capacity Assessment will be further developed into Climate Risk Profile accompanied with policy recommendation on priority adaptation actions to be mainstreamed into the coming Local Mid-term Development Plan (RPJMD) that will be drafted in second semester 2023. The mainstreaming of these priority adaptation actions into RPJMD is crucial as it will be the basis for the RAD-API development and annual planning of the local government.
60. It is expected that the mainstreaming of priority adaptation actions into the government's action plan and its implementation will complement the existing mitigation effort by Sigi District government and will eventually increase the resiliency of Sigi District towards climate change risks, especially risks related to the water, energy and food security.
61. In order to convince the decision makers on the benefit of the adaptation actions, through the project, two pilot villages will be selected to showcase the demonstration of how climate action can improve the resiliency of the village both on livelihood and economic fronts.

B. Economic, Social, and Environmental Benefits

Economic and Social Benefits

62. The project will have a direct impact on climate adaptation planning to disaster mitigation and preparedness, economic resilience, and climate-adaptive livelihood. The total direct and indirect beneficiaries of this project reached 257, 580 people distributed across 13 sub-districts with two pilot villages targeted, which are in the climate-sensitive disaster prone area of Palu Valley and within the ecosystem of Lore Lindu Biosphere Reserve. The Adaptation Plan implementation would reduce disaster and economic loss risks Sigi District has experienced by having more robust climate-based spatial planning, disaster preparedness, better food security, and sustainable source of renewable energy. Based on Sigi Disaster Management Agency, the earthquake in 2018 followed by flash floods and landslides throughout 2019 have caused USD 738 million USD loss. This is the estimated avoided cost if the climate adaptation program is successfully implemented.
63. Sigi is also selected for its leadership on the national level (LTKL), focusing on accelerating the implementation of sustainable development. In functional level, the project would equip and enable 50 officials in the District Government Agencies/Office in Sigi¹⁶ to implement the climate adaptation regional planning and develop an economic resilience model. When implemented, it would contribute to the growing of sustainable forest or agricultural commodities.
64. The availability of Gender Responsive and Inclusive Climate Risk Profile and the recommendation of priority adaptation actions will help stakeholders (private sector and community) to anticipate climate risks, such as floods and landslides, and to secure their business continuity, such as production and distribution of goods and services, distribution of goods, crops, etc. In addition to that, as the program will contribute to the fulfillment of Sigi's Regional Competitiveness Framework¹⁷, it will directly affect the income-generation as it comply with the sustainable investment appetite and sustainable supply chain from agricultural and forestry commodities. It is expected to increase Sigi's gross regional domestic products from the forestry, agriculture, and fisheries sectors beyond 43% of the entire Sigi's GRDP¹⁸.
65. For Bolapapu and Lonebasa Village Community in Kulawi and Pipikoro sub-districts respectively, the project will directly benefit 3,430 people, who also happen to be indigenous communities of Kulawi and Kaili, and are within the category of extremely poor and vulnerable. The project will enable them

¹⁶ <https://sigikab.go.id/index.php/pemerintahan/organisasi-perangkat-daerah.html>

¹⁷ <https://www.kabupatenlestari.org/en/document/kerangka-daya-saing-daerah-kdsd-booklet/>

¹⁸ <https://sigikab.go.id/dokumen%202020/RKPD%20MURNI%202019.pdf>

to 1) conduct participatory planning of their customary forest and/or community forest management, including enforcing women customary role as decision maker, 2) plan and implement disaster risk management to reduce their vulnerability, 3) 20% families in pilot villages have their household income increased from climate-adaptive agriculture and forest commodities, such as sustainable coffee, cocoa, or other food crops.

Environmental Benefits

66. The project will inform the government and other stakeholders to understand the change of nature due to the impact of climate change. This understanding is expected to expand the options on innovative adaptation solutions, especially nature-based adaptation solutions, to respond to the risks, for example, the floating crops solutions that can be implemented by a community of farmers who live in the flooded area. For the village residents, the project will directly contribute to increasing 20% of households capacity in water management and also enforce 20% of families in the two pilot villages to gain access to local sustainable energy sources.

Gender and Vulnerable Group Benefits

67. Building Sigi as a resilient district would impact gender mainstreaming, where the involvement of women and vulnerable groups in various activities is concerned, with a minimum of 30% participation of women. As the primary caregivers, women are responsible for the family's daily subsistence selections but are often not remunerated (Ferrant et al., 2014). However, women are disproportionately affected by the lack of cleaner and affordable energy options (Energia, 2008). Such is the case of Sigi, Central Sulawesi, and with 43 villages left in the dark, maternal mortality rates are high. Despite recognising that women are natural safeguards of natural resources, women in Sigi still lack access to essential services and voice and representation in decision-making. Particularly in rural areas, women play significant roles in small-scale agriculture and informal income-generating activities.

68. The project would integrate women's active participation in key activities in the planning and consultation process both at the strategic level through 30% participation in multi-stakeholder consultation and planning at the district level to the implementation process at the village level. Women's involvement, including women from the indigenous communities, will be accounted as key decision makers and front liners in climate mitigation and adaptation communication to targeted community groups and the wider public. The income-generating activities at the village level will also directly involve women, from deciding which forest/agriculture commodities to be cultivated, such as cocoa, coffee, forest honey, moringa, palm sugar, etc., to post-harvest and going to the market activities, including how they decide on how to grow the livelihood into economically valuable products and how they would access financing through cooperatives, VSLA or other community-driven initiatives. Environment safeguarding activities will also involve women, such as ensuring their inclusion as water committee members and/or in community forest stewardship initiatives and disaster management forum.

69. The Incorporation of gender analysis can increase the effectiveness of measures to protect people from climate variability and change. Gender-sensitive research is needed, including collecting, analysing and reporting sex-disaggregated data. Including gender-relevant considerations will strengthen jurisdictions' climate resilient planning. The availability of a Gender Responsive and Inclusive Climate Risk Profile will help all stakeholders, especially the vulnerable groups, to be able to understand climate risk related to water-energy-food security and to have the capacity to reduce the risks. The project will develop a Gender Responsive and Inclusive Climate Risk Profile to ensure that an effective gender mainstreaming approach is implemented throughout the project design, development, and implementation, where different needs of different gender groups are identified, sensitivities across gender groups are considered, and the interventions are tailored to meet different needs. This profile will be accessible to all stakeholders (i.e., braille version, infographic for those unable to read, etc.).

C. Cost Effectiveness

C.1. Project component 1:

Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with water-food-energy nexus approach; with project cost USD 604,147

- a. Concrete benefit from adaptation
- b. Avoided lost
- c. Alternative interventions and compromise

C.2. Project component 2:

Showcasing an effective District's Action Plan for Climate Change Adaptation with on the ground implementation focusing on two vulnerable village: Bolapapu Village in Kulawi Sub-District, and Lonebasa Village in Pipikoro Sub-District; with project cost USD 239,934

- a. Concrete benefit from adaptation
- b. Avoided lost
- c. Alternative interventions and compromise

(See Annex 1 for detailed Cost Effectiveness)

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

1. National Development Strategies

70. The proposed project will support and align to several key national development strategies and commitments. It corresponds directly with Indonesia's commitment towards climate change mitigation and adaptation, as formalized in the National Determined Contribution (NDC) and the NDC roadmap, the National Medium-Term Development Planning (Rencana Pembangunan Jangka Menengah Nasional/RPJMN) 2020-2024¹⁹ and National Action Plans for Climate Change Adaptation (Rencana Aksi Nasional Adaptasi Perubahan Iklim/RAN API) by the Ministry of National Planning. The three national strategic documents outline key agendas, especially building the environment and increasing disaster and climate change and economic resilience, including local government and people preparedness by expanding multi-sector partnerships. The strategies focus on the synergy of regional spatial use and the number of regencies and cities with detailed spatial planning for resilience to disaster and climate change, especially on building strength in safeguarding food, water, and energy resources. The consortium, through Component 1, will support the district in developing the action plans for addressing climate change mitigation and adaptation efforts and through Component 2, as well as conducting pilot projects that support resilient agriculture and energy independence in two selected vulnerable villages.

71. The project would also contribute to the Government of Indonesia's target of the number of regencies and cities with detailed spatial planning for resilience to disaster and climate change from 37 regencies and cities in 2019 to 250 regencies and cities in 2024 stipulated in RPJMN 2020-2024. Regional-level action plans act as building blocks of the national-level action plans and provide locally. The government of Sigi District will develop Sigi District's climate change adaptation plans to align with the national-level strategies.

72. The project also corresponds with The Presidential Regulation on 98/2021, which stipulates the implementation of carbon economic value that emphasizes Indonesia's efforts in climate change mitigation and adaptation, covering multiple priority sectors, such as food, water, energy, health, and ecosystem. This project aims to support the achievement of this commitment by supporting regional climate adaptation planning and implementation through climate change vulnerability and capacity assessment to provide data and information on current and future vulnerable areas that can be used as baseline information. In contrast, the capacity-building element of this project aims to ensure the

¹⁹ Narasi RPJMN 2020-2024, <https://old.bappenas.go.id/files/rpjmn/Narasi-RPJMN-2020-2024-versi-Bahasa-Inggris.pdf>

project's sustainability by ensuring proper implementation carried out by local stakeholders that includes monitoring and evaluation within and beyond the project period. The implementation element of this project will support existing on-the-ground projects that target priority sectors, namely food, water and energy, in pilot areas.

73. The proposed project will also support the Strategic Plan of the Directorate General of Climate Change of the Ministry of Environment and Forestry (Renstra PPI) through the assessment of local and data-driven climate vulnerability and capacity, which Sigi District can use for developing strategies and action plans to increase its food, water, and energy securities. Proposed implementation elements of this project aim to serve as a model of how adaptation strategies are implemented at the village level, where food, water and energy security is secured, while aiming to increase economic, social, ecosystem and livelihood resilience in focus villages. Such exemplary models will serve as “success stories” that showcase successful village-level transition into becoming climate-adaptive and can be replicated throughout and beyond Sigi District.

2. Sub-National and Regional Development Strategies

74. Sigi District's current Medium-Term Development Planning Document (Rencana Pembangunan Jangka Menengah Daerah/RPJMD) covers the district's strategic issues and strategies for 2021-2026. It stated the district's vision to increase its competitive advantages by strengthening its agribusiness sector. One of the missions to achieve this is by pursuing disaster mitigation-based sustainable development, achieved through a decrease in the disaster risk index and an increase in disaster resilience. The proposed project aims to support this mission by providing Sigi District with the data needed to strengthen disaster resilience, including baseline assessment of vulnerable areas and stakeholder capacity to develop strategies and action plans to reduce disaster risks and increase the communities' resilience.
75. Besides Sigi District's RPJMD 2021-2026, the project is precisely aligned with Sigi Hijau Vision. As a policy breakthrough initiated by Sigi District, it showcases the Sigi's government commitment to pursue jurisdictional sustainability, achievable through several strategies that include climate change mitigation and adaptation. This proposed project supports exactly this: helping Sigi District develop its regional action plans for climate change adaptation enhanced with capacity and vulnerability assessment and future climate projection modelling to create more comprehensive, adaptive measures. It also offers practical intervention to increase renewable energy and reduce deforestation and land degradation. The proposed project, which includes a pilot implementation in two selected villages, aims to improve the local community's economic, social, and ecosystem resilience and supports sustainable, forest-friendly and climate-adaptive agriculture to ensure food and livelihood security.

