Sustainable Aquaculture Development Plan

Draft

August 2022

Indonesia: Infrastructure Improvement for Shrimp Aquaculture Project

Sinjai District, South Sulawesi Province

Prepared by the Ministry of Marine Affairs and Fishery for the Asian Development Bank.

ABBREVIATIONS

ADB	–	Asian Development Bank
AH	–	Affected Household
AMA	–	Aquaculture Management Area
AMAN	–	*Aliansi Masyarakat Adat Nusantara*(Indigenous Peoples Alliance of Archipelago)/NGO
AP	–	Affected Person
BBPBAP	–	*Balai Besar Pengembangan Budidaya Air Payau* (Main Center for Brackish water Aquaculture Development)
BPN	–	*Badan Pertanahan Nasional* (National Land Affairs Agency)
CBO	–	Community-based Organizations
CDP	–	Community Development Plan
CDF	–	Community Development Framework
DDR	–	Due Diligence Report
DMS	–	Detailed Measurement Survey
EA	–	Executing Agency
EMA	–	External Monitoring Agency
GAR	–	Grant Assistance Report
GEF	–	Global Environment Facility
GRC	–	Grievance Redress Committee
GRM	–	Grievance Redress Mechanism
HSRT	–	*Hatchery Skala Rumah Tangga* (Household Scale Hatchery)
IA	–	Implementing Agency
IISAP	–	Infrastructure Improvement for Shrimp Aquaculture Project
INDOGAP	–	Indonesian Good Aquaculture Practices
IOL	–	Inventory of Losses
IP	–	Indigenous Peoples
IPP	–	Indigenous Peoples Plan
IPPF	–	Indigenous Peoples Planning Framework
KPA	–	*Kuasa Pengguna Anggaran* (Proxy of Budget User)
KUR	–	*Kridit Usaha Rakyat* (People's Business Credit)
LAR	–	Land Acquisition and Resettlement
MBC	–	Multi Brood stock Center
MMAF	–	Ministry of Marine Affairs and Fisheries
NBC	–	Nucleus Breeding Center
PIU	–	Project Implementation Unit
PMC	–	Project Management Consultant
CPMU	–	Central Project Management Unit
POKDAKAN	–	*Kelompok Pembudidaya Ikan* (Fish Cultivator Group)
POKLINA	–	*Kelompok Pengelola Irigasi Perikanan (*Fisheries Irrigation Management Group)
PSIA	–	Poverty and Social Impact Assessment
RTC	–	Regional Technical Consultant (RTC)
SADP	–	Sustainable Aquaculture Development Plan
SES	–	Socio-economic Survey
SIA	–	Social Impact Assessment
STELINA	–	*Sistem Telusur dan Logistik Ikan Nasional* (National Fish Traceability and Logistic System)
TPP	–	*Tim Penanganan Pengaduan* (Grievance Redress Committee)
TRTA	–	Transaction Technical Assistance
UPT	–	*Unit Pelaksana Teknis* (Technical Implementing Unit)

WWTP – Wastewater Treatment Plant

GLOSSARY

Affected Person (AP)	Means any person or persons, household, firm, private or public institution that, on account of changes resulting from the project, will have its (i) standard of living adversely affected; (ii) right, title or interest in any house, land, water resources or any other moveable or fixed assets acquired, possessed, restricted or otherwise adversely affected, in full or in part, permanently or temporarily; and/or (iii) business, occupation, place of work or residence or habitat adversely affected, with or without displacement. APs residing under one roof and operating as a single economic unit are collectively referred to as an affected household (AH).
Community	Refers to location sites of IISAP that will be implemented in many provinces of Indonesia.
Community Development	Is a process where community members come together to generate solutions to and take collective action on the common problems of the community.
Community Development Framework	A development framework that provides the procedures, key principles and requirements for social impact assessment, consultations with local community, preparation, and implementation of community development plan by the project in compliance with the ADB's SPS (2009) and relevant regulations of the Government of Indonesia.
Community Development Plan	Refers to a time-bound action plan with identified benefits and impacts of the project or program to the community, agreed beneficial measures and impact management; consultation with and participation of community in the impact assessment and implementation of beneficial measures and impact management, responsibilities of relevant agencies, implementation schedule, budget, and monitoring.
Detailed Measurement Survey (DMS)	With the use of approved detailed engineering drawings, this activity involves the finalization and/or validation of the results of the IOL, severity of impacts, and list of APs done during preparing of the resettlement plan. The final cost of resettlement is determined following completion of the DMS.
Fish Cultivator Group	Fish Cultivator Group (*Kelompok Pembudidaya Ikan*, *POKDAKAN*) is a collection of fish cultivators formed and growing on the basis of a common interest with mutual trust, harmony and intimacy to work together in order to utilize resources, develop businesses, funds, to improve the welfare of its members.
Indigenous Peoples	ADB Safeguard Policy Statement 2009 Indigenous Peoples Safeguards (p. 18): *"The term* Indigenous *Peoples is used in a generic sense to refer to a distinct, vulnerable, social and cultural group possessing the following characteristics in varying degrees: (i) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; (ii) collective attachment to geographically distinct habitats or ancestral territories in the project area and the natural resources in these habitats and territories; (iii) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and (iv) a distinct language, often different from the official language of the country or region. In considering these characteristics, national legislation, customary law, and any international conventions to which the country is a party will be taken into account. A group that has lost collective attachment to geographically distinct habitats or ancestral territories in the project area because of forced severance remains eligible for coverage under this policy."*

Meaningful Consultation	A process that: (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to APs; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of APs and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.
Shrimp Cultivation Cluster	Shrimp Cultivation Cluster, hereinafter referred to as Cluster, is a pond cultivation business with the concept of an area with shrimp commodities.
Vulnerable groups	These are distinct groups of displaced persons who are likely to be more adversely affected than others and who are likely to have limited ability to re-establish their livelihoods or improve their status and comprise of: (i) households living below the national poverty rate established by the Government of Indonesia, (ii) female headed households with dependents , (iii) disabled headed households with no other means of support, (iv) elderly headed households with no other means of support, (v) child headed households with no other means of support, (vi) landless households, (vii) those without legal title to land and (viii) ethnic minorities/indigenous peoples/customary communities.
Wastewater Treatment Plant (WWTP)	Wastewater Treatment Plant, hereinafter referred to as WWTP, is a water structure that functions to treat wastewater originating from shrimp farming activities.

NOTE

In this report, “$” refers to United States dollars.

CONTENTS

List of Appendixes

EXECUTIVE SUMMARY

1. Sinjai Timur, Sinjai Utara and Tellulempoi Subdistrict are included in the potential ponds area in Sinjai District with a total of 567.03 hectares, in which Sinjai Timur subdistrict is the most potential and widest pond. The potential ponds spread over 5 villages with a total area of 281.97 hectares.

2. In the potential pond areas, three project components will be built and rehabilitated, including (1) constructing a 5-hectare type 1 pond cluster in Samataring Village, (2) improving type 2 ponds in Samataring and Tongke-tongke Village, each covering an area of 5 hectares, and (3) reconstructing 22 kilometers of 6-meter-wide irrigation canals in

3. The project in Sinjai Timur subdistrict includes 13 beneficiary groups with a total 178 members, consisting of one group of type 1 assistance, 2 groups of type 2, and 11 groups of type

4. Productivity improvement and production cost cutting are made possible through upgrading the infrastructure of cluster system to semi-intensive shrimp farming, and/or irrigation and/ or communal WWT and/or other facilities improvement, disease training, control and monitoring followed by adequate laboratory facility, mangrove plantation surrounding the area and sustainable aquaculture practices.

5. The project establishes sustainable practices for the cluster, including (i) the introduction and improvement of sustainable aquaculture concept; (ii) shrimp farm pollution standards/threshold limit enforcement; (iii) closed-loop system investment to improve water quality and reduce water discharge; and (iv) adoption of farming technologies utilizing alternative chemicals and fertilizers to enhance water quality, as well as filter systems for water recycling and reduction of wastewater leakage into the environment.

6. There are small-scale shrimp production increases from 300 kg/Ha/Crop or 600 kg/Ha/year before the project to 2,250 kg/Ha/Crop or 4,500 kg/Ha/year after the project with the following economic assumptions: (i) the shrimp seed stocking density of 150,000 seeds/ Ha; (ii) a 120-day rearing period; (iii) 20 grams/pcs (50 pcs/kg) shrimp size on harvest; (iv) 75% shrimp survival rate; and (v) 1.2 Feed Conversion Rate (FCR).

7. With the poverty line of IDR 352,490, Sinjai District's poverty rate indicated 8.29% in 2021, representing 21,686 poor people, in which this number decreases since 2018.

8. Sinjai SADP is included in category B for environment, category C for involuntary resettlement (IR), and category C for indigenous people (IP). There is no significant impact for IR and IP.

9. For the Sinjai SADP implementation, a CDP will be developed. As such, the PIU will prepare and execute the CDP assisted by field facilitators and the regional consultant. In preparation stage, facilitators conduct public consultation for every beneficiary group receiving assistance and must disseminate all project information and activities to all beneficiary pond farmers. 10 types of training are prepared for improving capacity of farmers, involving 28 farmers.

10. Initial public consultation was provided for the project beneficiaries on 22 June 2022, and the coming consultation (2023-2024) has been scheduled for different topics and participants. First dissemination of Grievance Redress Mechanism was conducted on 22 June 2022, and the next for 2023-2024 has been scheduled.

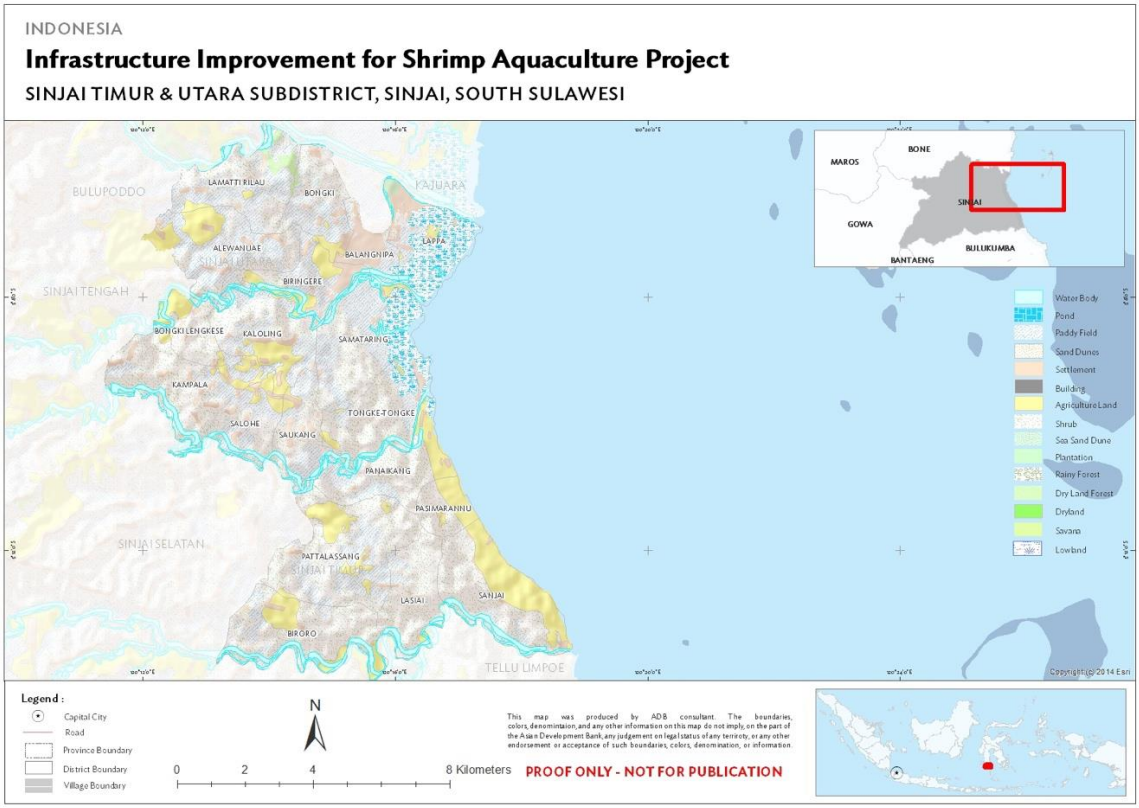
11. Some data in this document are preliminary, thus updates will take place during the project implementation.

I. CLUSTER PROFILE

A. Physical, Socio Economic, and Aquaculture Practices Conditions

1. **Geophysical conditions.** Soil types in Sinjai District based on spatial analysis of soil digital maps, there are several kinds of associations between inceptisol, entisol, and ultisol soil types. The largest land area in Sinjai District is dystropepts (52,120 hectares, 63.6%) spread over several sub-districts. While the least type of soil is tropudults with an area of 2 hectares (0.0002%) in Tellulimpoe District. The soil structure formed in North Sinjai is generally blackish Alluvial soil type. Soil types are Hydromorphic Alluvial, Gray Brown Alluvial, Blanosol, Resina and Regosol Complex, Red Mediterranean Complex and Latosol, Gray Brown Lateric, Yellowish Red Latosol, Reddish Mediterranean. The groundwater depth in the North Sinjai Subdistrict is between 5-6 meters. In coastal areas there is generally a thick stretch of sea sand, with a hard soil structure located at a depth of 1.5-2 meters from the surface of the sand or soil layer. Sinjai District has rainfall ranging from 2,000-4,000 mm/year, with rainy days varying between 100-160 rainy days/year. The average air humidity was recorded in the range of 64-87%, and the average air temperature ranged from 21.1°C-32.4°C. Based on observations from the Maros District Climatology Station, the average number of rainy days per month is about 12 days with a total rainfall of 155.

Figure 1: Map of Potential Ponds Area at East Sinjai Subdistrict

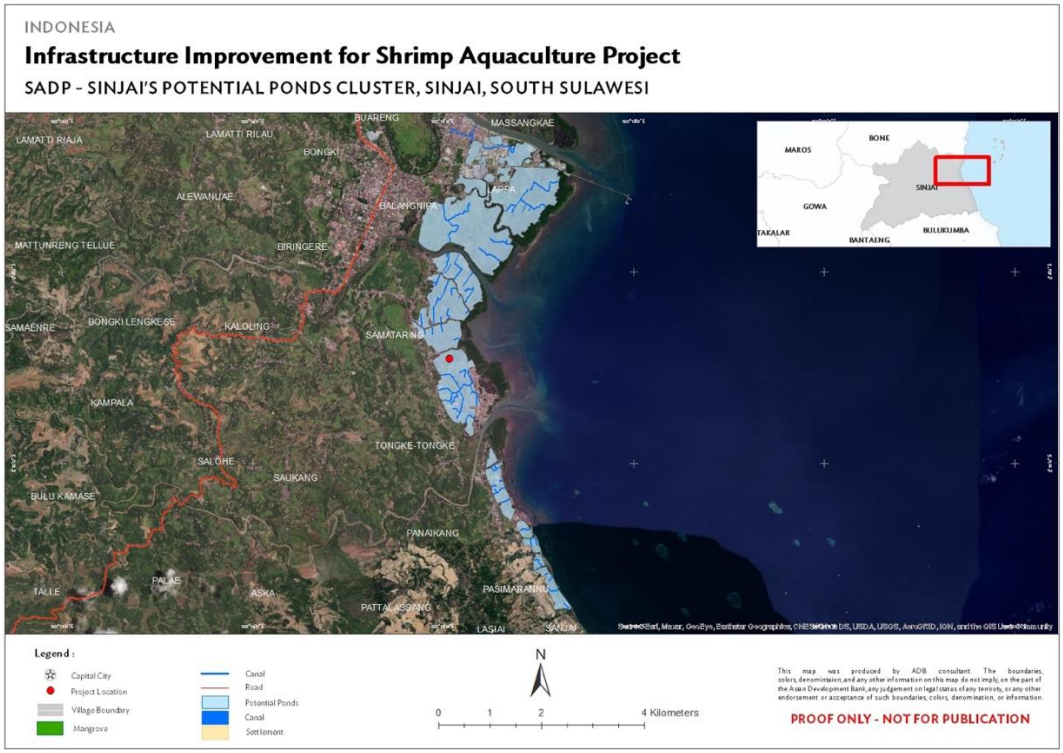


Source: TRTA Team analysis

2. Sinjai district has 9 subdistricts. Only 3 subdistricts have potential ponds for shrimp cultivation, namely Sinjai Timur (5 villages), Sinjai Utara (2 villages) and Tellulempoe (1 village). The total area of ponds in Sinjai District is 567.03 hectares. Sinjai Timur subdistrict is the most potential. Based on public consultation meeting in Sinjai District and initial field survey, the

proposed ponds area is in Sinjai Timur Subdistrict due to the other subprojects, as Sinjai Utara is urban area where many pond were converted and Tellulimpoe is the area that experienced dyke damage due to tides.

Figure 2: Map of Potential Ponds Area at Sinjai Timur Subdistrict



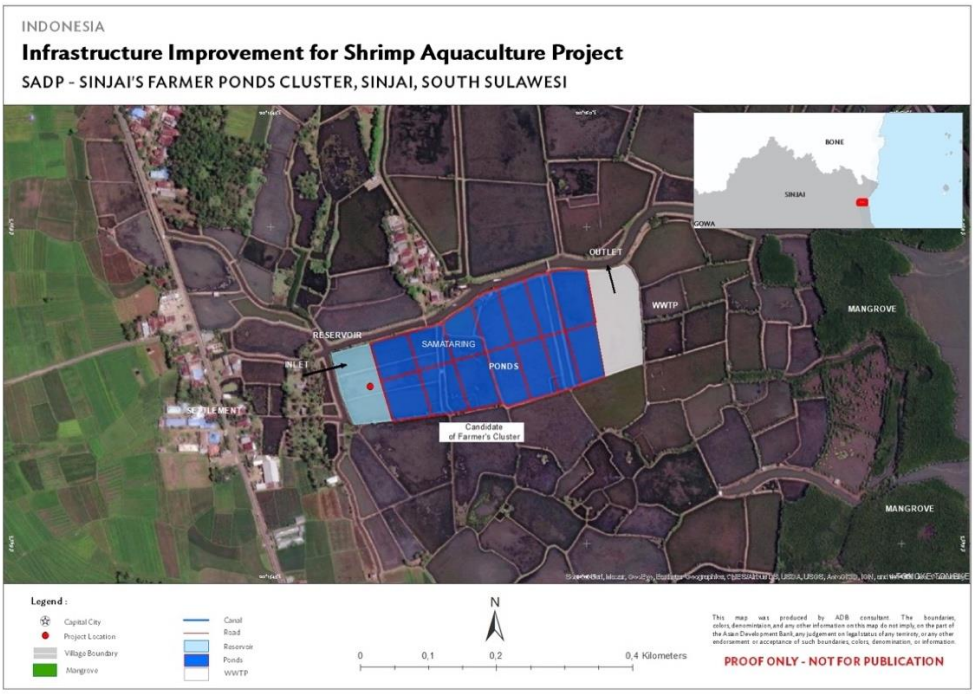
Source: TRTA Team analysis

3. Shrimp **Pond Potential Area**. The shrimp pond area in the Sinjai Timur subdistrict is 281.97 hectares. The potential ponds area in Sinjai Timur is distributed in villages of Tongke-tongke, Samataring, Panaikang, Sinjai, and Pasimarannu. From 5 villages a location will be selected for the ponds cluster (type 1), ponds upgrading (type 2), and irrigation canal (type 3).

4. **Ponds Cluster Site Location.** The most potential location for ponds cluster is in Samataring village. Selection of ponds cluster location is using technical criteria such as free from legal disputes/problems and no compensation fees, have accessibility in the area, have irrigation canals in the area, have a water source that meets fishery requirements cultivation, and free from flooding. The ponds cluster only need 5 hectares of 112.02 hectares.

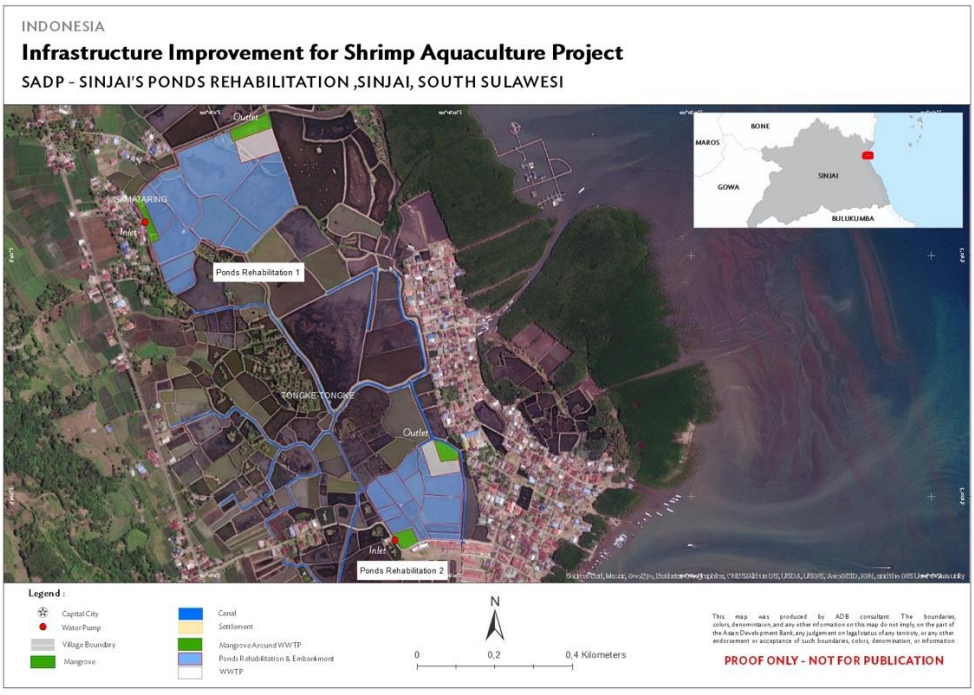
5. **Ponds Upgrading/Rehabilitation.** There are 2 site locations that receive ponds upgrading assistance, namely at Samataring village and Tongke-tongke village. Samataring (with area 112.02 hectares) has the largest pond area in Sinjai Timur Subdistrict. Tongke-tongke village has 89.01 hectares. The ponds rehabilitation is approximately 10 hectares of the pond area in Sinjai Timur Subdistrict. The selection of 2 site locations for ponds upgrading assistance is using criteria such as at least 20,000 m^2 of land area for fish cultivation, land ownership status is clear and clean, and not in dispute, availability of water in sufficient quantity with good quality in accordance with the requirements of fish farming and not contaminated from food hazards, and good transportation and communication infrastructures.

Figure 3: Sinjai's Farmer Ponds Cluster Map



Source: TRTA Team analysis, 2022

Figure 4: Sinjai's Ponds Upgrading Map

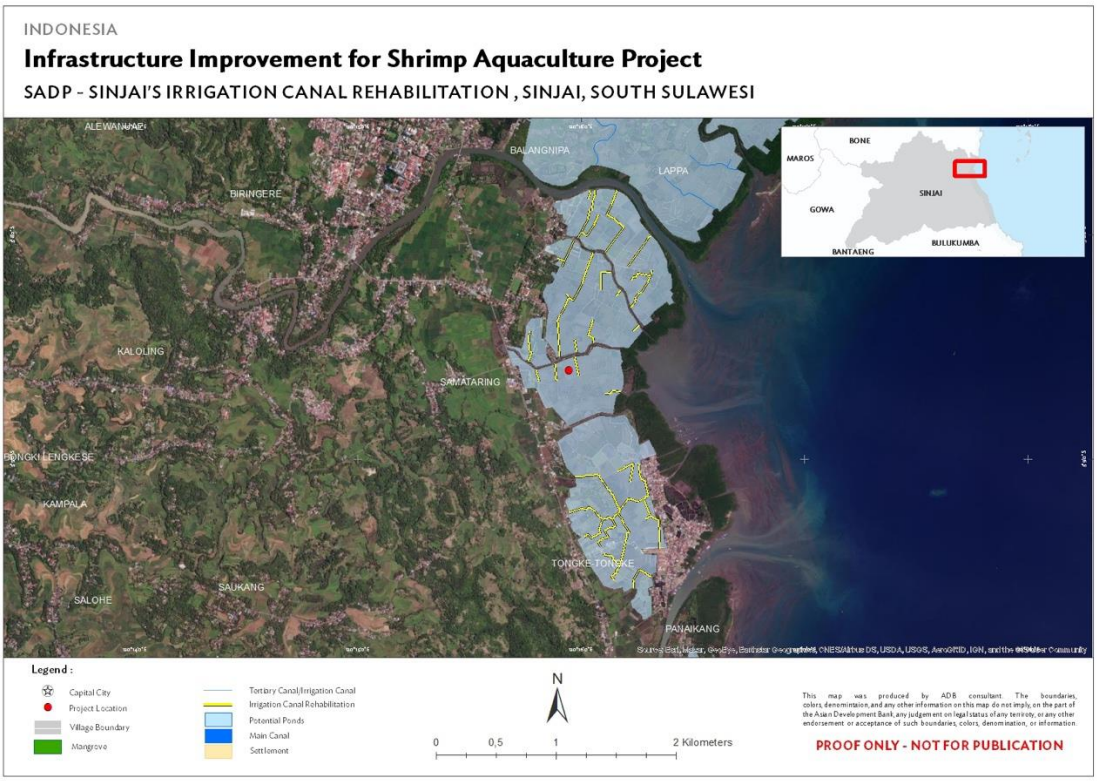


Source: TRTA Team analysis, 2022

6. **Irrigation Canal.** Sinjai Timur subdistrict has irrigation canals spread throughout the potential pond area. Some conditions of irrigation canals are narrow and experience siltation. This channel needs repair to support ponds upgrading. There are two requirements, on location and

on the fishery irrigation management group *(Kelompok Pengelola Irigasi Perikanan, POKLINA)* receiving the assistance. The location requirement is the pond area is within a sub district, allotted for fish cultivation, free from legal disputes/issues and approved by the landowner (no compensation fee), the fishery irrigation canals requiring rehabilitation and have not had similar assistance programs in the last 2 (two) years that is evidenced with a statement letter, and the irrigation canal has a maximum width of 6 meters at their top. Several villages whose canals will receive assistance in repairing irrigation canals are village of Tongke-tongke, Pasimarannu, Panaikang, and Sanjai.

Figure 5: Sinjai's Irrigation Canal Map



7. **Socioeconomic conditions.** The socio-economic profile of the most potential area for shrimp pond is presented in Table 01. Most of farmers are work as fish farmers and have Bugis ethnicity. The owners and tenants of ponds are female with a proportion of 20% female and 80% male. Average pond ownership in Sinjai Timur is 1.74 hectares per farmer. Total pond farmer in Sinjai Timur is 325 farmers.

Table 1: Socio-Economic Profile of Sub-Project Cluster

Indicator	Socio-Economic Profile
Ponds Cluster	
Ponds area (ha)	5.23 ha (from 41.90 ha of owned group)
Number of fish farmers group in the targeted ponds area	1 group
Type of partnership	Fish farmers group
Number of farmers in the targeted ponds area	12 of 22 farmers
Average area of pond ownership (Ha)	1.90
Number of vulnerable farmers in the ponds area	- people
Poverty rate of Sinjai District 2021 (%)	8.29
Range of income (Rp/month) in the group	IDR. 1,000,000 – 3,000,000

Indicator	Socio-Economic Profile
Main commodities produced	Shrimp Windu and Vannamei, Milkfish, and Gracilaria sp. sea grass
Gender and disability in farmers group	77% female, 23% male and 0% disable
Ponds Upgrading	
Ponds area (ha)	10 ha (from 49.60 ha of owned group)
Number of fish farmers group in the ponds area	2 (each at Samataring and Tongke-tongke)
Type of partnership	Fish farmers group
Number of farmers in the ponds area	35
Average area of pond ownership	1.42
Number of vulnerable farmers in the ponds area	-
Poverty rate (%)	-
Range of income (Rp/month) in the group	IDR. 1,000,000 – 3,000,000
Main commodities produced	Shrimp Windu and Vannamei, Milkfish, and Gracilaria sp. sea grass
Gender and disability	91% female, 9% male and 0% disable
Irrigation Canal	
Affected ponds area (ha)	83.65 ha
Number of fish farmers group in the ponds area	10
Type of partnership	Fish farmers group
Number of farmers in the ponds area	161
Average area of pond ownership	0.52
Number of vulnerable farmers in the ponds area	-
Poverty rate (%)	-
Range of income (Rp/month) in the group	IDR. 1,000,000 – 3,000,000
Main commodities produced	Shrimp Windu and Vannamei, Milkfish, and Gracilaria sp. sea grass
Gender and disability	30% female, 70% male, and 0% disable

Source: Fisheries Agency of Sinjai District and Questionnaire 2022

B. Mapping of Constraints for Value Chain Improvement

Table 2: Mapping Value Chain Constraints and Opportunities

Indicator	Description of Constraints and Opportunities
Aquaculture practices	**Constraints**: Disease, low productivity due to mostly traditional system farming and 3 circle ponds, sandy earth end pond causing water reduction in shrimp ponds, inadequate infrastructure and facility to upgrade into semi-intensive or intensive farming system, flood due to high tide. **Opportunities**: upgrading infrastructure by cluster system to intensive farming, or irrigation or communal WWT and/or other facilities improvement, disease training, control and monitoring followed by adequate laboratory facility, mangrove plantation surrounding the area will improve productivity, reduce production cost, good and sustainable aquaculture practices. It can be followed by INDOGAP registration with CBIB certification or International Certification (ASC or Organic) and apply traceability record.
Access to water services	**Constraints**: Water source from irrigation canal is dependent to tide, sea water and saline water source from borehole. There is no waste water treatment before discharge to environment.