E. Compliance with National Technical Standard

76. This program is following Presidential Regulation (PERPRES) Number 22 of 2017 concerning RUEN (National Energy General Plan), which later became guidelines for RUED (Regional General Energy Plan) at the provincial level through the Central Government Provincial Regulations Sulawesi Number 10 of 2019. The potential for developing renewable energy in Sigi District is also following the direction of Central Sulawesi Governor Regulation Number 25 of 2019 concerning the General Plan of Regional Electricity for 2019-2038, where the priority of rural electricity comes from mini hydro or solar energy.
77. Consortium Kolaborasi will run the development of the PLTMH -less than 1 MW- (mini hydro) plan through participatory cooperation to improve the community's economy in this program by fulfilling various legal aspects required. It is necessary to fulfil the Statement of Ability to Manage and Monitor the Environment (SPPL) following Minister of Environment and Forestry Regulation number 4 of 2021 to ensure that energy use does not conflict with ecological functions. Then, if planning to develop

energy installations in forest areas, a borrow-to-use permit is required through the Ministry of Environment and Forestry.

78. In addition, the Directorate General of New, Renewable Energy and Energy Conservation (EBTKE) has compiled Guidelines for Environmental Management in the mini hydropower sector. This guide contains explanations and general instructions for implementing mini hydropower environmental management. The developer must carry out this document at the technical planning, pre-construction, construction, operation, maintenance, and post-operation stages.
79. The production and processing of agricultural products must adhere to national standards to increase food security by enhancing the lives of farmers in the community. The Sigi District is home to some of the province's agricultural products, including rice, corn, coffee, and cocoa. The Indonesian National Standard (Standar Nasional Indonesia/SNI) already regulates a standard for these four goods. There are currently guidelines for using different types of seeds, fertilizers, pesticides, and herbicides, along with procedures in the processing process to generate products that are ready to be sold. It is envisaged that by adhering to this SNI, Sigi District's agricultural productivity—which currently remains below the national average—can be enhanced.

F. Identification of Overlapping Projects

80. Currently, no existing efforts overlap with Kolaborasi projects. However, some efforts would be very good to complement or synergize with Kolaborasi. Sigi District Government is working with 1) Church World Services (CWS) and Yayasan Inovasi Ketahanan Komunitas (INANTA), and 2) Mercy Corps and Yayasan Penabulu. The first project aims to build community resiliency with a focus on livelihood and agriculture in four villages. The second seeks to manage risks through economic empowerment at the village level in 10 villages. Both projects have similar approaches to Kolaborasi: to improve the community's capacity to manage risk through economic empowerment and focus on the village level. Our project will complement and strengthen those projects by bringing a more comprehensive approach by: 1) providing a stronger foundation for the local government to develop climate adaptation programs, and 2) building a solid showcase for influencing the top-down approach from national to local levels through two critical angles: (i) Water-Food-Energy Nexus approach and (ii) Multi-layered jurisdictional approach (Village – District – Provincial – National).
81. Other initiatives and projects with jurisdictional approaches to sustainable business models and supply-chain development are also available to be synchronized with Kolaborasi. They are GIZ SASCI+ project, particularly in the biosphere reserve context for Lore Lindu National Park, mainly focuses on enhancing sustainability and value-added components in the agricultural supply chain in Indonesia, The GIZ Forclime Project, in collaboration with the Ministry of Agriculture and the local agriculture technology research agency (Balai Pengkajian Teknologi Pertanian/BPTP), focuses on coffee and cocoa certification and commodities research and development, Sigi District government is pursuing agrarian reform and the issuance of customary forest and community forests surrounding Lore Lindu Biosphere Reserve to reduce deforestation and land degradation. The to-be-established multistakeholder forum will act as a coordinating and collaboration body at the district level to ensure all the initiatives and interventions are synergized and complementary to each other.

G. Learning and Knowledge Management

82. The project aims to produce several critical products targeted to capture process, results and lessons learned from the project – namely (i) a summary of the process translated into a decision-tree infographic, (ii) work-sheet(s) as guidance for process replication and (iii) case-study examples for each segment of the process. These products serve as practical learning tools for adults in government settings based on the consortium's previous experience.

83. Following previous successful learning methods, the consortium will disseminate such tools through (i) workshops with opportunities for district participants to participate online and (ii) targeted coaching clinics for interested districts to participate offline under their resources. Aside from working with the provincial government of Central Sulawesi to target other districts in the province for replication, the district of Sigi is also a founding member of LTKL since 2017. This membership provides a more significant opportunity for replication and learning across the eight other district members of LTKL and other active members of APKASI throughout Indonesia.
84. We aim to work closely with key national ministries/government institutions during the implementation process, including the National Disaster Agency, National Planning Agency – LCDI Secretariat and Ministry of Environment and Forestry. Hence, the plan is to integrate results better, learn from the projects as policy recommendations from subnational experience, and achieve greater replication potential across the country.
85. From a communication perspective, we plan to collaborate with the Communication and Information Agency and the Public Relations Agency of Sigi District to establish a micro-site connected to the district's official website documenting the process, results and lessons learned. The micro-site can be an information portal for Sigi District on climate adaptation issues and will be mirrored on social media platforms of the district government and consortium members.

H. Consultative Process

86. As a preparation stage for this proposal, we have begun the consultation with key stakeholders and vulnerable groups from a multifaceted angle. In environmental studies, science technology, especially for climate and disaster studies or other ecological studies, we consulted academic institutions focusing on disaster resiliency and forest protection, including Tadulako University, UIN Datokarama Palu and UIN Palu at the Central Sulawesi level.
87. The district government is also a part of the consortium and has received feedback from the Regional Development Planning Agency (BAPPEDA), Regional Disaster Agency (BPBD), Regional Environmental Agency (DLH) and Village Planning and Empowerment Agency (PemDes), based on the consultative process summarized in the table below. Further endorsement has also been given by the Head of Sigi District and formalized in the endorsement letter attached to this concept note.

Date	Consulted Stakeholders	Consultation Techniques	Consultation Findings	Incorporation of Findings into Project Design
11 April 2022	1.Mohammad Irwan S.Sos.MSi. Head of Sigi District 2.Dr.Samuel Yansen Pongji,M.Si Deputy Head of Sigi District 3. Muh.Basir Secretary of Sigi District 4. All Head of Sigi District Working Unit (OPD)	FGD and Working Session (32 Male, 18 Female)	<ul style="list-style-type: none"> - Successfully obtained Head of District's further commitment to pursue Sigi Hijau into achievable programs and initiatives. - Discussed green development work plan which can be integrated in joint collaboration and program synergy across OPD and development partners in Sigi. - Agreed on manifesting the work plan and collaboration through the establishment of Multistakeholder Forum. 	Agreement and Commitments achieved became the Enabling Conditions for the Project.
23-28 May 2022	Drs. Sutopo Sapto Condro, MT Head of Sigi District's Development Planning and Research Agency	Conference participation, FGD and Media Gathering for the 2022 Global Platform for Disaster Risk Reduction	Interest from Development Planning and Research Agency of Sigi to better link disaster risk reduction with enhance district's resilience on climate adaptation	The baseline for Project Theory of Change to link disaster risk reduction with enhance district's resilience on climate adaptation through an integrated plan

28 June 2022	Head and Representing Officer of Tourism Office, Office of Communication and Information Technology, Environment Office, Office of Cooperatives & MSME, Office of Integrated Service for MSME, Office of Industry & Trade, Office of Investment & One-Stop Integrated Licensing, Regional Research and Development Planning Agency, Horticulture and Plantation Food Crops Office, Disaster Management Agency, Civil Service Police Unit, Community and Village Empowerment Service.	Workshops and Group FGD (65 participants (17 female, 48 Male)	<ul style="list-style-type: none"> - Acceleration of green development program in Sigi District. - Synchronization of Sigi district's working units/ office programs in RKPD Perubahan 2022 and RKPD 2023 document (District Annual Work Plan) including the projected budget allocation in each unit/ office. 	Integration of the project plan and implementation into the Amendment District Annual Work Plan 2022 and District Annual Work Plan 2023
29 June 2022	1.Mohammad Irwan S.Sos.MSi. Head of Sigi District 2.Dr.Samuel Yansen Pongi,M.Si Deputy Head of Sigi District 3. Muh.Basir Secretary of Sigi District 4. All Head of Sigi District Working Unit (OPD) 5. Central Sulawesi Forestry Department 6. Central Sulawesi Environment Department 7. Fiscal Policy Agency, Ministry of Finance RI 8. Head of Lore Lindu National Park.	Workshop, FGD Participants (36 Male, 18 Female)	Identifying climate adaptation and disasters risk reduction should be aligned with methods to ensure better livelihood options, particularly in vulnerable area of the district	Identifying that the main components of the project should include (i) macro planning document co-creation, (ii) implementation planning document co-creation and (iii) implementation model
1 July 2022	Drs. Sutopo Sapto Condro, MT Head of Sigi District's Development Planning and Research Agency	Semi-structured interview	<ul style="list-style-type: none"> - Sigi District is planning to develop Regional Action Plans for Climate Change Adaptation (RAD-API) - RAD-API is aligned with the Sigi Hijau regulation and budgeting 	Development of RAD-API and integration of it into regional development and planning
27 June 2022; 8 July 2022	Afit Lamakarate, ST.,M.Si Head of Sigi District's Environmental Agency	Semi-structured interview	<ul style="list-style-type: none"> - Sigi District is planning to develop Regional Action Plans for Climate Change Adaptation (RAD-API), but has been unable to do so due to limited budget and capacity - RAD-API is aligned with the Sigi Hijau regulation and budgeting - Many villages in Pipikoro and Kulawi Sub-districts are vulnerable towards climate change as they are prone to floods, have high population density, have limited access to electricity and water supply and rely on the agriculture sector - Lonebasa Village in Pipikoro sub-district is among these vulnerable villages 	Development of RAD-API Selection of Lonebasa Village as one of the areas for pilot implementation
6 July 2022	Johansyah Halman, ST Secretary of Sigi District's Disaster Management Agency (Implementing Department)	Semi-structured interview	<ul style="list-style-type: none"> - Sigi District is prone to natural and man-made climate disasters - Bolapapu Village in Kulawi Sub-district is prone to flash floods 	Selection of Bolapapu Village as one of the areas for pilot implementation

88. Consultation processes were also carried out with key stakeholders at the civil society organizations, including Nemubuku, Forum Sudut Pandang, Ibu Foundation, Marcy Corps, Sikola Mombine Foundation and development partners, including GIZ SASCI+. There is also a strong opportunity to work with youth groups that have been developing initiatives on disaster resilience, including Earth Hour Palu, Macaca Rangers, Historia Sulteng, Sikola Pomore, Jaga Palu Official, Satu Buku Anak Palu, Ini Sigi, Like Sigi, Tadulako Desainer, Taman Baca Todea, Nobalu, Banua Risigi, and KPL Jambeana.
89. Before the commencement of the project, we will conduct a preliminary assessment to refine our approaches and interventions further to fit in with the current local contexts. We acknowledge that climate change impacts may be experienced differently by different gender, age and other social groups. Therefore the preliminary assessment will look into climate change impacts on these different groups as well as sensitivities that exist among these groups to tailor our interventions to maximize effectiveness and accurately address the diverse needs of these groups. This will involve a series of consultations through various means deemed appropriate and effective in the local context with representatives from these groups. The participation of the diverse groups will be maintained and ensured throughout the rest of the project, including project design, development and implementation.

I. Justification for Funding Requested

90. The funding of this project will fill the gap in developing climate adaptation programs in Sigi District. The Regional Action Plan for Climate Change Adaptation (RAD API) does not yet exist for the Sigi District. Therefore, a vulnerability assessment of climate change and an evaluation of the capacity of community groups and the local government is required to help the local government of Sigi District deal with climate change. Following that, the RAD API document will be developed while local stakeholders' capacities are also built. To support the village-level climate adaptation action plan, a pilot implementation of the water-energy-food nexus approach will also be carried out.
91. Component 1. Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with the water-food-energy nexus approach
92. With funding for component 1, the resilience of Sigi District could be strengthened by understanding the district's vulnerability and the increased capacity of the local stakeholders. A vulnerability assessment of climate change will be carried out using an indicator-based methodology that includes relevant indicators to the local context. Climate modelling will be added to the climate change sensitivity assessment to assure the district's long-term ability to adapt. Capacity assessment and development will also be carried out to improve the capacity of the local stakeholders.
93. Component 2. Showcasing an effective District's Action Plan for Climate Change Adaptation with on-the-ground implementation focusing on two vulnerable villages: Bolapapu Village in Kulawi sub-district and Lonebasa Village in Pipikoro sub-district
94. People who reside in remote, underdeveloped communities with little in the way of public infrastructure are a particularly vulnerable demographic to climate change. The Kulawi Subdistrict's Bolapapu Village and the Pipikoro Subdistrict's Lonebasa Village are two sites that meet these criteria. Due to extreme weather, floods have become more intense in Bolapapu Village in recent years, leading to several losses, including crop failure. However, since PLN has not provided electricity to Lonebasa Village, which can only be reached on two-wheeled vehicles, the availability of sustainable electricity sources is crucial to sustaining the people's way of life. The local communities currently have access to micro-hydro power plants as an electricity source to boost livelihoods.
95. Bolapapu Village has a population of 2,464 people, comprising 1,232 males and 1,232 females or a gender ratio of 100. In contrast, Lonebasa Village has a population of 966 people that includes 499 males and 467 females or a gender ratio of 118. Both targeted villages are homes for indigenous communities, namely To

Kulawi community (Bolapapu-Marena) and Kaili -Topo Uma community (Lonebasa). These indigenous communities practice traditional agroforestry and community forest management. According to Social and Welfare Office Data 2022, 49,5% of the Bolapapu residents and 70.8% Lonebasa residents are in the extremely poor and vulnerable category. While the consortium acknowledges the possible differences of how climate change impacts the different gender groups and their different capacities to adapt, further analyses are needed. They will be done in the preliminary assessment to understand the local situation fully.

96. With funding for Component 2, the water-energy-food (WEF) approach intervention will be implemented in the two villages as a pilot. The WEF's initiatives are particularly pertinent to tackling widespread issues, taking advantage of the connectivity of the three sectors to address the problems at a much larger scale. One example of the WEF-based projects, which can be implemented in Bolapapu and Lonebasa villages, is supporting sustainable and climate-adaptive agriculture in the villages by promoting forest conservation that can improve irrigation for agriculture and water quality and harnessing renewable energy potential from micro-hydro to increase productivity, which will be generated through effective preservation of healthy water catchments in that area. In the village of Bolapapu, effective water management may also help lower the risk of flooding while supporting irrigation for agriculture activities.

J. Sustainability

97. One of the critical aspects leading to successful implementation of regional and/or national action plans in any theme is a shared understanding of common goals and value-proposition for stakeholders to work collectively in achieving such common goals. In itself, research indicates that the climate crisis is acknowledged as a complex problem which requires a cross-cutting integrated systems approach to address. However, most climate adaptation strategies and plans are still formulated and implemented through sectoral lenses and implemented in silos.

98. This project aims to enhance sustainability of its outcomes by offering a cross-sectoral approach in designing strategy and plan to enhance climate resiliency in Sigi District. This is done specifically by highlighting impacts of the climate crisis on critical aspects for the district including water, energy and agriculture sector – consistent with the Water-Energy-Food (WEF) approach, in which agriculture and land are proxies of food. The WEF nexus provides a holistic, socio-ecological systems perspective which recognize value of all sectors in equal terms²⁰.

99. *“...Climate determines water availability, potential agricultural production and energy availability, particularly in areas dependent on hydropower. Climate variability and change is the main cause of the fluctuations in water availability as well as access to energy and food resources, triggering trade-offs across the whole WEF nexus....”*

100. By targeting WEF, it is expected that ‘co-ownership’ and willingness of stakeholders to work collaboratively in addressing the issues can be enhanced. The final result is a cross-sectoral sustainable climate adaptation strategy and plan. The consortium has put high importance in the district and village planning process in Sigi District to ensure sustainability of project outcomes beyond the project. By investing in a co-creation process with capacity development approach in conducting assessment, drafting, integrating and implementing agreed strategy under RAD-API, it also enhances potential sustainability of this project outcome. For that, Sigi District Government has expressed their commitment to adjust the budget allocation in accordance with the adaptation plan resulting from the project. Currently there are four sources of district budget that could be aligned with the adaptation plan which are Regional Planning Office, Environment Office and Disaster Mitigation Agency as well as Dana Desa program and budget. In terms of amount, for instance, Sigi District had committed 1%

²⁰Climate Change Adaptation through the Water-Energy-Food Nexus in Southern Africa, [Sylvester Mpandeli](#),^{1,2} [Dhesigen Naidoo](#),¹ [Tafadzwanashe Mabhaudhi](#),³ [Charles Nhemachena](#),⁴ [Luxon Nhamo](#),^{4,*} [Stanley Liphadzi](#),¹ [Sithabile Hlahla](#),³ and [Albert T. Modi](#)³

of 60 billion IDR Village Fund allocation to Sigi Hijau implementation in village level. The percentage is to be increased by the upcoming years.

K. Environmental and Social Impact and Risk

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

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
<i>Compliance with the Law</i>	<i>Further compliance assessment is not required</i>	The project is consistent with relevant policies and regulations of the government of Indonesia and further support the government's program, which would include: <ul style="list-style-type: none"> - Minister of Environment and Forestry Regulation no. 33/2016 on guidelines for the preparation of climate change adaptation actions - Law 32/2009 on Environmental Protection and Management - Minister of Energy and Mineral Resources Regulation no. 39/2017 on the implementation of physical activities using new and renewable energy and energy conservation.
<i>Access and Equity</i>	<i>Compliance assessment during the implementation may be required</i>	The project is targeted to provide equitable distribution of access to the community, which provide the local community with a number of benefits, including including raising awareness to climate change vulnerabilities and raising local resilience. Potential gender-based and vulnerable groups involvement in the project may require further assessment.
<i>Marginalized and Vulnerable Groups</i>	<i>Compliance assessment during the implementation may be required</i>	Considering the social benefit of the project, assessment is strongly needed. A comprehensive assessment would ensure that the project involves marginalized and vulnerable groups, which potentially lead to a greater impact.
<i>Human Rights</i>	<i>Further compliance assessment is not required</i>	Indonesia is highly regards the significance of upholding human rights principles. The fundamental rights of the participants will be upheld throughout this project.
<i>Gender Equality and Women's Empowerment</i>	<i>Compliance assessment during the implementation may be required</i>	Considering the social benefit of the project, assessment is strongly needed. The project seeks to advance gender equity and women's empowerment.
<i>Core Labour Rights</i>	<i>Further compliance assessment is not required</i>	Primary employee policy in this project is consistent with the adaptation principle policy
<i>Indigenous Peoples</i>	<i>Compliance assessment during the implementation may be required</i>	Issues and requirements specific to the indigenous groups present in the target communities will be captured during the assessment. In the event that any conflict could arise, the project shall adjust to mitigate and eliminate conflicts
<i>Involuntary Resettlement</i>	<i>Further compliance assessment is not required</i>	The project will strengthen local society adaptation

<i>Protection of Natural Habitats</i>	<i>Further compliance assessment is not required</i>	The project focuses on sustainable development with water-energy-food approach. However, the project shall adjust to mitigate and manage any activities, which would affect the natural habitats
<i>Conservation of Biological Diversity</i>	<i>Further compliance assessment is not required</i>	The project focuses on sustainable development with water-energy-food approach. However, the project shall adjust to mitigate and manage any activities, which would affect the biological diversity
<i>Climate Change</i>	<i>Further compliance assessment is not required</i>	The project is consistent with relevant climate assessment available on Central Sulawesi and further support the existing related program
<i>Pollution Prevention and Resource Efficiency</i>	<i>Further compliance assessment is not required</i>	Primary policy in this project is consistent with the adaptation principle policy
<i>Public Health</i>	<i>Compliance assessment during the implementation may be required</i>	Since the project requires active participation of the society, further compliance assessment during the implementation may be required
<i>Physical and Cultural Heritage</i>	<i>Further compliance assessment is not required</i>	The project location is situated in the vilages. If there is any cultural and physical heritage, further compliance assessment during the implementation may be required
<i>Lands and Soil Conservation</i>	<i>Further compliance assessment is not required</i>	Potential location for the project shall be evaluated prior to the project implementation

101. Based on the risk assessment above, the consortium acknowledges the potential risks of the proposed project. It considers minor, small scale (limited impacts and not widely spread), reversible, and easily mitigated risks. Therefore, the project can be categorized as “Category B” about Adaptation Fund’s Risk Categorization. The Environmental and Social Management Plan Document describes the potential direct, indirect, transboundary and cumulative risks and impacts and their respective mitigation measures in more detail.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Arrangements for Project Implementation

102. Konsorsium Lingkungan Adaptif, Berketahanan, Inovatif, dan Partisipatif (Kolaborasi) consists of 4 (four) organizations: (1) Yayasan Koaksi Indonesia, as the Lead Organisation; (2) Lingkar Temu Kabupaten Lestari (LTKL); (3) Earth Innovation Institute (EII); and (4) Alliance for Water Stewardship Indonesia (AWS Indonesia).