Indicator	Description of Constraints and Opportunities
	Opportunities: Irrigation improvement (2,210 m at UPT and 2 km at each farmers group), mangrove plantation in inlet/outlet canal to improve water quality. Reservoir facility to treat and collect the water before used for shrimp cultivation. Wastewater treatment ponds before discharge to environment or wastewater from shrimp ponds can be used for fertilizer for plants.
Access to technology	Constraints: source of water coming from sea water but un-adequate water pump to supply to shrimp ponds. Opportunities: cluster system, irrigation improvement (UPT Takalar 4,150m: Pinrang 7,550 m and 750-1000m at each farmers group), mangrove plantation, reservoir and communal WWT installation will improve water quality
Type of collaboration mechanisms within the cluster	Farmers group
Capacity of the farmers	Knowledge of shrimp farming techniques is still low
Access to extension worker support	Semi-intensive and intensive farming systems will need additional extension worker such as: technical manager to assist in cultivation method and system, wastewater treatment staff, mechanics to assist on generator, electricity, water pump and paddle wheel, feeders, or ponds men for shrimp production in each pond. **Constraints**: Will need experience technical manager and other skill workers. **Opportunities**: TOT and training will upgrade aquaculture knowledge of workers and technical assistance from feed company.
Access to finance	**Constraints:** Limited access to finance. **Opportunities:** training and technical assistance for surrounding farmers to access credit from KUR or LPMUKP and business plan training. Working capital could be reduce by term of payment facility from feed company up to 60 days.
Access to inputs	**Constraints:** Access to good quality and SPF seed is limited and usually via middleman as farmers practice traditional farming system with poor seed quality. Feed as farm input is the biggest production cost that need more working capital to do semi-intensive farming system. **Opportunities:** Brood stock center in BPIU2K Karangasem and MBC facility from government will provide high quality and SPF seeds with affordable prices. Feed company could provide term of payment up to 60 days to reduce high working capital and provide technical assistance.
Post-harvest practices	**Constraints:** Traditional farmers usually using motorcycle taxi to transfer shrimp from pond to harvest area (middleman) with no ice or limited ice. Decreasing product quality and animal welfare concern due to no ice killing after harvest and traceability. **Opportunity:** Provision of trainings to middleman and farmers on good post-harvest practices and provide tools to implement traceability.
Post-harvest infrastructure	**Constraints:** In some areas, there is inadequate irrigation infrastructure, bad production road due to flood, insufficient electricity, inadequate post-harvest process facility such as: clean water, shrimp washing facility, sorting, and grading area, weighing machine (other facility such as basket, ice will provide by middleman), and clean water source for shrimp washing **Opportunity**: IISAP will assist to improve the production road, farm infrastructure, irrigation, and post-harvest facilities in the center of cluster.

Source: TRTA Team analysis, discussed with MMAF, January 2022

II. CLUSTER DEVELOPMENT PLAN

8. **Proposed business model.** Cluster farmer will apply semi-intensive technology Vannamei shrimp cultivation technique. The pond will be redesigned according to the guidelines issued by MMAF and providing production facilities, including water pumps and waterwheels. Production inputs for aquaculture operations should be provided including high quality of shrimp seeds, shrimp feed, tea seed cake (saponin), lime and probiotics. The selected beneficiaries will be directly accompanied by a facilitator to strengthen and improve the group's ability. Alternately and gradually the beneficiaries will be given technical and non-technical training in shrimp cultivation.

9. The improvement of the pond will be implemented after all administrative processes and group strengthening has been carried out. During implementation, the farmer group will be accompanied by 3 facilitators (technical, business, and social). The technical facilitator will assist the farmer group in carrying out daily activities of Vannamei shrimp cultivation during the project period.

10. **Infrastructure and landscaping works.** The proposed investments in infrastructure are presented in Table 03 below and infrastructure siting and basic design are presented in Appendix 1. Overall, per cluster there are several main infrastructures to be built e.g., main ponds and all supported facilities, around 2 km for main inlet and outlet canals which covered by the natural mangroves to dissipate the impacts of water quality induced by communities, water reservoir, and access roads, and at least 1 package of simple wastewater treatment plant (WWTP). Figure 02 shows the layout of Sinjai Timur Subdistrict Farmer Pond Cluster with total area of 5 ha which consisted of 14 production ponds, 1 unit of water reservoir, 1 unit of WWTP, and farm and access roads.

Table 3: Proposed Infrastructure Works and Investments Farmer Cluster at Sinjai Timur Subdistrict

Name of Cluster: Sinjai Timur Cluster Total Area: 5.23 Ha Total Potential Area: 41.90 Ha							
No	**Infrastructure**	**Parameter 1**		**Parameter 2**		**Parameter 3**	
		Description	**Remark**	**Description**	**Remark**	**Description**	**Remark**
I	Upstream	Type					
1	Natural inlet as the main source to the main reservoir and ponds around the cluster	Type	Earth canals combined with mangrove	Length (m)	345	Width (m)	2.5
2	Natural inlet outside the cluster to be built	Type	Earth canals combined with mangrove	Length (m)	2,000	Width (m)	N/A
II	On Farm						
1	Reservoir	Type	Earth reservoir	Length (m)	115	Width (m)	50
2	Ponds	Type	Earth ponds combined with HDPE	Length (m) x Width (m) per unit pond	59.5 x 42	Total of ponds (unit)	14
3	Farm Roads	Type	Soil pavement	Length (m)	875	Width (m)	1.5

Name of Cluster: Sinjai Timur Cluster Total Area: 5.23 Ha Total Potential Area: 41.90 Ha							
No	**Infrastructure**	**Parameter 1**		**Parameter 2**		**Parameter 3**	
		Description	**Remark**	**Description**	**Remark**	**Description**	**Remark**
4	Access Roads	Type	Soil pavement	Length (m)	775	Width (m)	3
5	WWTP	Type	Concrete minimalist concept design	Length (m)	120	Width (m)	50
III	Downstream						
1	Natural outlet around the cluster	Type	Earth canals combined with mangrove	Length (m)	870	Width (m)	1.5
2	Natural outlet outside the cluster to be built	Type	Earth canals combined with mangrove	Length (m)	2,000	Width (m)	N/A

Source: TRTA Team analysis

11. **Environment improvement and sustainability.** The prevailing regulations, especially MOEF No. 4/2021 and MMAF No. 75/2016 applies for the environmental aspects of cluster ponds/hatchery and rural infrastructure. The siting criteria as agreed by EA are the basis for the subproject. The siting criteria is to minimize negative environmental impacts and risks. The clusters in Sinjai Timur (Sinjai, South Sulawesi) are built in existing farmers/farmers group lands and met the siting criteria. These sites are not within undisturbed landscapes. This was supported with PIPPIB (Indicative Map for Moratorium of New Permit), which proves that cluster areas are not at the border or within protected mangrove forest and wetland. Accordingly, the sites also comply with the spatial plan (RTRW).

12. The project will introduce sustainable practices for the cluster such as (i) introduction and enhancing of the sustainable aquaculture concept; (ii) enforcing standards/threshold limits for pollution from shrimp farms; (iii) investing in closed-loop systems that improve water quality and reduce water discharge; and (iv) adopting farming technologies that use alternatives to chemicals and fertilizers to enhance water quality, as well as filter systems that aim to recycle water and reduce wastewater leakage into the environment (through use of HDDPE). For the cluster, a communal WWT (wastewater treatment) using aerated lagoon combined with reedbed/ constructed wetland of mangrove strips in the channel is proposed. This coincides with sustainable aquaculture which combines ponds with mangrove plantation or re-plantation, either at the ponds cluster or beyond the cluster. The mangrove restoration program will be part of the project and involve community participation, enhancing livelihood and sense of belonging.

13. **Aquaculture production investments**. Shrimp production for small-scale farmers can be increased by: (i) improving pond preparation; (ii) increasing the number of stocked shrimp fry; (iii) providing additional feed (artificial feed) and (iv) increasing knowledge and skills of shrimp farmers through training. The proposed investments in production are presented in Table 04 below.

14. **Supporting services investments**. Some of the constraints are low productivity with traditional farming, lack of quality seeds, access to finance is limited and, lack of good infrastructure. Shrimp price, therefore, is stable. In this province, there is only one factory which has already been BAP certified, one feed company has been BAP certified. The shrimp cluster

program will help farmers to engage with farm input supply and increase the production, further cooperation can be explored with exporters to do International Certificate and good post-harvest handling practices to improve quality to access premium product for Japanese and EU market. The proposed investments in value chain and supporting services are presented in Table 05 below.

Table 4: Proposed Aquaculture Production Investments

Activity	Quantity	Procurement/ Implementing entity	Financing Timeline And Who pays
Farmers group establishment	13 groups	PIU/ UPT support by facilitators and extension workers	2023 (Q3, Q4) – 2024 (Q1)
Farmers group strengthening	13 groups	Legal Publications / Fisheries District Office support by extension workers	2023 (Q2) – 2026 (Q4) and ADB Fund
Pond reconstruction + plastic HDPE + Water pump + paddle wheel[1], Canal/ drain rehabilitation[2], and Communal WWTP[3]	2 packages (2 groups x10 = 20 core farmers)	Procedure for ADB procurement /DGA and PIU/ UPT	- DED (2023) - Construction (2024) ADB Fund
Shrimp pond Cluster Equipment (Generator, paddle wheel, water pump, feed, seed, probiotic etc.)	1 packages/ group/ Sub district (1 groups= 10 core farmers)	Procedure for ADB procurement /DGA and PIU/ UPT	2004 (Q4) – 2025 (Q3)
Shrimp disease sampling and handling training *(Sekolah Lapang)*	28 core farmers (13 group @ 2 farmers x 1 Sub Districts)	Procedure for ADB procurement	2023 (Q4) – 2024 (Q3)/ ADB
6 types of training (*Sekolah Lapang* and classical)	28 core farmers	Procedure for ADB procurement	2023 (Q4) – 2024 (Q3)/ ADB
Total Farmers	**198 Core farmers**		

15. **Cost estimates.** Detailed cost estimates by expenditure category are presented in Appendix 2 and are summarized in the Table 05 below.

Table 5: Summary Cost Estimate Farmer Cluster at East Sinjai Subdistrict ($ Million)

Item		Amount[a]
1.	Output 1	12.75
2.	Output 2	7,692.36
3.	Output 3	347.89
	Total	**8,053.00**

Note:
[a] Includes taxes and duties. Such amount does not represent an excessive share of the project cost
Source: TRTA Team analysis.

16. **Financial and economic analysis.** The production of small-scale shrimp farmers before project is 300 kg/Ha/Crop or 600 kg/Ha/year and after project the production of small-scale shrimp farmers increase up to 2,250 kg/Ha/Crop or 4,500 kg/Ha/year. The assumptions for economic analysis are (i) the stocking density of shrimp seed is 150,000 seeds/ Ha; (ii) rearing period is 120 days; (iii) shrimp size on harvest is 20 gram/pcs (50 pcs/kg); (iv) the shrimp survival rate is 75%

[1] Regulation Director General of Aquaculture No 31 /PER-DJPB/2021. Juknis Klaster Tahun 2021.
[2] Regulation Director General of Aquaculture Number 15 /PER-DJPB/2020 tentang Petunjuk Teknis Pengelolaan Irigasi Tambak Partisipatif (PITAP) Tahun 2020 (22 km per District = 22 groups).
[3] Per District 2 packages.

and (v) Feed Conversion Rate (FCR) is 1.2. The risk that may occur is the death of shrimp due to disease or errors in the implementation of the best aquaculture practices by group members. The economic and financial model is presented in Appendix 3 including key assumptions. A summary is presented in Table 06.

Table 6: Cash Flow and Financial Viability

Item	IDR	Variable	IDR
Revenues 7.875*) kg shrimp @ 80.000	630.000.000	**Benefits**	
Benefit streams		Xxx	#
Xxx	#	Xxx	#
Xxx	#	Total	#
Total (all values)	#		
Benefit 2	#		
		Costs	
Delay in Construction by 1 Year	#	Construction	4,565,000,000
		O&M	2,265,000,000
		Other subproject costs	377,500,000
		Total (direct subproject costs)	**7,207,000,000**
		Project management costs	293,000,000

*) Production per hectare is 2250 kg, in which 70% (3,5 Ha) of 5 Ha cluster pond area is production pond so the total production is 8.875 kg (3.5 x 2250 kg), shrimp size 20 gr/ pcs (50 pcs/kg) with the price of IDR 80,000/kg.
Source:

III. SAFEGUARD DUE DILIGENCE AND IMPLEMENTATION PLAN

A. Poverty, Social, and Gender

17. **Poverty.** Sinjai District's poverty rate is 8.29% in 2021. The poverty line is IDR 352,490. The number of poor people is 21,686. This number decrease since 2018[4].

18. **Unemployment.** South Sulawesi's open unemployment rate in 2020 was 6.31%. This value shows an increase from 2019 of 1.34%, which means that the number of open unemployed increased by 4,790,236. The open unemployment rate in 2020 was the highest in the past 5 years.

19. **Gender related data on aquaculture.** Aquaculture is dominated by men. Women are predominant in aquaculture-related marketing and processing. August 2021 National Statistics accounts that 37,130,676 people work in agriculture, forestry, and fisheries sector, out of which 12,903,992 (34.8%) are women. Sex-disaggregated statistics of individual actor (KUSUKA holder) for aquaculture are women 57,102 (13.9%) and men 352,737 (86.1%) or a total of 409,839 people. Women's participation is very limited for all activities in the aquaculture cycle such as: (i) determining seed cultivation and stockpiling and shrimp cultivation (men 98% and women 1% each respectively), and (ii) post-harvest sorting and cleaning (men 87% and women 3%). The role of women in marketing is also very low with only 1%, while men's role accounted for 81%.

20. Sinjai Timur SADP needs of Social Impact Assessment (SIA) based on subdistrict level, both statistic agency and field survey to get social data from pond farmer in Sinjai Timur

[4] Statistic of Sinjai District 2022 *(Kabupaten Sinjai Dalam Angka 2022)*.

Subdistrict. Official data on poverty, gender, unemployment, and others socio economic data, usually, is not available. Facilitator and regional technical consultant can conduct field survey by distributing questionnaires to pond farmers. Detailed profile of social and economic background of the land contributors and specific section on vulnerable households in the project will be developed upon the SIA results and community consultations that conducted in implementation stage. The SIA must accommodate data and information on land tenure at each village in potential ponds of the subdistrict. SIA report template can be seen in Appendix 4.

B. Safeguards

21. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.[5]

22. **Environment (category B).** As identified by desk study and field visits to Sinjai (South Sulawesi) as well as consultation with farmers, no sensitive areas and/or receptors (such as settlements, schools, hospitals, religious facilities, etc) may be affected by this subproject. The subproject is in the coastal areas with some strips of mangrove plants.

23. The environment screening to identify environmental impacts and risks of the cluster in Sinjai Timur (Sinjai, South Sulawesi) is presented in Appendix 5a. Based on the screening, there are no significant negative environmental impacts and risks. Referred to IEE and the Environmental Management Plan (EMP) prepared under the project, the impacts and risks can be adequately mitigated, therefore, the proposed clusters in Sinjai can be implemented in an environmentally acceptable manner.

24. Consultations with key stakeholders and communities have been jointly organized with Social Safeguards and Indigenous People Safeguards team. The consultations aimed at disclosing information on the project and the cluster development as well as impacts and benefits to the key stakeholders and community. The public consultations were carried out on 21 June 2022.

25. Based on the screening, the cluster only requires a statement on commitment to manage and monitor environmental impact (i.e., SPPL). The farmers and groups will submit the statement to the respective environmental agency *(Dinas Lingkungan Hidup).* The documents shall be prepared during planning phase, and no construction can be started without meeting the requirement.

26. The environmental management plan (EMP) for SDAP Sinjai (Sinjai Timur) is presented in Appendix 5b.

27. **Involuntary resettlement (category C).** Based on the screening of the proposed activities in the areas the subproject is categorized as C. The identified land and non-land impacts and its mitigation/arrangement are detailed in Table 08 below. The involuntary resettlement safeguards screening form is in Appendix 6.

28. There is no farmer household who will get physical and economical displacement. Beneficiaries will only share their land (pond plot) for other pond utilization and its supporting infrastructure of pond cluster. Land sharing will also be carried out on the subproject component of communal WWTP for farmer group who their member gets pond reconstruction. In Sinjai Timur

[5] ADB. Safeguard Categories.

subdistrict, irrigation canal repairing does not need land sharing due to the existing canal already there. The project will only repair the existed irrigation canal.

Table 7: The Land Provision Mechanism and Potential Impacts of the Proposed Infrastructures

Component-Subcomponents	Size (ha or m2 or km)	Number of participated/ affected farmer households	Number of vulnerable households and women involved/ affected	Land provision mechanism (land sharing/pooling)[a]	Identified non land impact (if any)[b]	Mitigation Document prepared/ provided[c]	Construction Schedule
Farmer Pond Cluster of POKDAKAN Lestari	**5.234 ha**	**22**	**-**			**IR Screening/ DDR[d]**	**By January 2024**
Production Pond	2.499 ha			Land sharing	No		
Canal 1 (inlet)	0.586 ha			Land sharing	No		
Canal 2 (outlet)	0.431 ha			Land sharing	No		
Reservoir Pond	0.575 ha			Land sharing	No		
WWTP Pond	0.910 ha			Land sharing	No		
Access road	0.233 ha			Land sharing	No		
Storage Facility	-			-	-		
Pond Reconstruction + Communal WWTP + Electricity at Tongko-tongke village	**7 ha**	**16**	**-**	**Land sharing**	**No**	**IR Screening/ DDR**	**By January 2024**
Production Pond	5 ha			No land sharing	No		
Reservoir Pond	1 ha			Land sharing	No		
WWTP Pond	1 ha			Land sharing	No		
Electricity	30 m			No land sharing	No		
Pond Reconstruction + Communal WWTP + Electricity at Samataring village (POKDAKAN Tajjolo Lagoari)	**7 ha**	**19**	**-**	**Land sharing**	**No**	**IR Screening/ DDR**	**By January 2024**
Production Pond	5 ha			No land sharing	No		
Reservoir Pond	1 ha			Land sharing	No		
WWTP Pond	1 ha			Land sharing	No		
Electricity	30 m			No land sharing	No		
Irrigation Canal at Tongke-tongke and Pasimarannu villages (each 3 POKDAKANs), Panaikang village (4 POKDAKANs), and Sanjai Village	**22 km**			**No land sharing**	**No**	**IR Screening/ DDR**	**By January 2024**
Inlet Canal	11 km	96	-	No land sharing	No		
Outlet Canal	11 km	69	-	No land sharing	No		

[a] Referred to the CDF prepared for the project
[b] Non land impacts include trees, structures, income/wages, access to resources, etc.
[c] The prepared document is attached in appendix 7
[d] The IR and IP screening is attached in Appendix 6.
Source: BPBAP Takalar and Pokdakan

29. There are 13 targeted groups of fish cultivators (Pokdakan) in the Sinjai Timur sub-district with 140.50 hectares of potential ponds spreading over at Tongko-tongke, Samataring, Panaikang, Sinjai, and Pasimarannu Villages. The number of group members varies from 11 to 22 people. The average area of fish cultivation per Pokdakan is 13.47 hectares.

30. Ponds of Pokdakan Lestari is in Samataring Village. They have 41.9 hectares that owned by 22 people. The pond cluster will be developed for 5.23 hectares in ponds with status as landowner and profit sharing. Land contribution of each farmer can be seen in Table 8.

Table 8: List of Farmers Groups for Pond Cluster Development

Name of the Activities	Name of the Farmers Group/Village	Name of the Members	Pond Area (Ha)	Contributed Land Size (Ha)	Land Status
Farmer Pond Cluster of Lestari at Samataring Village	Lestari/ Samataring	Saddang Husain	5.80	0.77	Landowner
		A. Ahmad Yani	4.50	0.75	Landowner
		Nurdin	1.50	-	Landowner
		Arham	0.70	-	Landowner
		Sabri	1.00	0.50	Landowner
		Faisal	2.00	0.50	Landowner
		Kahar Labba	0.60	-	Landowner
		Basri	1.00	-	Landowner
		Hamsah	1.10	-	Landowner
		Kamaruddin	0.80	-	Landowner
		Darmini	3.75	0.75	Landowner
		Akbar	2.00	0.15	Profit Sharing
		Zainuddin	1.20	0.20	Landowner
		Irwansyah	1.50	0.35	Landowner
		Abd Malik	0.50	-	Landowner
		Farlan	1.70	0.25	Landowner
		Reski Maulana	0.80	-	Profit Sharing
		Irfan	1.00	0.22	Landowner
		A.M. Jafar	1.50	-	Landowner
		Ramalang	2.25	0.32	Profit Sharing
		Usman	4.20	0.47	Profit Sharing
		Abdullah	1.50	-	Landowner
Total			**41.90**	**5.23**	

Source: BPBAP Takalar and Pokdakan

31. Only 2 groups received assistance for pond reconstruction (along with their communal WWTP and reservoir ponds), namely Pokdakan Cahaya Lombo in Tongke-tongke Village and Pokdakan Tajjolod Laguari in Samataring Village. Pokdakan Cahaya Lombo (16 group members) was represented by 10 people with the status of a landowner. Pokdakan Tajjolod Laguari (19 group members) was represented by 10 people with the status of a landowner. The area of the pond to be reconstructed is 7 hectares in each group.

Table 9: List of Farmers Groups for Ponds' Rehabilitation

Name of the Activities	Name of the Farmers Group/Village	Name of the Members	Pond Area (Ha)	Contributed Land Size (Ha)	Land Status of Ponds
Pond Reconstruction + Communal WWTP + Electricity at **Tongke-tongke Village (Pokdakan Cahaya Lombo)**	Cahaya Lombo/ Tongke-tongke	Abd.Hamid Hasyim	1.00	0.75	Landowner
		Abdul Malik	0.60	0.60	Landowner
		Haeriah	2.50	0.90	Landowner
		Sirajuddin	3.00	0.75	Landowner
		Bakri	0.50	0.50	Landowner
		Abidin	1.00	0.75	Landowner
		Ashar Abadi	1.50	-	Tenant
		Amiruddin	1.00	0.75	Landowner
		Arfah	0.80	0.50	Landowner
		Mapparoto	1.00	0.75	Landowner
		Abdul Kadir	0.50	-	Landowner
		Muh.Ramli	1.20	-	Tenant
		Haeruddin	2.00	0.75	Landowner
		Rahmawati	1.00	-	Landowner
		Saeful	0.50	-	Landowner
		Firdaus Amsul	0.50	-	Landowner
Pond Reconstruction + Communal WWTP + Electricity at **Samataring Village (Pokdakan Tajjolod Lagoari)**	Tajjolod Laguari/ Samataring	Usman	2.00	0.75	Landowner
		Arianto	2.00	0.75	Landowner
		Lala	2.00	-	Tenant
		Usran	2.00	0.75	Landowner
		Sainuddin	1.00	0.50	Landowner
		Muhammad Iklan	2.00	-	Tenant
		Ato	2.00	0.75	Landowner
		Gusdian	2.00	0.75	Landowner
		Mamma	1.00	0.50	Landowner
		Tasbi	1.00	-	Landowner
		Agussalim	2.00	0.75	Landowner
		A.Arifuddin	2.00	0.75	Landowner
		Muh.Anwar	2.00	-	Landowner
		Mendin	2.00	-	Tenant
		Nur Alamsyah	1.00	-	Landowner
		Sirman	2.00	0.75	Landowner
		M.Asri	1.00	-	Landowner
		Malik Ibrahin	1.00	-	Landowner
		Suardi	1.00	-	Landowner
Total			49.60	14.00	

Source: BPBAP Takalar and Pokdakan

32. All villages in Sinjai Timur Subdistrict that have potential ponds are passed by public irrigation canals. For this reason, all villages will receive assistance in repairing public irrigation canals. However, not all groups have ponds bordering that canal, so that only a few groups were identified including Tongke-tongke and Panaikang Village. The list of farmers group for irrigation canal can be seen in Table 10.

Table 10: List of Farmers Groups for Irrigation Canal (Public)

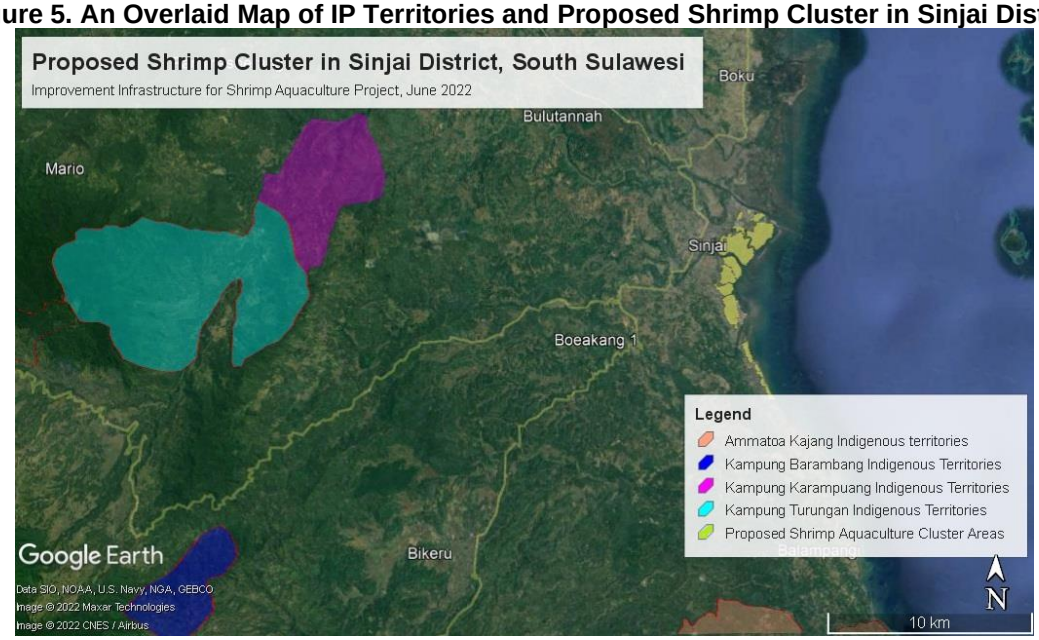
Name of the Activities	Name of the Farmers Group/Village	Name of the Members	Pond Area (Ha)	Contributed Land Size (Ha)	Land Status of Ponds
Irrigation Canal at Tongke-tongke Village					
Inlet Canal 11 km	Alameng/ Tongke-tongke	Asrang	1.70	-	Landowner
		Muizuddin	0.64	-	Landowner
		Mufassir	0.84	-	Landowner
		Ma'mun	0.48	-	Landowner
		Fauzan	0.44	-	Landowner
		Azhar	0.40	-	Landowner
		Rizal Jamil	0.45	-	Landowner
		Bece	0.40	-	Landowner
		Amrullah	0.65	-	Landowner
		Mursyidul Ummah	0.55	-	Landowner
		Bahtiar	0.44	-	Landowner
		Muzzakar Aziz	0.48	-	Landowner
		Nasruddin	0.60	-	Landowner
		Akbar Hijri	0.44	-	Landowner
		Zulkifli	0.55	-	Landowner
	Akar Laut/ Tongke-tongke	Suardi	1.00	-	Landowner
		Chairul Sani	0.10	-	Landowner
		Asdar	0.10	-	Landowner
		Hj. Sitti	0.10	-	Tenant
		Darwis	0.25	-	Landowner
		Harum	0.30	-	Landowner
		Jamluddin	2.50	-	Landowner
		A.Amiruddin	0.70	-	Tenant
		Umar	0.20	-	Tenant
		Firman Hijri	1.00	-	Tenant
		Amrianto	1.00	-	Landowner
		M.Yahya	0.10	-	Landowner
		Sidar	0.25	-	Tenant
		Akmal	0.20	-	Landowner
		Abd. Latif	0.45	-	Landowner
		M.Amir	1.00	-	Landowner
		Amrung	1.00	-	Tenant
		Taufiq	0.40	-	Landowner
	Mahkota Ratu/ Tongke-tongke	Muhammad Nasri	0.75	-	Landowner
		Mustaring Hasyim	2.00	-	Landowner
		Mashudin	1.00	-	Landowner
		Akbar	0.50	-	Landowner
		Murni	1.50	-	Landowner
		Nasir	0.50	-	Landowner
		Suarni	0.50	-	Landowner
		Hmara	0.75	-	Landowner
		Ismul	1.00	-	Landowner
		Sultan	0.25	-	Landowner
		Abd Rahman	0.50	-	Landowner
		Hardi	025	-	Landowner
		Rahmatullah	0.50	-	Tenant
		Iskandar Rauf	0.75	-	Landowner
		Mustamin	0.25	-	Landowner
	Passahakue/ Pasimarannu	Syarigawir	1.00	-	Landowner
		Muh.Mufti Amin	0.50	-	Landowner
		Rostilawati	0.50	-	Landowner
		Sunarni	0.15	-	Landowner
		Bahruddin	1.00	-	Landowner
		Muh Tahir	1.00	-	Landowner
		Baco	0.50	-	Landowner
		Tamrin	0.50	-	Landowner
		Muh.Dahlan	1.50	-	Landowner
		Junaeda	0.50	-	Landowner