103. Yayasan Koaksi Indonesia or Coaction Indonesia is a non-profit organization that acts as a network and knowledge hub. Coaction’s target is to realize sustainable development throughout the archipelago by accelerating the energy transition from fossil-based energy to renewable energy through three approaches: advocacy work, public campaigns, and strategic partnerships. Coaction collaborates with policymakers, the private sector, academia, community organizations, and youth activists in providing answers to the challenges of the energy transition through policy breakthroughs, funding, technology, and human resources. Established on March 16, 2017, some of Coaction’s flagships include: 1) Influence Indonesia's biofuel policy; 2) Encourage safeguards for strategic renewable energy technologies developed in Indonesia, 3) Open access to renewable energy to areas that are considered underdeveloped, frontier, and outermost regions; 4) Increase conversation and discourse on Green Jobs as a critical intervention for renewable energy to reach youth in the energy transition wave, 5) Amplify just climate action voices from local to national, 6) Develop learning exchange platforms for civil society organizations on climate and energy issues, 7) Deliver systemic change from strategic partnerships with several coalitions, alliances, and associations, such as Bersih Indonesia (with 30 civil society organizations), Voices for A Just Climate Actions (with 18 civil society organizations), and is a partner of the Sustainable District Platform (LTKL).

104. Lingkar Temu Kabupaten Lestari (Sustainable District Association in English) is an association of district governments formed and managed by the district government in order to realize sustainable land-use at subnational level that protects the environment and improves community welfare through partnership and collaborations. LTKL was established in July 2017 as a caucus for sustainable development under the Association of Indonesian Regency Government (APKASI). Currently, LTKL has 9 active member districts, including Sigi District, in 6 provinces in Indonesia and works side by side with 21 multi-stakeholder partner networks. LTKL General Assembly in 2019 decided that sustainable commodities, including sustainable products utilizing natural resources, were a priority for LTKL members to achieve national targets to obtain quality investment, create jobs and prevent disaster risks. As a forum, LTKL functions as an aid for district members in developing implementation strategies, connecting with the right partners to increase capacity and acquire incentives for sustainable development efforts, and sharing the opportunities and challenges for sustainable development to the public.
105. EII is a non-profit, applied research and policy institute with a mission to promote climate-friendly rural development through innovative, jurisdictional approaches to sustainable agriculture, forestry and food systems in tropical regions around the world. EII provides direct technical, strategic and convening support to governments, companies, indigenous peoples' organizations and farmers in support of jurisdictional REDD+ and low-emission, low-deforestation rural development. EII has established itself as an international organization working across several geographies to support tropical nations and states that are striving to lower their greenhouse gas emissions from land use as they conserve biodiversity and water resources, secure food and agricultural production systems, and strengthen traditional and indigenous claims on natural resources. EII helps lay the groundwork for a transition to sustainable, productive rural development by building multi-stakeholder consensus in support of this agenda, identifying opportunities within government programs and policies to foster good land management through proper planning and land classification, a plantation licensing process, environmental monitoring, and law enforcement.
106. AWS Indonesia is a foundation established to grow and strengthen the leadership of stakeholders in Indonesia in caring for and managing water resources convincingly and reliably that preserve the implementation of the social, cultural, and economic values of water. Yayasan AWS Indonesia wants to inspire users and managers of water to actively participate in maintaining and taking care of water resources on the land of Indonesia. The foundation was established for humanitarian purposes, specifically in growing and strengthening the leadership of stakeholders in Indonesia in caring for and managing water resources convincingly and reliably that preserve the implementation of water values not only in the economic aspect but also in socio-cultural and environmental. AWS water stewardship approach is embodied in the International Water Stewardship Standard (AWS Standard). The AWS Standard is an ISEAL standard and a globally applicable framework that drives, recognizes, and rewards good water management practices. Since 2019, AWS Indonesia has been an active promoter of good water stewardship and become a partner of Alliance for Water Stewardship. AWS Indonesia also works together with Water Stewardship Asia Pacific to promote water stewardship.
107. In conducting the proposed project, the consortium will work closely with a variety of local stakeholders. These include relevant governmental institutions, such as the Development Planning and Research Agency (*Badan Perencanaan Pembangunan, Penelitian dan Pengembangan Daerah* or BP3D), Environmental Agency (*Dinas Lingkungan Hidup*) and the Disaster Management Agency (*Badan Penanggulangan Bencana Daerah* or BPBD); all of which had been consulted during the process of concept note development and had expressed the utmost support for this project. The consortium will also work closely with the district-level working group for climate change adaptation, involving it from the commencement of the project and ensuring adequate capacity for project implementation within and beyond the project period.
108. The communication strategies for project coordination, reporting, monitoring and evaluation will include regular coordination meetings, with daily communication done through project management platforms, emails and online messaging platforms.

B. Financial Risk and Project Management Risk

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

Categories	Potential Risk	Level	Mitigation Strategy
Institutional	Different knowledge in the team and changes in personnel	Moderate	<ol style="list-style-type: none"> 1. Internalization of organizational culture through SOPs 2. Institutional documentation is stored in project reports and accessible storage, such as Google Drive as cloud-based storage and sharing management
	The targeted program's outcome and output are not met by the end of the grant cycle	Significant	<ol style="list-style-type: none"> 1. A monitoring and evaluation mechanism is established and utilized regularly by the team 2. Monthly meetings and reports are conducted to identify bottlenecks and solutions in the program implementation
	Multiple compressed schedules due to some overlapped activities	Moderate	Each activity is organized and handled by different key PICs so the preparation of overlapped activities can still be carried out simultaneously
	Changes in organizational planning or strategy due to the long ongoing COVID-19 pandemic	Moderate	<ol style="list-style-type: none"> 1. Communicate actively with partners during the Covid-19 pandemic situation to find a broader perspective in making the best decisions in activities 2. Health is our priority. The working mode is determined dynamically according to the current situation and conditions associated with the provisions of restrictions from the government, both national and local, when working in the field, following the requirements of the health protocol 3. Each activity has a contingency plan to accommodate the worst-case scenario if one or more team members are infected with the Covid-19 virus 4. All our teams are required to have national health insurance (BPJS/JKN-KIS) 5. Hold regular check-in to listen to staff needs for motivation and mental health awareness
Financial	Changes in currency exchange rate lead to changes in the proposed budget items and the impact on the budget proposed for activities in the work plan	Significant	Using the currency exchange rate according to: <ol style="list-style-type: none"> 1. The trend before proposal submission 2. The exchange rate according to the time of disbursement 3. Readjustment of budget after the disbursement
	Delays in disbursement will hinder the process of implementation and its impact on the outputs' achievement	Significant	Funding and financing countermeasures
	Disbursement schemes that require initial	Significant	This disbursement scheme needs to be known in advance so that countermeasures

	financing		can be made, especially among the consortium members. The issue of transparency is critical in financing.
Social	The involvement of communities in several activities does not refer to gender equality and inclusive manners	Significant	Needed to ensure the involvement of representatives from the vulnerable groups in every activity possible, mainly on-the-ground activities
	Obtained organizational and legal access to communities to manage programs sustainably	Significant	Community facilitation to obtain organizational and legal access that is suitable and agreed by the community, either through the existence of village-level enterprise or cooperation
	No channels play the role of a multistakeholder forum to accelerate climate change adaptation efforts	Significant	Join the regional and local Disaster Risk Reduction Forum of Central Sulawesi as the caucus for climate change adaptation accelerator
Environmental	<p>Availability of actual or potential threat of adverse effects on living organisms and environment by effluents, emissions, wastes, resource depletion, etc., arising out of project activities. The threat would result in financial loss that occurs due to:</p> <ol style="list-style-type: none"> 1.) Liability for personal injury and property damage; 2.) Liability for the remediation of environmental impacts; 3.) First party loss arising from an environmental impact. (e.g. owned property damage and restoration, business interruption, etc.) 4.) Civil fines and penalties as well as compensation for impaired natural resources. 	Significant	Environmental risk identification, assessment, and evaluation. These efforts involve determining the magnitude of identified risks (the combination of likelihood and consequence) and making decisions about whether they are acceptable or whether they warrant treatment.
Political	Change in leadership due to the election results in 2024	Significant	Updating the latest relevant leadership and renew the endorsement from the government based on the existing letter given for the project

C. Environmental and Social Risk Management

As the project is more toward strategic planning and programming, the possibility of negative environmental and social impacts and risks are very minimal.

Environmental and social principles	Impact and Risks	Mitigation Strategy
<i>Compliance with the Law</i>	-	-
<i>Access and Equity</i>	-	-
<i>Marginalized and Vulnerable Groups</i>	-	-
<i>Human Rights</i>	-	-
<i>Gender Equality 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>	-	-

109. Collaboration with different stakeholders across different stakeholder groups in the district will also enable the identification of risks across different sectors, along with preventive measures to be taken as early as possible to ensure that the potential environmental and social risks are minimized. Safeguarding policy from each organization and for the project must be made clear to avoid any breach of the safeguard policy.

110. Risks related to Covid infection can be kept minimal by having limited in-person activities. Upon conditions in which in-person activities need to be conducted, adherence to precautions and health protocols will be enforced.

D. Monitoring and Evaluation

Monitoring and Evaluation of Climate Change Adaptation (M&E) consist of these components (1) Strategy and objectives; (2) Achievement Indicators; (3) Implementation of Activities; (4) Financial Use, which refer to:

1. Compliance (compliance); whether the project implementation follows existing standards and procedures
2. Examination (auditing); whether the resources and services intended for certain parties (target audience/beneficiaries) are accountable
3. Reports (accounting); generating information or proof of evidence to measure the social changes based on the financial traceability
4. Explanation (narrative); generating storytelling to justify that the project implementation is consistent with the planning and below or beyond the target.

M&E is carried out throughout the planning, implementation, and reporting stages based on the availability of 1) Activity Report or Back-to-officer Report (field visit), 2) Quarterly/Progress Reports, 3) Annual Reports, and 4) Final Report.

1. Activity Report.

The reporting process will take place after every activity is carried out. These reports identify

who attends the activity and points of discussion/actions. The pieces should also include documentation and financial statements.

2. Quarterly Reports
The consortium members will report every three months to summarize achieved activities and output levels that contribute to the expected results.
3. Annual Reports
Annual reports consist of progress and achievements within a year of implementation and whether the project has succeeded in harvesting the planned outcome.
4. Final Report
The Project Final Report is intended to summarize the project's outcomes and is the final document of the Kolaborasi Project. Relevant stakeholders can use the report to document project successes, lessons learned, and performance to signal future project delivery improvement.