Name of the Activities	Name of the Farmers Group/Village	Name of the Members	Pond Area (Ha)	Contributed Land Size (Ha)	Land Status of Ponds
		Mading	0.25	-	Landowner
		A.Fajar	0.25	-	Landowner
		A.Kamri	0.50	-	Landowner
	Usaha Bersama/ Pasimarannu	M.Muh.Syahrir	0.50	-	Landowner
		Nurbiba	0.25	-	Landowner
		M.Yusuf	1.00	-	Landowner
		Ahmad	0.50	-	Landowner
		Rohani	0.25	-	Landowner
		Rawang	0.25	-	Landowner
		Idrus	0.25	-	Landowner
		Arham	1.00	-	Tenant
		Kardi	0.25	-	Landowner
		Rosmiati	0.25	-	Landowner
		Mansur	0.50	-	Landowner
		Hasanuddin	1.00	-	Landowner
		Mannawi	0.50	-	Landowner
		Baba Daeng M.	0.25	-	Landowner
		Fitriadi	1.00	-	Landowner
		Suharti	0.25	-	Landowner
		Muhiddin	0.25	-	Landowner
		Mustafa	0.50	-	Landowner
		Wahyuni	0.25	-	Landowner
Outlet Canal 11 km	Sungai Baringeng/ Panaikang	Najamuddin A	0.37	-	Landowner
		Arfah	0.29	-	Landowner
		Hasmah Amin	0.80	-	Landowner
		Asrul	0.16	-	Landowner
		Abd. Hamis	0.30	-	Landowner
		Hajral Aswad	0.10	-	Landowner
		Moh. Riansyah	0.40	-	Landowner
		Hartatini	0.50	-	Landowner
		Hasnawati	0.60	-	Landowner
		Nia	0.40	-	Landowner
		Amrullah	0.35	-	Landowner
		Darmawati	0.70	-	Landowner
		Dahan	0.30	-	Landowner
		Lutfi HM	0.32	-	Landowner
		Muhammad Takdir	0.12	-	Landowner
	Sipakaenre/ Panaikang	Nukman	0.45	-	Landowner
		Megawati	0.15	-	Landowner
		Darmawati	0.15	-	Landowner
		Abd. Karim	0.35	-	Landowner
		Nasri	0.15	-	Landowner
		Nirwana Ningsih	0.20	-	Landowner
		Massolerang	0.25	-	Landowner
		A.Suarti ramli	0.15	-	Landowner
		Muhammad Jufri A	0.20	-	Landowner
		Antolleng	0.40	-	Landowner
		Abd. Aziz Amin	0.40	-	Landowner
		Takwa Yahar	0.25	-	Landowner
		Aminullah Mansyur	1.50	-	Landowner
		Faisal	0.15	-	Landowner
		Arifuddin	0.15	-	Landowner
	Mappidaceng/ Panaikang	A.Karya Kuasse	0.90	-	Landowner
		Murniati	0.68	-	Landowner
		Rahmatullah	0.45	-	Landowner
		Irwan	0.95	-	Landowner
		A.Pelita Kuasse	0.49	-	Landowner
		Sadri	1.35	-	Landowner
		Hasbiah	0.13	-	Landowner
		M.Ramli	0.25	-	Landowner

Name of the Activities	Name of the Farmers Group/Village	Name of the Members	Pond Area (Ha)	Contributed Land Size (Ha)	Land Status of Ponds
		Burhanuddin	0.50	-	Landowner
		Syahrir Djafar	0.13	-	Landowner
		M.Rikman	1.00	-	Landowner
		Hanung	0.30	-	Landowner
		Hasnah	0.40	-	Landowner
		Irdawati	0.25	-	Landowner
		Monro	0.30	-	Landowner
		Hasmah	1.00	-	Landowner
		Firman	0.30	-	Landowner
		A.Siti Hamdinah	0.20	-	Landowner
		Masyita	0.20	-	Landowner
		Nirwa	0.10	-	Landowner
	Masseddigau/ Panaikang	Darmawati	1.05	-	Landowner
		Faisal	0.50	-	Landowner
		M.Muh Kartu	1.30	-	Landowner
		Muh.Jafar Luluang	0.17	-	Landowner
		Usman	0.50	-	Landowner
		M.Yusri	0.37	-	Landowner
		Jufri	0.12	-	Landowner
		Fatimah	0.81	-	Landowner
		Fitriani	0.41	-	Landowner
		Sitti Rahmah	0.42	-	Landowner
		Hasmah	0.80	-	Landowner
		Betta	0.30	-	Landowner
		M.Ilyas	0.13	-	Landowner
		Rohani	0.18	-	Landowner
		Atong	0.30	-	Landowner
		Hasnani	0.30	-	Landowner
		Ruhani	0.12	-	Landowner
		Suaebah	0.20	-	Landowner
		Nurcahya	0.37	-	Landowner
	Ujung Kupang/Sanjai	A.Hamka	0.90	-	Landowner
		A.Sidik	0.75	-	Landowner
		Ambo Rappe	0.40	-	Landowner
		A.Pasengeri	0.75	-	Landowner
		A.Darwis	0.50	-	Landowner
		Kade	0.70	-	Landowner
		Rappe	0.40	-	Landowner
		Jumardin	0.40	-	Landowner
		Sinar	0.40	-	Landowner
		Muh. Asrul	1.00	-	Landowner
		A. Lukman	0.50	-	Landowner
Total					

Source: BPBAP Takalar and Pokdakan.

Figure 5. An Overlaid Map of IP Territories and Proposed Shrimp Cluster in Sinjai District



Source: TRTA Analysis and field visit in June 2022

33. **Indigenous peoples (category C).** The summary of potential positive and negative impacts to indigenous people is presented in the table below. The indigenous peoples safeguard screening form is in Appendix 6. The screening showed no significant impact to *Masyarakat Hukum Adat* communities in the candidate of cluster areas in Sinjai District. The nearest of MHA group – three indigenous kampung communities namely, Kampung Barambang, Kampung Karampuang and Kampung Turungan located 16 km in highland areas from subproject site in coastal zone in East Sinjai. The overlaid map and IP screening checklist in the appendices will be use as a basis to justify the impact categorization C, means not expected to have impacts on indigenous people.

34. **Community Development Plan (CDP)**. At the preparatory stage (during project implementation) the project team with support from the Sinjai District Fisheries Agency has produced long-listed farmer groups (39 groups) in the potential pond areas in Subdistrict of Sinjai Utara, Sinjai Timur, and Tellulimpoe that are already registered in their office. Proposals for farmer group names are selected by BPBAP Takalar in accordance with the technical eligibility criteria. The selected groups will be the targeted beneficiaries of the project and will be further assisted by the consultants and facilitators throughout the project implementation period. With the information of the selected groups of farmers and the target area - a CDP will be developed for implementation in the area. The CDP will be prepared for each district of the project site. The PIU, supported by field facilitators and the regional consultant, will prepare, and execute the CDP.

35. In preparation stage, facilitators will conduct public consultation for all beneficiaries group who receive assistance (13 targeted groups). The formulation of the goals expected by the shrimp farming community who participate in the project needs to be carried out after the social profile and social impact assessment have been completed. Facilitators must disseminate all information and activities related to the project to all beneficiary pond farmers. Including information about the need for an internal cooperation agreement of group as well as a cooperation agreement between the group and BPBAP Takalar. Each member of the beneficiary group must know their respective roles, including their rights and responsibilities. Each member must also know who the member of the group is whose land is shared, for example for production ponds, water reservoirs, WWTP ponds, and canals. Of course, this internal agreement will lead to institutional arrangements of each group according to the type of assistance they receive.

Table 11: Roles and Responsibilities of Balai, RTC, Facilitator, and Beneficiaries

Institution	Division of work	Roles and Responsibilities
Technical Implementation Unit of General Directorate of Aquaculture	Project Implementation Unit (PIU)- BPBAP Takalar	- Undertaking day-to-day implementation activities. - Prepare and submit the SADP for ADB review and approval - Update and prepare DDR for UPT's infrastructures based on DED - Coordinating the implementation of assistance activities to pond farmers, such as seed assistance to HSRT, construction and assistance of farmer pond clusters, irrigation canals, and pond reconstruction and construction of communal WWTPs. - Implementing procurement, safeguards activities and gender action plan - Ensure subproject's activities compliance with government's regulations and ADB SPS (2009), CDF, IPPF - Prepare the required mitigation plan if IR impacts are identified in the subproject areas upon the completion of DED - Ensuring safeguards document's clearance from ADB prior to award of contract - Establishing unit or contact person that will handle technical and safeguards aspect and Grievance Redress Mechanism at subproject level. - Monitoring, and preparing semiannual monitoring reports on safeguards-related activities for ADB and government requirements. - Submiting Semiannual Monitoring report to CPMU for consolidation and submission to ADB.
Regional Technical Consultant (RTC)	Supporting PIU	- Assist the PIU in day-to-day project management and coordination with the respective PIUs and local governments to create synergies and expedite the project implementation. - Support PIU to ensure that all loan covenants and Design and Monitoring Framework (DMF) are fully complied. - Assist PIU to prepare the SADP and MHADP, if any, to meet the requirements as stipulated in CDF, IPPF and PAM. - Ensure implementation of CDF, IPPF, SADP and MHADP - Coordinate the stakeholders and partners at local levels to create synergies and expedite the project implementation. - Assist the PIU to review, update and prepare DDR. - Assist PIU to prepare SADP and ensure that the implementation of social safeguards (IR and IP screening, DDR, CDP, IPP, SADP, MHADP), and gender activities. - Proactively provide advice and take actions on any safeguard compliance issues. - Assist PIU in GRM's implementation and management. - Collaborate with PMC capacity building specialist to train and implement the CDF and IPPF

Facilitator (3 types of facilitators)	Supporting PIU and RTC	- The facilitators will implement most if not all activities at field level, from community and value-chain stakeholders' mobilization to trainings and civil works. - Participate in training activities provided by PMC and PIU safeguard specialist and capacity building specialist. - The duties of the technical facilitator are to support the PIU in selection an verification of POKDAKAN propective beneficieries, - To mobilize the communities aruound the project activities, to facilitae technical trainings of farmers in various areas: construction, production, post-harvest, - To Support the development of aquaculture clusters and other project provision, - To assist beneficiaries if there are obstacles that arise during implementation through the established GRM - Participate in training, implement the principles of social and environmental safeguard, - To facilitate and increase the capacity of shrimp farmers, by coordinating with relevant agencies, - Help RTC to prepare the SADP and conduct meaningful consultation with the targeted beneficiaries, with support from PIU's safeguard specialist and officer - Ensure the participation of vulnerable households and women - Ensure implementation of CDF, IPPF, SADP and MHADP, if any - Prepare planning document (SADP) and implementation reports for PIU's submission to ADB for review and approval - The duties of the business development field facilitator are: - mobilize all shrimp farming value-chain stakeholders around the project activities - facilitate synergies between them for specific activities, to assist Pokdakan in preparing business development plans, access credit, access private sector and register for INDOGAP, - To facilitate linkage with Government instances whenever needed and the private sector.
Farmers	Beneficiaries Member of POKDAKAN	- Participate and provide input in every public consultation held by Balai. - Participate in group meetings held both in the preparation of proposals and assistance activities for pond cluster development, irrigation canals, and pond repairs along with WWTP ponds and water reservoirs received by the group. - Provide information in social and economic survey activities of beneficiaries. - Participate in pond infrastructure development activities. - Participate voluntarily by allowing to use part of their pond land for the construction of farmer's pond clusters and pond repair. - Obtain rights as project beneficiaries such as the right to receive services when making complaints and obtaining income recovery activities.

		- Get assistance in the form of seeds, feed, and medicines, as well as other supporting equipment needed according to the type of activity received by each group. - Get training to improve skills in Vannamei shrimp farming.

Source: PAM and Readiness Criteria Document of IISAP and Analysis 2022.

36. The detail CDP in this document is still a draft and needs to be updated upon the final design or detailed engineering design (DED) during project implementation. There could be a change of location after the DED is completed. Changes in location have consequences for changes in beneficiaries. The DED will be prepared by regional technical consultant after they consult to farmer group.

37. **Trainings on Community Empowerment and Shrimp Aquaculture Value Chain.** The trainings for shrimp farmers under output 1 and 2 project activity must include the small holder farmers, women, and youth. Several capacity building activities that will be carried out for quality seed production inputs, sustainable aquaculture infrastructure, and improve the value chain as presented in the following Table 12.

Table 12: Training and Schedule

Type of Training	Schedule	Targeted participants and its numbers	Location
Training on the operation of seed production and management for UPTD and HSRT (small scale hatchery).		- persons PTD & HSRT	Each Balai Office
Training on disease sampling and handling.	2023 (Q3) – 2024 (Q4)	28 Core Farmers	Each Balai Office
Training on monitoring water quality, disease, and residue for shrimp farmers.	2023 (Q3) – 2026 (Q1)	28 Core Farmers	Each Balai Office
Training on financial literacy, farmer-based enterprise, access to finance and small-scale farmer group strengthening and farmer institutional empowerment	2023 (Q4) – 2024 (Q3)	28 Core Farmers	Each Balai Office
Training on establishment and strengthening of farmer-based enterprises		14 Core Farmer Groups	Each Balai Office
Training on good and sustainable aquaculture practices involving women.	2025 (Q1) – 2027 (Q1)	28 Core Farmers	Each Balai Office
Training on shrimp farming technology including pond water quality and wastewater management and cleaning technology, feed management, disease and biosecurity, mangrove management and replanting	2023 (Q3) – 2024 (Q4)	28 Core Farmers	Each Balai Office
Training on good shrimp post-harvest handling to add the value, food safety and quality assurance	2023 (Q3) – 2024 (Q4)	28 Core Farmers	Each Balai Office

Training on CBIB, CPPIB certification processes	2024 (Q1) – 2027 (Q1)	28 Core Farmers	Each Balai Office
Training on INDOGAP, STELINA and traceability	2024 (Q1) – 2027 (Q1)	28 Shrimp Farmers	Each Balai Office

38. **Consultation and Participation Plan.** The Project ensures meaningful consultation will be conducted as required by ADB SPS (2009), CDF and IPPF. Initial public consultation had been conducted to the project beneficiaries on 22 June 2022. The summary of consultation meeting conducted is attached in Appendix 8. The table below indicates the public consultation and participation plan to be conducted for the subproject.

Table 13: Method and Topic of Public Consultation

Activities	Schedule	Targeted Audience	Method of Consultation	Topics	Responsible Agency
Public consultation 1	22 June 2022	All Fish Farmer Group in Sinjai Utara and Sinjai Timur subdistrict/ Traditional Leader/ Village office's staff	Meeting	Technical Aspect/Environmental Safeguard/ Social Safeguards/Location and group requirements.	DGA/BPBAP Takalar/TRTA.
Public consultation 2	March 2023	Beneficiaries Groups/ Traditional leader/local NGO	Meeting	Facilitator roles/Community empowerment	BPBAP Takalar/RTC/ Facilitators
Public consultation 3 **at Pond Cluster Location**	December 2023	Beneficiaries Group of Irrigation Canal and Communal WWTP	Focus Group Discussion	Role sharing/internal agreement/financial accounting	BPBAP Takalar/RTC/ Facilitators
Public consultation 3 **at 6 villages of irrigation canal**	December 2023	Beneficiaries Group of Irrigation Canal and Communal WWTP	Focus Group Discussion	Role sharing/internal agreement/financial accounting	BPBAP Takalar/RTC/ Facilitators
Public consultation 3 **at 2 villages of pond reconstruction**	December 2023	Beneficiaries Group of Irrigation Canal and Communal WWTP	Focus Group Discussion	Role sharing/internal agreement/financial accounting	BPBAP Takalar/RTC/ Facilitators
Public consultation 4 **at Pond Cluster Location**	February 2024	Beneficiaries Groups	Focus Group Discussion	Pond cluster design/Civil work/ Participation in	BPBAP Takalar/RTC/ Facilitators

Activities	Schedule	Targeted Audience	Method of Consultation	Topics	Responsible Agency
				implementation stage	
Public consultation 4 **at 6 villages of irrigation canal**	February 2024	Beneficiaries Groups	Focus Group Discussion	Pond cluster design/Civil work/ Participation in implementation stage	BPBAP Takalar/RTC/ Facilitators
Public consultation 4 **at 2 villages of pond reconstruction**	February 2024	Beneficiaries Groups	Focus Group Discussion	Pond cluster design/Civil work/ Participation in implementation stage	BPBAP Takalar/RTC/ Facilitators

39. The summary consultation meetings, minutes of topic discussed, photos and list of participants will be reported in the semiannual safeguard monitoring report.