E. Result Framework

(See Annex 3 for detailed project result framework, including milestones, targets and indicators)

F. Alignment with Adaptation Fund Result Framework

Project Objective(s) ²¹	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
1. Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with water-food-energy nexus approach	The capacity of approximately 50 people from relevant stakeholder groups (government, organizations, local communities, universities) for conducting climate change adaptation planning and implementation activities assessed and improved	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. Four types of targeted stakeholder groups including indigenous community and women group with increased capacity to minimize exposure to climate variability risks	171,775
	Two knowledge products on District-wide climate change vulnerability and adaptive capacity, and recommended adaptation options encourage district-wide climate change adaptation planning and implementation	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into regional development strategy	25,662
	One Regional Action Plans on Climate Change Adaptation (<i>Rencana Aksi Daerah Adaptasi Perubahan Iklim</i> or RAD-API) developed with collaboration with district government and multistakeholder working group	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into regional development strategy	143,021
	Regional Action Plans on Climate Change Adaptation (<i>Rencana Aksi Daerah Adaptasi Perubahan Iklim</i> or RAD-API) mainstreamed into 3 district-level work and/or development planning documents	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into regional development strategy	90,411
	Series of learning and communication activities targeting 50 people at the district, province and national level conducted to encourage replication and upscaling	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Fifty (50) people (targeted population) aware of predicted adverse impacts of	69,917

²¹The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology, but the overall principle should still apply

			climate change, and of appropriate responses	
2. Showcasing an effective District's Action Plan for Climate Change Adaptation with on the ground implementation focusing on two vulnerable villages: Bolapapu Village in Kulawi sub-district and Lonebasa Village in Pipikoro sub-district	The capacity of approximately 16 people from village institutions in pilot villages for conducting climate change adaptation planning and implementation activities assessed and improved	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. Two village level institutions with increased capacity to minimize exposure to climate variability risks	261,102 (lump sum of project implementation costs in two pilot villages)
	Four knowledge products on village-wide climate vulnerability and adaptation options encourage village-wide climate change adaptation planning and implementation	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Fifty (50) people (targeted population) aware of predicted adverse impacts of climate change, and of appropriate responses	
	20% of families in pilot villages have their household income increased from climate-adaptive agriculture	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 20% of households and communities having more secure (increased) access to livelihood assets 6.2. 20% of targeted population with sustained climate-resilient livelihoods	
	20% of families' capacity in water management increased	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural assets for good water management maintained or improved under climate change and variability-induced stress	
	20% of families gain access to local sustainable energy sources	Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors	4.2. Physical infrastructure improved to withstand climate change and variability-induced stress	

Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
1.1. Improvement of institutional capacity local stakeholders in district-level climate change adaptation collaborative planning and interventions	The capacity of approximately 50 people from relevant stakeholder groups (government, organizations, local communities) for conducting climate change adaptation planning and implementation activities assessed and improved	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1. Three types of climate change risk reduction actions or strategies (focusing on water-energy-food nexus) introduced at local level	171,775
1.2. Strengthened governance of cross-sectoral climate change adaptation policy with appropriate adaptation measures and systemic	Two knowledge products on District-wide climate vulnerability and adaptive capacity, and recommended adaptation options encourage district-wide climate change adaptation planning and implementation	Output 1: Risk and vulnerability assessments conducted and updated at a national level	1.1. One district-level vulnerability and capacity assessment project that conduct and update risk and vulnerability assessments	25,662

efforts				
	One District Action Plan for Climate Change Adaptation (RAD API) developed and incorporated with recommended adaptation options	Output 7: Improved integration of climate-resilience strategies into country development plans	7.1. One regional action plan introduced or adjusted to address climate change risks	143,021
	Three district government's annual work and/or development plans incorporate the district's climate change adaptation strategies	Output 7: Improved integration of climate-resilience strategies into country development plans	7.2. Three targeted working and/or development strategies with incorporated climate change priorities enforced	90,411
1.3. Establishment of knowledge sharing method for collaborative planning practice for climate change adaptation at district, provincial and national level	Series of learning and communication activities targeting 50 people at the district, province and national level, conducted to encourage replication and upscaling	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1. Fifty (50) people (targeted population) aware of predicted adverse impacts of climate change, and of appropriate responses	69,917
2.1. Increased knowledge and capacity of the local community by adopting the District's Action Plan for Climate Change Adaptation	The capacity of approximately 16 people from village institutions in pilot villages for conducting climate change adaptation planning and implementation activities assessed and improved	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1. Three types of climate change risk reduction actions or strategies (focusing on water-energy-food nexus) introduced at local level	261,102 (lump sum of project implementation costs in two pilot villages)
2.2. Increased economic, social, and ecosystem resilience in the local community through the water-energy-food nexus approach to become a successful model for replication in other areas of the Sigi District	Four knowledge products on village-wide climate vulnerability and adaptation options encourage village-wide climate change adaptation planning and implementation	Output 1: Risk and vulnerability assessments conducted and updated at a national level	1.1. One village-level vulnerability and capacity assessment project that conduct and update risk and vulnerability assessments	
	20% of families in pilot villages have their household income increased from climate-adaptive agriculture	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.2. Climate-adaptive income sources from agriculture for households generated under climate change scenario	
	20% of families' capacity in water management increased	Output 5: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	5.1. Natural resource assets for ensuring sustainable water supply and management created, maintained or improved to withstand conditions resulting from climate variability and change	
	20% of families gain access to local sustainable energy sources	Output 4: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	4.1.1. Infrastructure to generate sustainable energy developed or modified to respond to new conditions resulting from climate variability	

G. Budget

(See Annex 3 for detailed project Budget)

H. Disbursement Schedule

(See Annex 4 for detailed project Disbursement Schedule)

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

A. Record of endorsement on behalf of the government²²

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

Mohamad Irwan Lapatta, S.Sos,M.Si <i>Head of Sigi District</i>	Date: July 13, 2022
Dr. Samuel Yansen Pongi, SE.,M.Si <i>Deputy Head of Sigi District</i>	Date: July 7, 2022
Drs. Sutopo Sapto Condro, MT <i>Head of Sigi District's Development Planning and Research Agency</i>	Date: July 1, 2022
Afit Lamakarate, ST.,M.Si <i>Head of Sigi District's Environmental Agency</i>	Date: June 27, 2022
Johansyah Halman, ST <i>Secretary of Sigi District's Disaster Management Agency (Implementing Department)</i>	Date: July 6, 2022

²² 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.

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

<p>I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (.....list here.....) and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.</p>

<p><i>Name & Signature</i></p> <p>Implementing Entity Coordinator</p>	
<p>Date: (Month, Day, Year)</p>	<p>Tel. and email:</p>
<p>Project Contact Person:</p>	
<p>Tel. And Email:</p>	

Annexes:

Annex 1. Cost Effectiveness

Project Component	Output	Benefit of Project Component	Avoided Lost	Alternative Intervention
1. Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with water-food-energy nexus approach	<p>1.1. Improvement of institutional capacity local stakeholders in district-level climate change adaptation collaborative planning and interventions</p> <p>1.2. Strengthened governance of cross-sectoral climate change adaptation policy with appropriate adaptation measures and systemic efforts</p> <p>1.3 Establishment of knowledge sharing method for collaborative planning practice for climate change adaptation at district, provincial and national level</p>	<p>Adaptation policy may support climate risk proofing of infrastructure (transport, energy) to ensure that development benefits are not degraded over the expected lifetime of the investment²³.</p> <p>The economic benefits of adaptation are sustained or increased agricultural production, higher household incomes, enhanced environmental services, protection of the asset base, and less vulnerability to extreme weather events²⁴.</p>	Climate change will cause increasingly severe economic and social impacts. These impacts relate, for example, to changes in labour and agricultural productivity, health effects, loss of capital assets, displacement of people and changes to ecosystems.	<ul style="list-style-type: none"> - Instead of designing projects to change the practices of marginalised populations, learning processes within organisations and with marginalised populations must be placed at the centre of adaptation objectives. These learning processes could take a somewhat lengthy period to have an impact on all community groups in the district. - In order to boost the communities adaptation to climate change, facilities and infrastructures should be improved and added if needed. This intervention could potentially be more expensive.
2. Showcasing an effective District's Action Plan for Climate Change Adaptation with on the ground implementation focusing on two vulnerable villages: Bolapapu Village in Kulawi sub-district and Lonebasa Village in Pipikoro sub-district	<p>2.1 Increased knowledge and capacity of the local community by adopting the District's Action Plan for Climate Change Adaptation</p> <p>2.2 Increased economic, social, and ecosystem resilience in the local community through the water-energy-food nexus approach to become a successful model for replication in other areas of the Sigi District</p>	<p>Community-based adaptation (CBA) provides information and concrete examples on potential impacts of climate change and mitigative measures which are location specific and community managed. CBA also provides information needs which can be shared and replicated in an appropriate format and manner acceptable by communities²⁵.</p> <p>CBA recognises the inherent adaptive capacity which exists within vulnerable populations and seeks to build on this. Adaptive capacity is central to building resilience because it involves the processes and capacities which enable continued response to a changing and uncertain climate over time²⁶.</p>	Livelihood lost for the rural communities, especially those who have high reliance on the natural resources. These communities inherently vulnerable to climate change. Rising temperatures will have negative impacts on labor productivity and human health.	<ul style="list-style-type: none"> - Effective adaptation to climate change requires the efficient use of land, water, energy, and other vital resources, and coordinated efforts to minimize trade-offs and maximize synergies. The local communities find alternative livelihoods that are less vulnerable to climate change.

²³https://assets.publishing.service.gov.uk/media/57a08adee5274a31e0000806/DEWPoint_A0406_Jan2011_Co_Benefits_of_adaptation_v1-1.pdf

²⁴https://www.unccllearn.org/wp-content/uploads/library/ifad_adaptation_farmers.pdf

²⁵<https://www.adaptation-undp.org/community-based-adaptation>

²⁶https://careclimatechange.org/wp-content/uploads/2014/08/CBA_Brief_ALP_English.pdf

Annex 2. Results Framework

Outcome/Output	Indicator	Baseline	Target	Source of Verification	Risk and Assumption
Component 1. Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with water-food-energy nexus approach					
Outcome 1.1. Improvement of institutional capacity local stakeholders in district-level climate change adaptation collaborative planning and interventions	A jurisdiction becomes climate resilient, with strong institutional capacity prepared for planning and implementing climate change adaptation interventions	The institutional capacity of local stakeholders in Sigi District for planning and implementing climate change adaptation measures is unknown and capacity improvement has not been conducted	Sigi District becomes a climate resilient jurisdiction with strong institutional capacity prepared for planning and implementing climate change adaptation interventions	Assessment reports, activity reports, decision letters, documentation	-
Output 1.1.1. The establishment of a district-level working group for climate change adaptation	One district-level working group for climate change adaptation established for spearheading climate change adaptation efforts in the district	0	One district-level working group for climate change adaptation established and operating	Activity report, documentation, Team development decision letter (SK pembentukan tim)	-
Output 1.1.2. Carrying capacity assessment of local stakeholders for climate change adaptation planning and interventions	Institutional Capacity Assessment on climate adaptation planning and intervention with focus on water-energy-food nexus) used as the basis for capacity building	0	One assessment report on institutional capacity on climate adaptation planning and intervention	Assessment report, documentation	-
Output 1.1.3. Institutional capacity building roadmap at district and community level developed	Institutional capacity strengthening roadmap developed for district level and serves as a basis for institutional capacity building	0	One institutional capacity strengthening roadmap document	Copy of document	-
Output 1.1.4. Increased capacity of local stakeholders in implementing climate change adaptation interventions	The capacity of people from relevant stakeholder groups (government, organisations, local communities, universities) for conducting climate change adaptation planning and implementation activities assessed and improved	Unknown; to be assessed in the project	Capacity improvement of approximately 50 people from relevant stakeholder groups (government, organisations, local communities, universities) for conducting climate change adaptation planning and implementation activities improved	Activity report, documentation,	-