40. **Grievance Redress Mechanism.** The Project ensures that grievance redress mechanism had been established and disclosed to the targeted communities in subproject areas. Table below has information on the dissemination schedule, grievance redress committee contacts and information as established in the subproject areas.

Table 14: GRM Dissemination Schedule

GRM Dissemination Schedule and Location	Means of disclosure/ dissemination[a]	Focal Persons (names) and contact number of GRC members at village and PIU level[b]
1. June 22, 2022	Booklet, Pamphlet, and verbal announcement during public consultation meeting	Head of GRC (BPBAP Takalar): Head of Tongke-tongke Village: Head of Samataring Village: Head of Sanjai Village: Head of Panaikang Village: Head of Pasimarannu Village: Head of Pokdakan Lestari: Head of Pokdakan Tajjolod Laguari: Head of Pokdakan Cahaya Lombo
2. March 23, 2023	Pamphlet and verbal announcement during public consultation meeting	
3. December 17, 2023	Pamphlet and verbal announcement during public consultation meeting	
4. February 8, 2024	Pamphlet; verbal announcement during public consultation meeting; and social media	

[a] For example: verbal announcement during meetings / using pamphlets in village office/ Digital or social media information, etc.

[b] Complete GRM flowchart and GRC members and contacts are attached in Appendix 10.

41. The complaint's flow chart of the established GRM is in Appendix 10.

IV. THE BUDGET FOR SADP

42. Costs related to SADP include (i) socio and economic data and information collection for SIA; (ii) public consultations, (iii) capacity building (workshop and training), (iv) grievance resolution (assessment, investigation, meetings, carrying out of actions, etc.) and (v) internal social monitoring report.

43. Budget for SADP is from the Project. PIU and CPMU are responsible to secure of funds and timely allocate of funds for SADP. The SADP budget can be seen in Table 15.

Table 15: The Budget for SADP

Activity	Volume	Unit Price (Rp)	Amount (Rp)
Conducting survey for SIA	200 farmers	40,000	8,000,000
Public Consultation	7 times for 50 participants	15,000,000	105,000,000
Training	10 trainings for 28 farmers	350,000	98,000,000
Grievance Resolution	6 times per year	7,000,000	42,000,000
Internal Social Monitoring Report	Lump sum	10,000,000	10,000,000
Total			**263,000,000**

Appendix 1

Infrastructure Siting and Design

Appendix 2
Detailed Cost Estimates by Expenditure Category

Appendix 3
Economic and Financial Model

Appendix 4
Social Impact Assessment

SOCIAL IMPACT ASSESSMENT TEMPLATE

Table of Content

Executive Summary

This section provides a concise statement of background of SIA, project feature, project area description, objective of Social Impact Assessment, Socio-Economy survey and profile, Conclusion, and recommended actions.

I. Introduction

Provide 1-5 paragraph regarding to ADB Policy on Inclusive Social Development.

E.g., ADB Policy on Inclusive Social Development is to ensure the voice of the poor, women, and other vulnerable group are heard at all levels of decision making. It is central to the success of social development effort. Social Assessment is needed to formulate the strategy for the social development (The Poverty Reduction Strategy of ADB, 2004)

A. Background

Describe background of the SIA, project impact and benefits related community development, participation, and gender equality. Brief information on the map of project location and project objective.

B. Need of Social Impact Assessment

Explain relevancy of SIA in project context, thematic area of SIA, SIA integration on project design and sequence of SIA.

C. Objective and Scope of SIA

Describe one or two paragraph objective and scope of SIA. Describe the SIA is to ensure social dimension are fully incorporated into project final design

D. Approach and Methodology

Explain the approach and methodology including type of data, source of data, social economy survey, field observation, in depth interview and public consultation**.** Identifies project stakeholders, especially primary stakeholders, consultation, and participation strategy to be used during SIA.

Table 1: Methodology of SIA

No	Methodology	Description
	Desk Review	
	FGD	
	In depth interview	
	Public Consultation	
	Field observation	
	Sampling survey	

II. Socio Economic Profile of the Subprojects in xxxx District

This section outlines the results of the social impact assessment based on SIA methodology used (Desk Review, FGD, in depth interview, Public Consultation, Field observation, sampling survey) with information and/or data disaggregated by gender and assessment of vulnerability. Criteria of vulnerability refer to female heading households, landless households, elderly head of households and disabilities people. This section also provide assessment of other social groupings, provide demography profile (occupation, income, school participation, unemployment, description and status of poverty line) poverty in fisheries sector, climate change and disaster risk, per capita expenditure, , land holding pattern, housing type, health and hygiene status, sources of drinking water, family debt and credit services, and provides information and data regarding aquaculture sector performance, shrimp aquaculture, climate change effect on shrimp production, gender related data on aquaculture. Source of data and reference must be provided.

III. Lan Tenure, Poverty and Social Analysis Strategy

Provide description of land tenure at each village in subdistrict and of laws, policies, regulations, and institutional mechanisms regarding the social protection programs including the Pro Poor Program of Government of Indonesia (Include past and ongoing poverty eradication programs), poverty line in the areas refer to BPS Data, poverty status (and rank) among the villagers and fishermen refer to Poor Data in Village level and estimation the poor fishermen population (below the poverty line in this area based on Integrated Basic Data for the Poor in Districts Level (*Basis Data Terpadu Kemiskinan* Kabupaten). This Poor data is officially data of district that updated by years by Bappeda (Development Planning Agency) that providing poor household data by name by address.

This section also provides the gender-sensitive assessment and gender related policies. and assessment of the existing condition: Poor fisherman caused lack of capacity on production and lack of fish farmer group management, Unequal access to social assistance for fisherwomen, unavailability of sex disaggregated data, limited women's participation. Explain the project strategy to solve the problem and challenges through description the project activity and result.

Table 2: Summary of Project Activities and Result

Result of Analysis	Project Activity	Beneficiary	Result	Outcome
Poor fishermen caused lack of capacity on production skill and lack of fish farmer group management	Training, workshop, technical assistance	fishermen	Improve the capacity of fisherman on production and group management skills	Increase the fishermen income and reduce the poverty
Unequal access to social assistance for fisherwomen,	Facilitation the Registration for fisherwomen	fisherwomen	Increase number of fisher women have been registered	access to social assistance for fisherwomen
unavailability of sex disaggregated data	Training and assistance to provide sex disaggregated data	Balai Fishery Agency farmer group	availability of sex disaggregated data	Formulation Gender-sensitive assessment and Gender related policies based on sex disaggregated data
Etc.				

IV. Gender Analysis, Power Relation, and Decision Making

Provides government policy and program for gender issues, status of women in the areas including marriage age for women and literacy and sex ratio for woman, specific gender assessment (role and norm) in aquaculture area including women's roles HSRT, women's role in the shrimp farming cycle, control over income and gender division in the value chain. Complete the table below.

Table 3: Gender Division of Labor on Shrimp Value Chain

Activities	Traditional Farming		Intensive Farming	
	Men Role	Women role	Men Role	Women Role
HSRT *(Hatchery Skala Rumah Tangga)*				
Supplement or Medicine				
Shrimp Feed				
Shrimp Farming				
Shrimp Harvesting				
Aggregator				

This section provides analysis for the Access and Control Over Assets and Resources. Provide updated and completed the table below:

Table 4: Access and Control Over Assets, Resources, and Decision Making

Assets/Resources	Men	Women
Access to Financial Capital (Credit)	Describe man access to decision making related financial asset	Describe women access to decision making related financial

	and access to credit based on data and survey. *(E.g., In male-headed households, men usually have greater say when making decisions related to financial assets. However, both men and women share opinion in terms of access to credit).*	asset and access to credit based on data and survey. (E.g., *From the discussion in xxx, the women mentioned that they mostly control the cash income from the selling of shrimp. Discussion on household expenditure and access to capital or credit is also commonly discussed. Income distribution within the household is relatively equitable. Income generated from aquaculture is likely to benefit entire household*).
Land Ownership or Land Status	Provide information regarding sex disaggregated data on land ownership especially men access to land ownership. E.g., *Sex disaggregated data on land ownership is not available. However, there are some model of land status regarding shrimp aquaculture. In traditional farming, there is land leasing in which shrimp farmer rent the ponds on yearly basis. For intensive farming, lands or ponds mostly owned fully for fear that landowners could change their minds in the middle of business running.* *Both traditional and intensive farming decision making on land use are male dominated.*	Provide information regarding sex disaggregated data on land ownership especially women access to land ownership. E.g., *According to the National Land Agency (BPN), only 24.2% of Indonesian land is registered under female ownership. The trend seems to be the same globally. FAO data shows that less than 13% of farmland owners are women.* *There is no sex disaggregated data on ponds ownership. However, in xxx showed that productive assets such as house, land, ponds, cars are under the men's names*.
Capacity Building (Training, Internship, etc.)	Describe men access to capacity building, number of man participants in training, kind of training and specific training for man (if any). *E.g., Both men and women from the Balai received capacity building or training. However, there are different kinds of training targeted for male and female actors in the aquaculture. Training on shrimp farming, shrimp feeding, and harvesting are mostly accessed by male participants (male groups). Training on water management, post-harvest processing is conducted for women staff of the Balai and the interns.*	Describe women access to capacity building, number of women participants in training, kind of training and specific training for women (if any). *E.g., Balai xxx: Number of xx Female staff and interns are trained to check water quality and shrimp sample.* *Balai xxx: Number of xx Women's community group are trained on shrimp processing (such* as making shrimp crackers). *Balai xxx: There is a specific training under other directorate on processing and marketing training program or Processing and Marketing Group. This*

	There is no specific training on "soft skills" such as leadership, gender awareness, business management, conflict resolution has not been given to men and women in the aquaculture sector.	*program is mostly accessed by women's community groups.*
Technology	Describe men access and utilization on new technology. *E.g., There is a Millennial Shrimp Farming with capital managed by young people, especially university students since 2021.There is no specific intervention whether female participants are also targeted.*	Describe women access and utilization on new technology.
Certification	Describe certification system, disaggregated data and men access and participations in certification system. *E.g., There are two certification systems:* *(i) INDOGAP: Certification for assessment of processes from hatchery to feeds* *(ii) STELINA: Certification from post-harvest to global market.* *Balai xxx: In March 2022, there is one Balai that implements INDOGAP. Not all are certified There is no sex disaggregated data in the certification management (gender blind policies).*	Describe certification system, disaggregated data and women access and participations in certification system.
Organization (Association or cooperative)	Describe men access and participations**,** number of memberships, disaggregated data in Organization (Association or cooperative E*.g., Most farmer associations formed are male groups. There are very few female-only groups. Sometimes, in the group there are women who have a personal relationship with the chairman (Suppose the group leader is the husband, the deputy leader of the group is his wife*).	Describe women access and participations**,** number of memberships, disaggregated data in Organization (Association or cooperative) *E.g., In xxx (Location): The female farmer group that turned into a fish farming group because it used her yard. So that women are not far from home.*
Farmer Pond Cluster, Irrigation Canal, and pond reconstruction Communal WWTP	Describe men access and participations, number of staff, disaggregated data in farmer pond cluster, irrigation canal, pond reconstruction and communal WWTP.	Describe women access and participations, number of staff, disaggregated data in farmer pond cluster, irrigation canal, pond reconstruction and communal WWTP.

	E.g., Member groups working in farmer ponds cluster and other infrastructure: ● *Location xxx: 3 men and 9 women* ● *Location xxx: 1 man and 5 women*	E*.g., Female staff dominantly working in laboratory considered that they are detailed and thorough.* *Facilities:* ● *In xxx: There is only one toilet that can be used by both men and women in the supporting facility in farmer pond cluster.* ● *in xxx: There are toilet facilities for women. Lockers are separated for female and male so that women can comfortably change clothes.* ● *Balai xxx provides breastfeeding room.*
Management / Organization	Describe men access and participations, number of group member, disaggregated data in Management/Organization. E.g., *Most shrimp farmer group office has gendered institution profile as follows:*	Describe women access and participations, number of staff, disaggregated data in Management /Organization. E*.g., In (location xxx): Women are the chairmen of working groups in the working group of division.* *In (location xx): For field facilitator, there is no significant distinction between men and women except in the assistance of shrimp farming groups.*

V. Stakeholder Engagement Plan and Community Participation

Describe the importance of community participation in the project context, series of community meetings was held during SIA, process of consultation meeting, and analyze the stakeholders involved in the project in addition, mentioned the communication and consultation plan. Table below must be provided.

Table 5: Consultation and Participation Strategy Plan

Target Group	Topic of Consultation	Process of Consultation	Indicator	Responsible Institution
Project Preparation stage				
Describe the participants who will attend the consultation	Define, identify the topic that will be discussed. E.g., *Community Socialization (General information of project objective, output, benefits, and activities.)*	Describe the way of consultation: meeting, group discussion, interview, publish leaflet and brochure etc.	– Number of participants – Topic /information shared – Minutes of Meeting – View /suggestion from participants	Define the institution who will be in charge

Target Group	Topic of Consultation	Process of Consultation	Indicator	Responsible Institution
Project Implementation Stage				
Describe the participants who will attend the consultation	E.g., *Public Consultation for finalize Community Action Plan*	Describe the way of consultation: meeting, group discussion, interview, publish leaflet and brochure etc.	– Number of participants – Topic /information shared – Minutes of Meeting – View /suggestion from participants	Define the institution who will be in charge
Describe the participants who will attend the consultation	E.g., *Technical Assistance Meeting*	Describe the way of consultation: meeting, group discussion, interview, publish leaflet and brochure etc.	– Number of participants – Topic /information shared – Minutes of Meeting – View /suggestion from participants	Define the institution who will be in charge
Describe the participants who will attend the consultation	E.g., *Public Consultation for review the progress of implementation and budget use (quarterly meeting)*	Describe the way of consultation: meeting, group discussion, interview, publish leaflet and brochure etc.	– Number of participants – Topic /information shared – Minutes of Meeting – View /suggestion from participants	Define the institution who will be in charge

Table 6: Consultation Meeting During SIA

No.	Target Group/Participants	Place and Time	Topic of Meeting	Method	Responsible Institution

VI. Customary Community Analysis

Provide 2-3 paragraph to describe the existence of customary communities in project area, education, health, livelihood, and demographic profile. Customary communities definition refer to the ADB Framework (RCCDF, 2019), regulation of GOI and AMAN (*Asosiasi Masyarakat Adat Nasional).*

Note: Customary communities are a group of people who have lived on their ancestral land for generations, have sovereignty over the land and natural wealth in their customary bounded territory, where customary law and institutions arrange the social life of the community, and carry out the social-political and economic lives of the community. Additional characteristics of

customary communities include in varying degrees: (i) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; (ii) collective attachment to geographically distinct habitats or ancestral territories and to the natural resources in these habitats and territories; (iii) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and (iv) a distinct language, often different from the official language of the country (RCCDF, 2019).

VII. Monitoring and Evaluation Plan

This section provides objectives and approach of M&E activities for the SIA of the project. Types of data and information to be collected, survey timing and indicators, as well as requirement and qualification for the survey team should be described. Training activities, survey duration and budget also need to be included.

VIII. Recommendations

This section provides recommendations for gender inequality, poor households, increased knowledge, skills, and capital to assist women and vulnerable groups.

Appendix

1. Relevant Regulations on Gender Equality and Community Empowerment
2. List of Focus Group Discussions activities during SIA
3. Minutes of Public consultation
4. Questioner Survey
5. Documentation /Photo of SIA.

Appendix 5a

Screening Form of SADP Sinjai (Sinjai Timur)

Nature of the project activities:

Linear infrastructure:

1. Ponds. Reconstruction of shrimp ponds cluster with HDPE mulch in Sinjai Timur
2. Canals. Reconstruction/ rehabilitation of irrigation canals (inlet and outlet).
3. Pipeline. Construction of the piping system in the shrimp pond cluster
4. Electricity. Construction of distribution line (poles erection) to the ponds location.

Non-linear infrastructure:

1. Communal WWT. Construction of WWT (wastewater treatment) comprising of aerated lagoon and reedbed/ constructed wetland with mangrove strips. Approximately 1 ha
2. Construction of water reservoir

Scale of the Project Activities:

The shrimp pond cluster cover a 5 ha ponds for Vannamei, comprising of the following facilities and supporting facilities:

- Shrimp ponds cluster (5 ha) with number of ponds (xxx units)
- Irrigation canals (22 km)
- Pipeline with approximately length xx m (or km)
- Communal WWT with capacity xxx m3 (1 unit)
- Water reservoir with capacity xx m3 (xx units)

Applicable domestic environmental compliance requirements

- Law No 11/2020 on Job Creation
- Government Regulation No. 22/202 on environmental protection and management
- MOEF Regulation No. 4/2021 on Types of Activities Requiring AMDAL, UKL-UPL and SPPL
- MOEF Regulation No. 7/2021 on Forestry Planning, Change of Forest Areas Allocation and Function, and Use of Forest Area
- MOEF Regulation No. P.106/MENLHK/SETJEN/KUM.1/12/2018 on Second Revision of MOEF Regulation No. P.20/MENLHK/SETJEN/KUM.1/6/2018 on Types of Protected Flora and Fauna
- MMAF Regulation No. 57/PERMEN-KP/2018 stipulated on Aquaculture Good Practices (CBIB)
- MMAF Regulation No. 75/2019 on Wastewater Treatment for Shrimp Ponds
- DJPB Regulation No. 31 /PER-DJPB/2021 on Technical Guideline on Grant Channeling for Shrimp Ponds Cluster, 2021
- Indonesia National Standard (SNI) and MMAF Standard Operating Procedures (SOPs)
- Local regulations (Perda) on spatial plan, environmental protection and management, water resources, and agriculture

Other information that can help judge the impacts or risks (thus category):

The ponds cluster of Sinjai Timur is located at the areas where other fishery (e.g. milkfish) activities dominated.

PART II. Siting of the (Sub) Poject Proposed

Sensitive receptors and/or various protected areas Include but are not limited to:	**If inside these areas, please provide details**	**If outside, where and how far from their boundary?**
Critical and natural habitat as defined by SPS	No	The site of cluster in Sinjai Timur is located far away from the critical and natural habitat. It is approximately 20 km from national park of Bantimurung (butterfly sanctuary).
World natural or cultural heritage sites	No	There is no world cultural heritage, but some national/local cultural heritage identified with relatively long distance. The fortress area of Benteng Balangnipa in Kecamatan Sinjai Utara is located approximately 3 km from the sites. Similarly, prehistoric stone park of Pake Gojeng (as declared in Decree 240/M/1999) is located with relative distance 5 km to the cluster sites. The cluster sites are far from the Mangottong Cemetery Park with approximately 2 km.
Officially designated nature reserves, forest park, geo-park, important wetland, key habitats for wildlife, reproduction area of protected flora, spawning, feeding, wintering ground and migrating route for key aquatic life, estuary, mangrove etc	No	
Un-official domestically but designated internationally as various protected areas, such as by IUCN, UNEP etc	No	The areas of shrimp pond surrounded by mangrove strips with relative distance to tongke-tongke mangrove forest 3 km to the project site. There are three types of mangrove plants in the combined natural and rehabilitated mangrove, namely *Ryzhopora mucnorata, Avicenia sp, and Nypa fructicans.* In addition, some fauna identified in the mangrove forest such as insects, snakes, bats, stork, and grouse. Aquatic animals found in the forest among others oyster, fishes, crabs, and shrimp.
Designated basic farmland, basic grassland, scenic area/ park, drinking water source protective zone, oceanic special protective zones, natural fishery	No	

ground, key zone for water and soil erosion control, closure zone for desertification etc		
Areas with main function as residential, health and medical, cultural, educational, R&D, and offices as well as physical cultural resources/relics, airports, air fields or military bases/zones etc.	No	The project site is quite far from residential areas with relative distance in range 600 – 1000 m, while its distance to the hospitals, schools, and cultural/religious buildings is more than 1 km

Appendix 5b

Potential Environmental Impact and Environmental Management Plan for Shrimp Ponds

Environmental Impacts	Main Activity	Prevention and Mitigation Measure
Wastewater effluent from ponds Contaminated due to excessive/ inefficient feeding (fish meal, fish oil, and other commercial manufactured feeds),	Breeding, hatching, Feeding for growing shrimps and harvesting	➢ Manufactured feeds shall be registered in the Ministry (MMAF) and used as the direction for use ➢ Ensure that pellet feed has a minimum number of "fines" or feed dust. ➢ Match the pellet size to the species' life-cycle stage (e.g., smaller pellets should be fed to fry or juvenile animals to reduce the unconsumed fraction ➢ Regularly monitor feed uptake to determine whether it is being consumed and adjust feeding rates accordingly. ➢ Where feasible, use floating or extruded feed pellets as they allow for observation during feeding time ➢ Store feed in cool, dry facilities and ideally for no longer than 30 days to avoid reduction in vitamin contents. Moldy feed should never be used as it may cause disease ➢ Spread feed as evenly as possible throughout the culture system, ensuring that as many animals as possible have access to the feed. ➢ Feed several times a day, especially when animals are young, allowing better access to food, better feed conversion ratios and less wastes ➢ Halt feeding at a suitable interval before harvest to eliminate the presence of food and / or fecal material in the animal's gut ➢ During harvesting, contain and disinfect blood water and effluent to reduce the risk of disease spread and to contain effluent matter.
Excessive Water extraction and use, cause saline water intrusion	Prepare Ponds, include piping, water treatment	➢ Abstract groundwater for sanitation and domestic use only (surface and PDAM piped water supply is preparable, if any) ➢ Use shallow aquifer, instead of deep wells
Contamination of food, increase discharge's chemical content	Application of antibiotics and veterinary medicines or hormones	➢ Medicines (used for aquaculture) shall be registered in the Ministry (MMAF) and used as the direction for use ➢ Apply approved over-the-counter antibiotics in strict accordance with the manufacturer's instructions to ensure responsible use ➢ Apply approved antibiotics that are purchased and utilized by prescription under the guidance of a qualified professional ➢ Develop a contingency plan covering how antibiotics should be applied following the identification of disease outbreaks ➢ Store antibiotics in their original packaging, in a dedicated location ➢ Avoid stockpiles of waste antibiotics by adopting a "first-in, first-out" principle so that they do not exceed their expiration date. Any expired antibiotics should be disposed of in compliance with national regulations ➢ consider sanitation and prevent the aquaculture products from various hazards for food safety such as bacteria, biotoxin, heavy metals and pesticides, as well as forbidden residues (antibiotic, hormone)
Exposure to Chemicals, Infectious disease vectors (malaria, dengue, etc)	Ponds operation	➢ Follow MMAF's occupational health and safety (Appendix 1 of MMAF Regulation No. 6/PERMEN-KP/2018) ➢ Addressed as part of the occupational health and safety program including specific additional medical screening for the labor force ➢ Implementation of preventive measures (e.g., mosquito nets in living quarters).

		➢ Additional guidance on the prevention and control of communicable diseases is provided in the General EHS Guidelines
➢ Wastewater treatment (WWT) Lagoon:		
Odor or effluent from WWT and its sludge can contaminate water and soil etc	Operation of WWT of shrimp ponds	➢ Optimise operation following SOP for O&M to reduce odor in normal operation and malfunctioning; ➢ Use PDE such as mask to reduce the odor (affecting the workers) ➢ Observe and test regularly at inlet and outlet of lagoon following SOP to monitor treatment performance in order to adjust accordingly, e.g. the aeration intensity, retention time etc to ensure treated effluent meet standard; ➢ During the biological stage, the excess sludge (i.e. excess bacteria) is pumped ➢ Sludge are digested and dewatered to the optimal degree, is finally disposed of at the dump ➢ The sludge is dried using SDB (sludge drying bed) consisting of sludge feeding (from 1 to 10 days) followed by drying period (from 4 days to 3 months), and subsequently drain. ➢ Drying of the sludge using evaporation process (solar light) are affected by several factors that shall be maintained, among others: temperature, light intensity, area of the surface, and barometric pressure. ➢ As the sludge from shrimp ponds and ponds' WWT are quite similar and mostly constitutes of organic material, both can be used for embankment, compost, and construction material. ➢ In case the sludge will be used for other purposes (as agriculture media or raw material for brickstone etc) or dumped at the other areas, the sludge shall be tested for heavy metals contents per government regulation ➢ Especially for constructed wetland some preventions and mitigations to be carried out: - All components expected to receive and/or trap debris and sediment should be inspected for clogging and excessive accumulation at least annually, or as needed; these components may include control structures, weirs, orifices, and outfall pipes. - All structural components should be inspected annually for cracking, subsidence, spalling, erosion, and deterioration. - Check the forebay for accumulated sediment. In general, the forebay should be dredged if sediment fills over 50% of design volume.
Direct discharge or spillage of wastewater due to malfunction , poor O&M or outage of on-site WWT:	O&M of on-site wastewater treatment lagoon and wetland for ponds	➢ Include bypass/emergency lagoon in WWT design to store effluent during these incidents; ➢ In case testing of the wastewater exceeded the quality standard set forth, then: - Conduct inspection of the process in the WWT, and fix the problem, as the deviation or failure identified - Check all machines and equipment of WWT, and fix the problem, as the deviation or failure identified. - Check inlet and outlet on monthly basis. ➢ In case of electric blackout, genset shall be turned on automatically ➢ In case of leakage/fracture of WWT ponds (due to earthquake or other reasons), WWT process shall be halted. Open the emergency standby lagoon to store excessive Wastewater that continues to be generated from aquaculture operation. The inspection and repair shall be carried out until safe condition. ➢ In case of accident in WWT, first aid shall be provided at the site, and subsequently referred to polyclinic or hospital emergency unit for further medical care.

		➢ In case of flood in the WWT, reserve pumps shall be turned on to avoid the flood water entering the WWT or wastewater contaminate the floodwater
➢ Solid waste management		
General solid wastes cause aesthetic and health/sanitary problem	domestic garbage from offices and operation etc,	➢ Collection of the solid wastes in the temporary depot and then segregated the wastes by its characteristics: organic wastes, inorganic wastes, and recyclable materials. ➢ In case the facilities located at remote areas and unable to access Dinas Kebersihan service, it is allowed to burn the solid wastes in incinerator, especially for small volume of unwanted wastes after segregation and separate plastic wastes and other recyclables
Organic wastes can cause odor, aesthetic and health/sanitary problem.	Organic solid wastes, e.g. sludge from ponds dredging/clearing, residues of feeds, and composting	➢ Reuse organic wastes as fuel (such as tree branches) and others is utilized through simple composting or digestion or fermentation on site or by nearby farmers; ➢ Use of sediment/sludge from dredging for compost and inert wastes reused in embankment of ponds ➢ Cover the wastes with soil layer;
Hazardous wastes cause pollution and poisoning	Hazardous wastes, e.g. antibiotics and other chemicals	➢ In co-located subprojects: Coordinate with co-located laboratory to collect and transferred the hazardous wastes to the Lab and follow measures in Table below on labs ; ➢ If standalone without lab nearby: cooperate with nearby hospitals or industries capable to manage the hazardous.
➢ Occupational health and safety:		
Occupational risks during operation – Heavy Lift	Manual works during operation of shrimp ponds and broodstocks (lifting of materials/loads and harvest)	➢ Use mechanical and / or automated equipment to facilitate lifts heavier than 25 kg ➢ Use workstations that can be adapted to individual workers, especially if shrimp are processed at post-harvest ➢ Construct ponds that are rectangular in shape to facilitate harvesting. ➢ Use embankments which at least 2.5 meters wide, to be accessed by vehicles to drag harvest seines
Occupational risks during operation – Electric Shock	Operation of pump, paddle wheel, lighting, and other electric powered units	➢ Waterproof all electrical installations ➢ Ensure that fuses are used and that there is an appropriate connection to the ground ➢ Ensure that all cables are intact, waterproof, and without connection ➢ Provide training in the correct handling of electric equipment (e.g., pumps and) to avoid the risk of short circuits ➢ Employ lock out / tag out (LOTO) procedures
Occupational risks during operation - Drowning	Water based works at the ponds	➢ Provide lifejackets and harnesses with safety clips (karabiners) that lock on to lines or fixed points ➢ Ensure that personnel are experienced swimmers ➢ Train personnel in safety at sea, including procedures for supervision of personnel ➢ Require that personnel wear lifejackets on exposed sites and at sea ➢ Where large vessels are used to transport personnel and equipment to marine sites, ensure that the vessel can be securely berthed on the pontoons, reducing the risk of falling into the gap between the vessel and the pontoon
Diseases and outbreak	Accidental introduction of wild breeds or non-certified (SPF) breeds into the ponds	➢ Use the seeds come from certified broodstock unit which implement good hatchery practices and proved by Health's Notification from authorized agency ➢ Equipment and machines for shrimp aquaculture shall be made from environmentally friendly materials, non-toxic, and free from diseases.

Appendix 6
Involuntary Resettlement and Indigenous Peoples Screening Form

INVOLUNTARY RESETTLEMENT AND INDIGENOUS PEOPLES SCREENING CHECKLISTS

For INO/55020-001 /INFRASTRUCTURE IMPROVEMENT FOR SHRIMP AQUACULTURE PROJECT IN SINJAI DISTRICT, SOUTH SULAWESI PROVINCE

July 2022

A. Introduction

1. The project targets seven provinces considered as priority under the Aquaculture Masterplan 2020-2024, MMAF. The project will provide input on Community Shrimp Aquaculture Cluster in 26 proposed areas Aceh Province (Pidie, Bireun, Aceh Besar, Aceh Jaya and West Aceh Districts), Lampung Province (East Lampung, South Lampung, and Tanggamus Districts), East Java Province (Situbondo, Gresik and Sidoarjo Districts), Central Java Province (Jepara, 2 clusters), South Sulawesi (in Bone, Pangkep, Pinrang, Sinjai, Bulukumba, Wajo and Luwu Districts).