Outcome 1.2. Strengthened governance of cross-sectoral climate change adaptation policy with appropriate adaptation measures and systemic efforts	A jurisdiction becomes climate resilient, with strong enabling condition in place for planning and implementing climate change adaptation interventions	The relevant climate adaptation interventions have not been identified, and the enabling condition for pursuing accurately identified climate adaptation interventions is inadequate	Sigi District becomes a climate resilient jurisdiction with strong enabling condition in place for planning and implementing climate change adaptation interventions	Assessment reports, activity reports, documentation	-
Output 1.2.1. Climate change vulnerability assessment using district level data and indicators and climate modeling based on water-energy-food (WEF) nexus approach	A district-wide climate change vulnerability assessment incorporating district-level data and indicators and climate modeling used to encourage district-wide climate change adaptation planning and implementation	0	One district-wide climate change vulnerability assessment report	Copy of assessment report	-
Output 1.2.2. Key recommendations based on district's climate change vulnerability assessment is mainstreamed and acknowledged in the district 2025-2030 Mid-Term Development Plan (RPJMD)	Policy briefs and recommendations on climate change adaptation priority actions developed	0	One policy brief document, detailing recommendations on climate change adaptation priority actions	Copy of document	-
Output 1.2.3. Co-Created District's Action Plan for Climate Change Adaptation (<i>Rencana Aksi Daerah Adaptasi Perubahan Iklim Kabupaten Sigi - RAD-API</i>)	One Regional Action Plans on Climate Change Adaptation (<i>Rencana Aksi Daerah Adaptasi Perubahan Iklim</i> or RAN-API) developed with collaboration with district government and multistakeholder working group	0	One Regional Action Plans on Climate Change Adaptation (<i>Rencana Aksi Daerah Adaptasi Perubahan Iklim</i> or RAN-API)	Copy of document	-
Output 1.2.4. Co-Created District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2021-2024 aligned with interventions under the RAD-API	Action plan activities related to climate change adaptation included in District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2021-2024	0	One District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2021-2024 aligned with interventions under the RAD-API	Activity report, documentation	-
Output 1.2.5. Co-Created District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2025-2030 aligned with interventions under the RAD-API	Action plan activities related to climate change adaptation included in District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2025-2030	0	One District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2025-2030 aligned with interventions under the RAD-API	Activity report, documentation	Political commitment and willingness for pursuing climate adaptive district remains strong

Outcome 1.3. Establishment of knowledge sharing method for collaborative planning practice for climate change adaptation at district, provincial and national level	Knowledge-sharing methods developed and used across regions as a medium for exchanging learnings of successful measures	There is a lack of knowledge-sharing media for learning exchanges across regions, hindering replication and upscaling of successful efforts	Learnings from the planning and implementation processes of climate change adaptation measures in Sigi District are used for replication at the district, provincial and national levels	Activity reports, documentation	-
Output 1.3.1. Learning and Communication Tools targeted for replication co-created based on Monitoring, Evaluation & Learning (MEL) throughout the process	Learning and Communication Tools targeted for replication co-created based on Monitoring, Evaluation & Learning (MEL) throughout the process	0	One set of Learning and Communication Tools targeted for replication co-created based on Monitoring, Evaluation & Learning (MEL) throughout the process	Copy of document	-
Output 1.3.2. Series of learning and communication activities to encourage replication at the district, provincial and national levels	Learning and communication activities	0	Two National events with 3 regional events at provincial and district level	Activity report, documentation	-
Component 2. Showcasing an effective District's Action Plan for Climate Change Adaptation with on the ground implementation focusing on two vulnerable villages: Bolapapu Village in Kulawi sub-district and Lonebasa Village in Pipikoro sub-district					
Outcome 2.1. Increased knowledge and capacity of the local community by adopting the District's Action Plan for Climate Change Adaptation	Local communities are empowered to plan and implement effective climate change adaptation measures	Local communities possess inadequate knowledge and capacity for planning and implementing local climate change adaptation measures	Local communities in Bolapapu and Lonebasa villages understand and are empowered to plan and implement effective climate change adaptation measures at the village level	Assessment reports, activity reports, documentation	-
Output 2.1.1. Delivery of analysis and action plan from the district level down to the village-level	Activities based on the action plan included in village development plan	0	One document plan that include climate change adaptation action plan	Activity report, Documentation	Rejection from local communities. Such risk will be mitigated through co-creation of village-level climate change adaptation plans and interventions.

Output 2.1.2. Carrying capacity assessment of local stakeholders for climate change adaptation planning and interventions	Institutional Capacity Assessment on climate adaptation planning and intervention with focus on water-energy-food nexus) used as the basis for capacity building	0	Two assessment reports on institutional capacity on climate adaptation planning and intervention for Bolapapu and Lonebasa villages	Assessment reports, documentation	-
Output 2.1.3. Increased capacity of village institution to prepare and implement derivative programs from District's Action Plan for Climate Change Adaptation at the village-level	The number of people increased capacity from village institutions in Bolapapu and Lonebasa Villages for conducting climate change adaptation planning and implementation activities assessed and improved	Unknown; to be assessed in the project	Capacity improvement of approximately 50 people from village institutions in Bolapapu and Lonebasa Villages for conducting climate change adaptation planning and implementation activities improved	Activity report, Documentation	-
Outcome 2.2. Increased economic, social, and ecosystem resilience in the local community through the water-energy-food nexus approach to become a successful model for replication in other areas of the Sigi District	The water-energy-food nexus approach is applied for increasing climate resilience at the village level	Strategies using the water-energy-food nexus approach is not applied for increasing climate resilience at the village level	Strategies using the water-energy-food nexus approach are applied for increasing climate resilience at the village level	Assessment reports, activity reports, documentation	-
Output 2.2.1. Climate change vulnerability assessment at the village-level based on water-energy-food nexus approach	Two village-level climate change vulnerability assessment reports for Bolapapu and Lonebasa villages incorporating village-level data and indicators and climate modeling used to encourage village-wide climate change adaptation planning and implementation	0	Two village-level climate change vulnerability assessment reports	Copies of assessment report	-
Output 2.2.2. Participatory identification of local livelihood productivity improvement as a basis for the village-level action plan for climate change adaptation	Current local livelihood productivity identified and analyzed to serve as the basis for improvement measures that are climate-adaptive	0	Two reports detailing identified livelihood productivity improvement measures and recommendations for Bolapapu and Lonebasa villages	Activity report, Documentation	-
Output 2.2.3. Co-creation of village-level climate change adaptation action plan based on the water-energy-food potentials	Recommendations for priority climate change adaptation action plans developed for pilot implementation in Bolapapu and Lonebasa villages	0	Two recommendation reports for climate change adaptation action plans for Bolapapu and Lonebasa villages	Copies of reports	-

Output 2.2.4. Increased community's capacity to access adaptive agricultural practices	The number of families in pilot villages have their household income increased from climate-adaptive agriculture	0	20% of households and communities having more secure (increased) access to adaptive agricultural practices 20% of targeted population with sustained agriculture-based climate-resilient livelihoods	Activity report, Documentation	Uncertainty in local communities' willingness to apply new practices.
Output 2.2.5. Increased community's capacity in water management for agricultural needs and as energy source	Number of families' capacity in water management increased	0	20% of families' capacity in water management increased		Uncertainty in local communities' willingness to apply new practices.
Output 2.2.6. Increased community's capacity to access inclusive and sustainable energy	Number of families gain access to local sustainable energy sources	Unknown; to be assessed in the project	20% of families gaining access to local sustainable energy sources		Uncertainty in local communities' willingness to apply new practices.
Output 2.2.7. Water-energy-food nexus to support business model of village-level climate adaptation action plan	Sustainable, climate-adaptive businesses implemented at Bolapapu and Lonebasa villages using the WEF approach	Unknown; to be assessed in the project	Establishment of climate-adaptive businesses in Bolapapu and Lonebasa villages		Reliance of business success on stakeholders' commitment.

Annex 3. Project Budget

Program Components	Expected Outputs	Activities	Lead Delivery Partner	Cost Components									Total
				Staff time	Consultant services	Travel & Per diem	Procurement of goods	Office running cost	Workshop & Meeting	Publication	Project Execution cost (9.5%)	Others	
Strengthening Sigi district resilience, particularly its water, food and energy security, towards climate change impacts through appropriate and localized climate change adaptation plan and intervention	District-level working group for climate change adaptation established	Establishment of District Working Group for Climate Change Adaptation	LTKL	14.150	6.750	3.100	0	0	20.434	0	4.221	0	51.059
	Assessment of local stakeholder capacity for carrying out climate change adaptation planning and interventions developed	Institutional Capacity Assessment on climate adaptation planning and intervention with focus on water-energy-food nexus)	AWS-EII-Koaksi	18.834	34.800	16.583	0	0	400	1.000	6.804	0	78.420
	Institutional capacity building roadmap at district and community level developed	Institutional Capacity Strengthening Roadmap development for district and community level	LTKL-AWS-EII-Koaksi	10.850	17.400	15.033	0	0	0	1.500	4.254	0	49.038
	Increased capacity of local stakeholders in implementing climate change adaptation interventions	Capacity building/Training series for District officials and wider stakeholders (NGOs, Private, Universities, etc)	AWS-EII-Koaksi	10.500	12.400	14.672	50	0	1.600	1.250	3.845	0	44.317
	Climate change vulnerability assessment developed, using district level data and indicators, and	Climate Risk Vulnerability Assessment	AWS-EII-Koaksi	23.935	44.400	14.672	500	0	0	1.000	8.028	0	92.535

	enhanced with climate modeling												
	Recommendation on Climate change adaptation action plans fully developed, agreed upon by relevant stakeholders, and formalized into Regional Action Plan for Climate Change Adaptation	Policy brief and recommendation development on climate change adaptation priority actions	LTKL-AWS-EII-Koaksi	13.684	17.200	13.122	50	0	800	1.250	4.380	0	50.486
	Recommendations for Climate Change Adaptation plan and intervention are mainstreamed in the development of RPJMD drafting process.	Integration of project recommendation into RPJMD Formulation processes	LTKL-AWS-EII-Koaksi	17.300	2.400	22.422	0	0	800	1.000	4.173	0	48.095
		Priority recommendations integration process into District Government Work Plan (RKPD) and District Agencies Work Plan (Renja) based on RPJMD 2021-2026	LTKL-EII	6.900	2.400	10.022	0	0	0	0	1.836	0	21.158
		Priority recommendations integration process into District Government Work Plan (RKPD) and District Agencies Work Plan (Renja) based on RPJMD 2025-2030	LTKL-EII	6.900	2.400	10.022	0	0	0	0	1.836	0	21.158
	Communication and Learning Products to aim for province and country-wide replication	Monitoring, Evaluation & Learning (MEL) throughout the process to be summarized and developed into learning and communication tools	LTKL-Koaksi	12.000	9.000	10.850	0	0	4.293	0	3.434	0	39.577
		Development of learning and communication	LTKL-Koaksi	10.500	9.000	0	0	0	954	2.982	2.226	0	25.662

		tools including but not limited to (i) decision-tree infographic, (ii) work sheet(s) and (iii) case-study examples.											
		Series of learning and communication activities to encourage replication at district, province and national level.	LTKL-Koaksi	18.000	9.000	13.800	0	0	23.051	0	6.066	0	69.917
Improved climate change resilience of the local community, project implementation at 2 villages	Climate risk adaptation demonstrated in 2 pilot villages	1. Community awareness on the importance of Gender responsive and inclusive climate change adaptation on water-energy-food nexus raised 2. Community capacity on identifying risk, appropriate solutions, planning, implementation and managing knowledge is increased 3. Village adaptation action plan developed 4. (optional) implementation of Village adaptation plan demonstrated (can be software or hardware activity identified in the village plan)	AWS-EII-Koaksi	43.969	90.750	61.254	25.250	3.000	9.000	5.226	22.653	0	261.102
Project Management	Quarterly Narrative report developed	Quarterly Narrative report development	LTKL-AWS-EII-Koaksi	14.844	960	0	0	0	0	0	1.501	0	17.305
	Quarterly Financial Report Developed	Quarterly Financial report development	LTKL-AWS-EII-Koaksi	7.244	960	0	0	0	0	0	779	0	8.983
	Project Audit report provided	Project audit conducted	Appointed KAP	25.000	0	0	0	0	0	0	2.375	0	27.375

	Project Management Dashboard developed	Project Management Dashboard development and operationalization	LTKL-AWS-EII-Koaksi	6.900	7.400	0	0	0	0	0	1.359	0	14.429
										9.5%	80,944		839,672
										8.5%			78.252
										Total			998.868

Annex 4. Disbursement Schedule with Time-bound Milestones

Project Objective/Components	Output	Time-bound Milestones Disbursement Schedule per Objective - Cost					
		Year 1		Year 2		Total	
		Mid-term 1	Mid-term 2	Mid-term 1	Mid-term 2		
1. Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with water-food-energy nexus approach	1.1. Improvement of institutional capacity local stakeholders in district-level climate change adaptation collaborative planning and interventions 1.2. Strengthened governance of cross-sectoral climate change adaptation policy with appropriate adaptation measures and systemic efforts 1.3 Establishment of knowledge sharing method for collaborative planning practice for climate change adaptation at district, provincial and national level	161,374.5	161,374.5	107,583	107,583	537,915	

2. Showcasing an effective District's Action Plan for Climate Change Adaptation with on the ground implementation focusing on two vulnerable villages: Bolapapu Village in Kulawi sub-district and Lonebasa Village in Pipikoro sub-district	2.1 Increased knowledge and capacity of the local community by adopting the District's Action Plan for Climate Change Adaptation 2.2 Increased economic, social, and ecosystem resilience in the local community through the water-energy-food nexus approach to become a successful model for replication in other areas of the Sigi District	60,351.4	60,351.4	90,527.1	90,527.1	301,757
Project Activities Cost (A)						839,672
Project Execution Cost: 9.5% (B)						80,944
Implementing Entity Fee: 8.5% (C)						78,252
Total Project Cost (A+B+C)						998,868

Annex 5. Environmental and Social Management Plan

Checklist of environmental and social principles	Details	Potential environmental and social risks and impacts	Mitigation measures	Timeline (in semester)
<i>Compliance with the Law</i>	<p>Further compliance assessment may be required: The design and implementation of the project is consistent with relevant policies and regulations of the government of Indonesia, which would include:</p> <ul style="list-style-type: none"> - Minister of Environment and Forestry Regulation no. 33/2016 on guidelines for the preparation of climate change adaptation actions - Law 32/2009 on Environmental Protection and Management - Minister of Energy and Mineral Resources Regulation no. 39/2017 on the implementation of physical activities using new and renewable energy and energy conservation. 	<ul style="list-style-type: none"> - Insufficient compliance to rules, regulations, and standards, specifically for village-level implementation under project component 2. This can have a negative effect once the project is completed. 	<p>Throughout the design and implementation phases, compliance with the rules, regulations and laws at the national, provincial and district levels will be maintained through, for example, development and submission of environmental documents. This will be strengthened with continuous consultation with relevant government officials. The village-level implementation under project component 2 will also adhere to existing village-level regulations and incorporate consultation with village-level officials of the selected areas.</p>	Semester 1-3
<i>Access and Equity</i>	<p>Compliance assessment during the implementation may be required: The project is targeted to provide equitable distribution of access to the community, which provides the local community with a number of benefits, including raising awareness to climate change vulnerabilities and raising local resilience with the water-energy-food approach. Potential gender-based and vulnerable groups involvement in the project may require further assessment.</p>	<ul style="list-style-type: none"> - Unequal access to the project benefits and involvement in project activities. This might reduce the impact of this project with the exclusion of some community groups. - Conflicts arising due to project location and selection of representatives from community groups 	<p>The program will be designed to ensure equality throughout the project. The preliminary assessment will incorporate community group identification and mapping, and engagement with these community groups will be conducted. This will help identify and address the differing needs and challenges faced by different groups, ensuring equitable access to benefits. Involvement and participation of the community groups will be ensured prior to and throughout the project through ways deemed appropriate given the local situation.</p>	Semester 2-3
<i>Marginalized and Vulnerable Groups</i>	<p>Compliance assessment during the implementation may be required: Considering the social benefit of the project, assessment is strongly needed to ensure that the project involves marginalized and vulnerable groups.</p>	<ul style="list-style-type: none"> - Marginalized and vulnerable groups like indigenous groups, women, the elderly, people living with disabilities, and people living with 	<p>The Gender Responsive and Inclusive Climate Risk Profile will be developed to help all stakeholders, including marginalized and vulnerable groups, to understand climate risks related to water-energy-food security and to have the capacity to reduce the risks. A comprehensive community group mapping and a participatory approach would ensure that the</p>	Semester 1-2

		HIV/AIDS are not properly engaged.	project involves all community groups, including marginalized and vulnerable groups, which would lead to a greater impact.	
<i>Human Rights</i>	Further compliance assessment is not required: Indonesia highly regards the significance of upholding human rights principles. The fundamental human rights of the participants will be upheld and not violated throughout this project.	-	-	-
<i>Gender Equality and Women's Empowerment</i>	Compliance assessment during the implementation may be required: Considering the social benefit of the project, assessment is strongly needed. The project seeks to advance gender equity and women's empowerment.	- Women are unfairly involved and underrepresented in project activities, and receive unfair benefits from the project	The Gender Responsive and Inclusive Climate Risk Profile will be developed to help all stakeholders, including gender groups, to be able to understand climate risk related to water-energy-food security and to have the capacity to reduce the risks. This profile will ensure that an effective gender mainstreaming approach is implemented throughout the project design, development and implementation. The project will ensure a minimum of 30% participation of women prior to and throughout the project.	Semester 1
<i>Core Labour Rights</i>	Further compliance assessment is not required: Primary employee policy in this project is consistent with the adaptation principle policy.	-	-	-
<i>Indigenous Peoples</i>	Compliance assessment during the implementation may be required: Issues and requirements specific to the indigenous groups in the target communities will be captured during the assessment. Upon any potential conflict arising, the project shall mitigate and eliminate conflicts.	- The project unintentionally violates the rights of Indigenous Peoples residing in project areas	A community group identification and mapping in the preliminary assessment will be done to identify any indigenous groups in the project areas. Then, the interventions will be designed in a way that will avoid any violation of the rights of Indigenous Peoples.	Semester 1
<i>Involuntary Resettlement</i>	Further compliance assessment is not required: The project will strengthen local society adaptation.	-	-	-
<i>Protection of Natural Habitats</i>	Further compliance assessment is not required: The project focuses on sustainable development with the water-energy-food approach.	- The project implementation in the two villages include infrastructure changes that could disturb natural habitats	Assessments of specific environmental impacts will be conducted and consulted with relevant stakeholders and become the basis for developing environmental documents. Environmental permits will be obtained prior to the construction.	Semester 2
<i>Conservation of Biological</i>	Further compliance assessment is not required: The project focuses on sustainable development with the	-	The project will not threaten the biological diversity in the project areas. In the activities under	-

<i>Diversity</i>	water-energy-food approach. However, the project shall adjust to mitigate and manage any activities, which would affect the biological diversity.		component 2, the interventions will be done in the village that will not disturb biological diversity.	
<i>Climate Change</i>	Further compliance assessment is not required: The project will not significantly contribute to the increase in greenhouse gas emissions and is consistent with relevant climate assessment available on Central Sulawesi and further supports the existing related program.	-	-	-
<i>Pollution Prevention and Resource Efficiency</i>	Further compliance assessment is not required: Primary policy in this project is consistent with the adaptation principle policy.	- Project component 2 in the two villages include infrastructure changes that could cause water and air pollution that could spread beyond the project areas (e.g. other areas along the watershed)	Assessments of specific environmental impacts will be conducted and consulted with relevant stakeholders, which will become the basis for developing environmental documents. Environmental permits will be obtained prior to the construction.	Semester 2
<i>Public Health</i>	Compliance assessment during the implementation may be required: The project does not foresee any significant health risks exposed to intended beneficiaries, nor will it affect the health of others. However, since the project requires active participation of stakeholders, and the COVID-19 pandemic is still ongoing at the time of the concept note writing, further compliance assessment during the implementation may be required	- The implementation of project activities jeopardizes the health of participating stakeholders	The project activities will be conducted in ways that ensure the health and safety of stakeholders are prioritized and health protocols will be enforced. At the time of the concept note writing, the world is still dealing with the COVID-19 pandemic. If the pandemic remains ongoing during the project implementation, or similar health issues arise, relevant health protocols will be enforced.	Semester 1-3
<i>Physical and Cultural Heritage</i>	Further compliance assessment is not required	- The project damages physical and cultural resources and sites in the two target villages	A preliminary assessment will be done to identify any physical and/or cultural resources and sites that exist in the two villages. Upon identification, the interventions will be designed in a way that will avoid any alteration, damage or removal of such resources and sites.	Semester 1
<i>Lands and Soil Conservation</i>	Further compliance assessment is not required: No risks are identified for activities under component 1, while the activities under component 2 might have an impact on soil conservation.	- The pilot implementation in the two villages will decrease soil quality of project sites	The identification of potential locations for project component 2 will include a soil survey and a land suitability analysis to understand the soil condition and design appropriate interventions that consider land suitability and do not reduce soil quality.	Semester 1

Annex 6. Gender Assessment and Gender Transformative and Inclusive Project Action Plan

Gender assessment is crucial to be conducted early in the project design to ensure that an understanding of gender roles and power relation will inform how the project should be designed and formulated. This understanding will help to ensure how the project can: (i) address gender inequalities; (ii) address differential needs of women and men; (iii) ensure equal access to resources, services, and capacity development; (iv) ensure equal participation of women and men in management arrangement as beneficiaries, partners, and key stakeholders; and (v) ensure equal participation in decision-making processes.

Given the patriarchal cultural values that shape the social construction in Central Sulawesi²⁷, including Sigi district, gender assessment using intersectionality approach is expected to highlight all inequalities between women and men in many aspects, such as race, age, economic status, social status, and religion. Gender assessment must be conducted at district and community level that is relevant to the project. The pilot villages are the target for gender assessment at community level. Through the assessment, gender roles, power relations and inequalities must be identified and used as the baseline to be monitored and compared to the post project situation (endline) to show how it has successfully help [or fail] to address the inequalities.

When conducting gender assessment, three principles should be upheld. The first is to avoid stereotypes or assumptions, since not only they are politically incorrect or offensive but also that they are incomplete. The second is to be willing to see different forms of power, particularly of women. A gender assessment should be able to reveal the complexities of power dynamics in an environment and reveal the common flaws in simplistic and binary assumptions. The third is to approach gender analysis with an open mind. As an outsider, researchers should be aware of their own positionality and biases and the ways in which ideas about power, masculinities, and femininities are inherently part of the way they see the world and understand other environments.

Gender assessment shall be at least focused on several key steps to ensure a comprehensive gender assessment²⁸. These steps are:

1. **Understanding the context.** Expectations about femininity and masculinity vary based on different environments, time periods, and social groups. While it is useful to make comparisons across contexts, it is also essential to recognize where contexts diverge in gendered expectations. A gender analysis also examines patterns over time and recognizes that ideas about gender are changing and co-dependent. The context, even though in one district, might be different from one village to another village and between district level and village level.
2. **Asking Questions.** Gender analysis involves asking questions about the different experiences, expectation and relationships of an environment for men, women, boys, girls, and sexual and gender minorities (SGMs). As part of a gender analysis, one should think beyond intended effects of the policy and consider cascading effects that cross into the private sphere, have economic impacts, or affect the security of individuals differently.
3. **Understanding power dynamics.** Gender, according to Carol Cohn, is a way of “structuring power,” and so it is important to understand who has access to different forms of power as a result of their gender identity. It is useful to take a broader view of power and to recognize power differentials between women, between men, between boys, and between girls, not only in term of sex but in multi aspects (age, religion, economy status, social status, religion and race, etc.).
4. **Understanding intersectionality identities.** One’s access to power differs also based on one’s religion, class, education, race, ethnicity, age, and many other factors. A gender analysis does not treat women as a monolithic group, but asks questions about different experiences of women, men, boys, girls, and SGMs. Many inequalities are at works for each individual. Intersectionality approach helps to provide comprehensive understanding in conducting the gender assessment.
5. **Challenging existing knowledge and conventions.** A gender analysis requires gender researchers to look for new or innovative sources of information. One way to incorporate different data would be to speak to women in a society who might be ignored because they are not in positions of public power.

Gender assessment should be done as part of the full proposal development. As part of the concept

²⁷ Aisyah, N. . (2021). Quality of Life and Women Empowerment in Central Sulawesi. *Journal of Asian Multicultural Research for Social Sciences Study*, 2(1), 36-44. <https://doi.org/10.47616/jamrsss.v2i1.91>

²⁸ <https://reliefweb.int/report/world/how-do-gender-analysis-practical-guidance-un-community>

note development, gender responsive and inclusion mainstreaming can be done by indicating how each output of the project is to be sensitised by gender and inclusion safeguard. The table below shows how gender and inclusion safeguards are mainstreamed for each output.

Specific Gender Dynamics of Disaster Risk and Resilience

In terms of climate risk, women and men differently adapt and are affected by climate change – especially in rural areas such as the targeted partner villages in Sigi District. Women are often disproportionately vulnerable to the effects of climate change and climate change can exacerbate gender disparities. On the other hand, many examples have showcased women’s unique experiences and skills as powerful agents of change towards a more climate resilient community. Globally, gender – sensitive climate change adaptation and mitigation programs show positive, measurable results, including increasing women’s participation in decision making.

Specifically, the abovementioned gender analysis should be conducted aligned with the five dimensions of climate resilience to determine the roles of women and men in and outside of the project context, including the constraints they face and the available opportunities for more resilient communities. The five dimensions of climate resilience include (i) social dimension; (ii) ecological dimension; (iii) economic dimension; (iv) physical dimension; and (v) institutional dimension.

Project/Programme Components	Expected Concrete Outputs	Gender responsive and inclusion safeguards checklist	Climate Risk Gender Dimension
1. Development of supporting climate change adaptation policy with appropriate adaptation measures and good governance to strengthen Sigi District resilience with water-food-energy nexus approach	1.1.1. The establishment of a district-level working group for climate change adaptation	<ul style="list-style-type: none"> • Procedure and scope of audience, to inform the working group establishment • The working group member selection procedure. Who is in and who is out? • The proportion of women and men in the working group • The state of gender knowledge of working group members 	Institutional <ul style="list-style-type: none"> • Women in Key Decision- Making Positions • Mapping gender & climate resilience issues in the ecosystem, incl. value-chain, producer groups and business owners • Financing Resilience • Business Ownership for critical sector (incl. agribusiness and energy)
	1.1.2. Carrying capacity assessment of local stakeholders for climate change adaptation planning and interventions	<ul style="list-style-type: none"> • The assessor and his/her/their expertise to conduct a gender responsive and inclusive capacity assessment • The inclusion of women and vulnerable group as part of the local stakeholder 	
	1.1.3. Institutional capacity building roadmap at district and community level developed	<ul style="list-style-type: none"> • The inclusion of women and vulnerable group in the stakeholder consultation 	
	1.1.4. Increased capacity of local stakeholders in implementing climate change adaptation interventions	<ul style="list-style-type: none"> • The inclusion of women and vulnerable group as part of the local stakeholder? • The inclusivity of capacity building program designed for the vulnerable group (i.e. people with disabilities) 	
	1.2.1. Climate change vulnerability assessment using district level data and indicators and climate modeling based on water-energy-food (WEF) nexus	<ul style="list-style-type: none"> • Is segregated data available for this assessment? 	

	approach		
	1.2.2. Key Recommendations based on district's climate change vulnerability assessment is mainstreamed and acknowledged in the district 2025-2030 Mid-Term Development Plan (RPJMD)	<ul style="list-style-type: none"> Do these recommendations reflect the different needs of men and women and the vulnerable group? 	
	1.2.3. Co-Created District's Action Plan for Climate Change Adaptation (Rencana Aksi Daerah Adaptasi Perubahan Iklim Kabupaten Sigi - RAD-API)	<ul style="list-style-type: none"> Does the Co-creation effort involve women and vulnerable group? How? 	
	1.2.4. Co-Created District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2021-2024 aligned with interventions under the RAD-API	Does the Co-creation effort involve women and vulnerable group? How?	
	1.2.5. Co-Created District Government Work Plan (RKPD) and District Agencies Work Plan (RKPD) based on RPJMD 2025-2030 aligned with interventions under the RAD-API	<ul style="list-style-type: none"> Does the Co-creation effort involve women and vulnerable group? How? 	
	1.3.1. Learning and Communication Tools targeted for replication co-created based on Monitoring, Evaluation & Learning (MEL) throughout the process	<ul style="list-style-type: none"> Does the tools development involve women and vulnerable group? Will the learning tools be accessible for women and vulnerable group? 	
	1.3.2. Series of learning and communication activities to encourage replication at district, province and national level	<ul style="list-style-type: none"> The inclusion of women and vulnerable group as part of the local stakeholder 	
2. Showcasing an effective District's Action Plan for Climate Change Adaptation with on the ground implementation focusing on two vulnerable villages: Bolapapu Village in Kulawi sub-district and Lonebasa Village in Pipikoro sub-district	2.1.1. Delivery of analysis and action plan from the district level down to the village-level	<ul style="list-style-type: none"> The analysis delivery procedure, i.e. specified for each group in the village versus general assembly for all? 	Social <ul style="list-style-type: none"> Drivers of climate change vulnerability and how gendered barriers exacerbate them The impact of climate change on gender dynamic within households and communities Women's roles within producer groups, cooperatives and local councils Gender-differentiated climate resilience
	2.1.2. Carrying capacity assessment of local stakeholders for climate change adaptation planning and interventions	<ul style="list-style-type: none"> The inclusion of women and vulnerable group as part of the local stakeholder The inclusivity of the capacity building program designed for the vulnerable group (i.e., people with disabilities) 	
	2.1.3. Increased capacity of village institution to prepare and implement derivative programs from District's Action Plan for Climate Change		

	Adaptation at the village-level		building opportunities
	2.2.1. Climate change vulnerability assessment at the village-level based on water-energy-food nexus approach	<ul style="list-style-type: none"> Is segregated data available for this assessment 	<p>Ecological</p> <ul style="list-style-type: none"> The most important climate related impacts and risks in the region and the changes observed by men and women The role of men and women in managing natural resources and the direct & indirect importance for their livelihoods gender-differentiated climate-resilience building opportunities <p>Economic</p> <ul style="list-style-type: none"> The most important sources of income at household and community level The impact of climate change on economic activities Household's financial preparedness against climate shocks Existing and potential women's role in climate adaptive and transformative activities The climate-related impacts and risks on social and productive infrastructure The impact of women's access to ownership of key assets (land, home, etc.) on community resilience
	2.2.2. Participatory identification of local livelihood productivity improvement as a basis for the village-level action plan for climate change adaptation	<ul style="list-style-type: none"> The participatory identification procedure, i.e. specified for each group in the village versus general assembly for all 	
	2.2.3. Co-creation of village-level climate change adaptation action plan based on the water-energy-food potentials	<ul style="list-style-type: none"> Does the Co-creation effort involve women and vulnerable group? How? 	
	2.2.4. Increased community's capacity to access adaptive agricultural practice	<ul style="list-style-type: none"> The inclusion of women and vulnerable group as part of the local stakeholder The inclusivity of the capacity building program design to vulnerable group (i.e., people with disabilities) 	
	2.2.5. Increased community's capacity in water management for agricultural needs and as energy source		
	2.2.6. Increased community's capacity to access inclusive and sustainable energy		
	2.2.7. Water-energy-food nexus to support business model of village-level climate adaptation action plan	<ul style="list-style-type: none"> The inclusion of women and vulnerable group as key partners and/or customers in the business model 	