2. The proposed project will help farmers to improve productivity and profitability of smallholder's shrimp farming through following three outputs on (i) quality and sustainability of inputs production increased; (ii) sustainable aquaculture infrastructure and services developed; and (iii) shrimp aquaculture value chain strengthened.

3. One of core subproject representative sites are selected in East Sinjai Subdistricts, Sinjai District, South Sulawesi. The potential villages for shrimp cluster located in Tongke-Tongke Village and Samataring Village, East Sinjai Subdistrict, Sinjai District, South Sulawesi Province. The initial IP screening showed no significant impact to IP group in the subproject site. The nearest of IP group located in Kampong Barambang, Kampong Karampuang and Kampung Turungan found 16 km from subproject site, and it located in in Barambang and Bonto Villages, Sinjai Borong Subdistrict.

B. Information on project/subproject/component:

a. Subproject name: Sinjai Timur Subdistrict

b. Contract package number:

c. District/ Administrative Name: Sinjai District

d. Location/ area:

e. Civil work dates (proposed): xx January 2024

f. Technical Description: MMAF will build a farmer pond cluster of approximately 5 hectares, repair 22 kilometers of irrigation canals, and reconstruct the pond and its WWTP area of 14 hectares.

C. Screening Questions for Involuntary Resettlement Impact

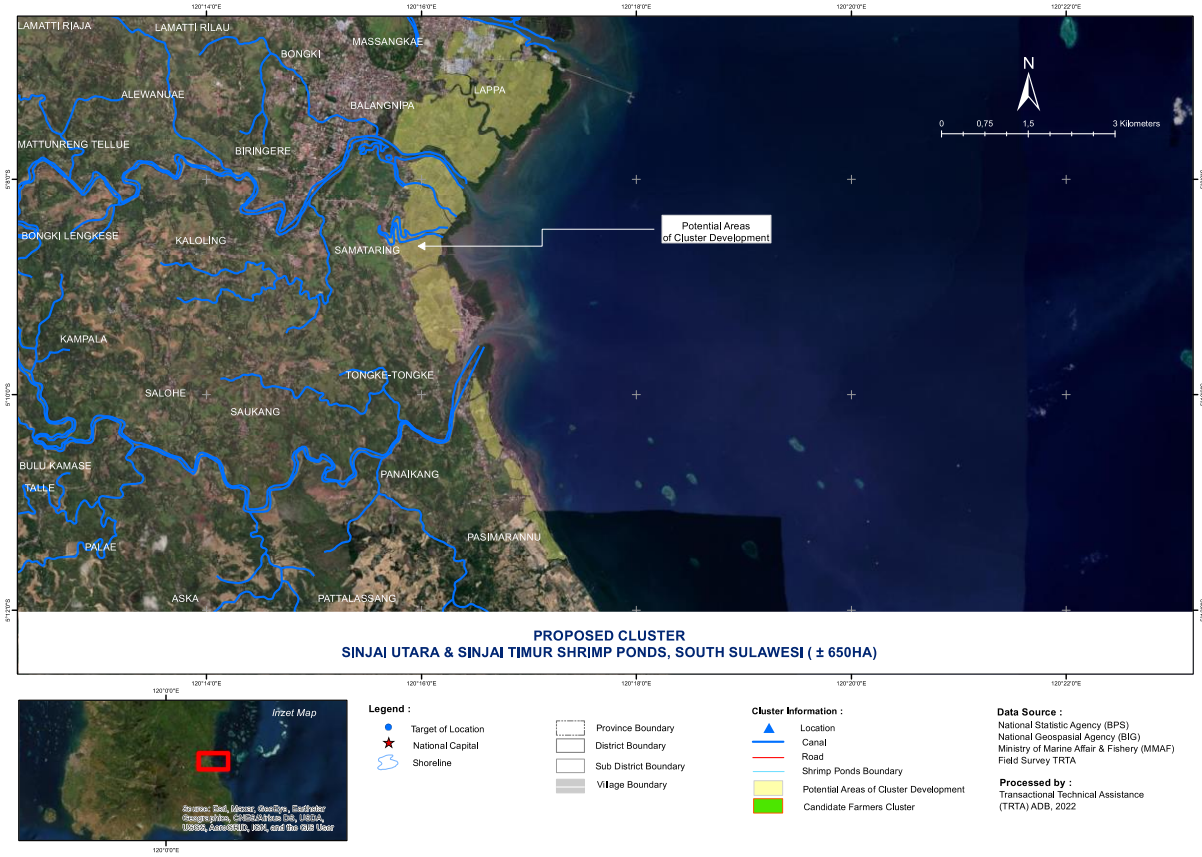
Below is the initial screening for involuntary resettlement impacts and due diligence exercise. Both

permanent and temporary impacts must be considered and reported in the screening process.

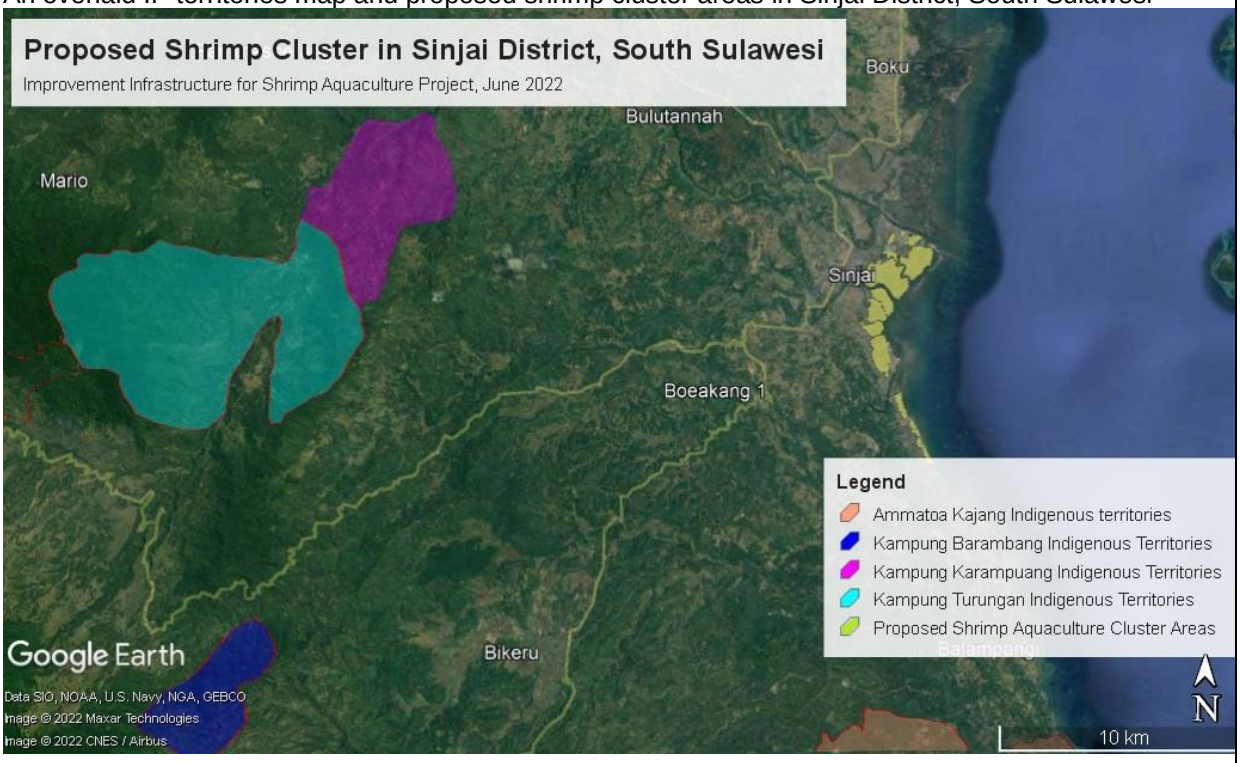
Involuntary Resettlement Impacts	Yes	No	Not Known	1. Remarks
Will the project include any physical construction work?	✓			All the projects will include physical construction work.
Does the proposed activity include upgrading or rehabilitation of existing physical facilities?	✓			Yes, irrigation canal will be rehabilitated, and 2 hectares of farmer pond will be reconstructed with communal WWTP.
Will it require permanent and/or temporary involuntary land acquisition?		✓		There will no land acquisition in all sites. There is no physical displaced.
Will it require donation or negotiated land acquisition?		✓		The farmer pond cluster, irrigation canals, and communal WWTP do not require land donation or negotiated land acquisition.
Are there any non-titled people who live or earn their livelihood at the site or within the corridor of impact (COI) / Right of Way (ROW)?		✓		There are not any non-titled people who live or earn their livelihood at all the site that used to construct dan rehabilitate the farmer pond cluster, irrigation canals, and communal WWTP.
Is the ownership status and current usage of the land known?	✓			The land ownership for the farmer pond cluster, irrigation canals, and communal WWTP owned by member of POKDAKAN.
Will there be loss of housing?		✓		No housing and residential land will be lost because the current usage is ponds and its irrigation canal.
Will there be loss of agricultural plots?		✓		Loss of agricultural and other productive assets due to land acquisition is not expected as most of the fisheries farmer land are ponds. Upgrading the farmers ponds will increase the value of their productive assets.
Will there be losses of crops, trees, and fixed assets (i.e., fences, pumps, etc.)?	✓			There might be loss of trees, if the existing farmer pond development will use dike that there are trees. The existing irrigation canal will repair only.
Will there be loss of businesses or enterprises?		✓		No, because the businesses belong to the fisheries farmer.
Will there be loss of incomes and livelihoods?		✓		No, there won't be loss of income sources for the people.

Involuntary Resettlement Impacts	Yes	No	Not Known	1. Remarks
Will people lose access to facilities, services, or natural resources?		✓		No, the people will not lose access to these things.
Will any social or economic activities be affected by land use-related changes?	✓			Yes, the land use is not changed but the social and economic activities might be positive for their livelihood.
Are any of the affected persons (AP) from indigenous or ethnic minority groups?		✓		There are no AP from indigenous or ethnic minority groups.

Additional Notes: (sketch map or pictures)



An overlaid IP territories map and proposed shrimp cluster areas in Sinjai District, South Sulawesi



C. Screening Questions for Indigenous Peoples Impact

Below is the initial screening for indigenous peoples impacts and due diligence exercise. Both permanent and temporary impacts must be considered and reported in the screening process.

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
A. Indigenous Peoples Identification				
1. Are there socio-cultural groups present in or use the project area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities" in the project area?		✓		The nearest of IP group areas, in three indigenous *kampong* (village) -in Kampong Barambang, Kampong Karampuang and Kampung Turungan found 16 km from subproject site,
2. Are there national or local laws or policies as well as anthropological researches/studies that consider these groups present in or using the project area as belonging to "ethnic minorities", scheduled tribes, tribal peoples, national minorities, or cultural communities?		✓		
3. Do such groups self-identify as being part of a distinct social and cultural group?		✓		

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
4. Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?		✓		and it located in in Barambang and Bonto Villages, Sinjai Borong Subdistrict. These three indigenous kampongs located in Karaeng Lompo Mountain areas.
5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?		✓		
6. Do such groups speak a distinct language or dialect?		✓		
7. Has such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?		✓		
8. Are such groups represented as "Indigenous Peoples" or as "ethnic minorities" or "scheduled tribes" or "tribal populations" in any formal decision-making bodies at the national or local levels?		✓		
B. Identification of Potential Impacts				
9. Will the project directly or indirectly benefit or target Indigenous Peoples?		✓		The subproject will not affect to livelihood systems of indigenous peoples since no IP group existed in the subproject site.
10. Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)		✓		
11. Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)		✓		
12. Will the project be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?		✓		
C. Identification of Special Requirements *Will the project activities include:*				
13. Commercial development of the cultural resources and knowledge of Indigenous Peoples?		✓		The IP groups are not expected to be affected by any physical displacement impact from project activities. The project will be implemented in outside customary land.
14. Physical displacement from traditional or customary lands?		✓		
15. Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the identity and community of Indigenous Peoples?		✓		
16. Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?		✓		
17. Acquisition of lands that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?		✓		

D. Involuntary Resettlement and Indigenous Peoples Impact

After reviewing the answers above, EA/ Safeguard Team confirms that the proposed subsection/ section/ subproject/component (tick as appropriate):

- **[ ]** Has involuntary resettlement (IR) or land acquisition impact, a resettlement plan (or corrective action plan) is required
- **[✓]** Has No IR impact, due diligence report to be prepared to confirm.
- **[ ]** Has Indigenous People (IP) impact, an indigenous people plan (IPP) (or specific IP action plan) is required
- **[✓]** Has No IP impact, no IPP/specific action plan is required.

Prepared By: Signature: Name: Position:	Verified by: Signature: Name: Position:
Date:	Date:

Appendix 7

Impacts Mitigation Documents (Land sharing-pooling agreements/Non land impacts arrangement)

PROSPECTIVE BENEFICIERIES STATEMENT LETTER

The undersigned below:
Name : ……..
Position : Chairman of POKDAKAN ……..
Address : .....

Stating that with regard to the 2024 Shrimp Cultivation Cluster Assistance (hereinafter referred to as “Government Assistance”) which was handed over to us, we hereby state that we are willing to:

1. receive and utilize the said Government Assistance for shrimp farming in the xxxxxx District.
2. secure and maintain the Government Assistance that has been received.
3. ensure that there are no conflicts, both internal to the group and with the community around the cluster location.
4. utilize the results of Government Assistance for sustainability and further cluster development.
5. repair cluster damage.
6. be subject to sanctions in accordance with the provisions in the Technical Guidelines for Distribution of Shrimp Cultivation Cluster Assistance in 2021.
7. do not transfer, pledge, pledge, or trading Government Assistance to other parties.
8. provide correct information to the government's internal and external supervisors.
9. report the use of Government Assistance to the Director General of Aquaculture every 4 (four) months and copy to the office.
10. ensure that there are no conflicts, both internal to the group and with the community around the cluster location; and
11. will not sue the Ministry of Marine Affairs and Fisheries, xxxx District Fisheries Agency or anyone else if they are subject to sanctions if they do not carry out numbers 1 to 10 as referred to.

This statement is made as a commitment to the assistance provided.

……..., ……

10,000 duty stamps, and signature

Chairman of POKDAKAN ……

LAND STATUS STATEMENT LETTER

The undersigned below:
Name : ……..…
Address : ……. *(Fill in the correct identity card)*
No. ID card : .....

In this case, acting as the owner/user of a land parcel with the attached Certificate/Letter of Statement and in connection with the 2024 Shrimp Cultivation Cluster Assistance for .....……..... *(Fill in the name of the organization)* having its address at ..... *(Fill in the address of the organization)*, hereby represents and guarantees that the land parcel:

1. Not being involved in a dispute in any legal dispute with any party.
2. Not being bound as collateral for any debt to any party.
3. Not being confiscated by any party for any reason.
4. Not being transferred to any party in any way.

I …..(name) voluntarily allow the IISAP project to use the said land plot(s) for Shrimp Cultivation Cluster Assistance in (fill in the period of the project activities) without any compensation and without transfer of ownership.
That, if the statements and guarantees mentioned above are not true, then I am willing to be legally responsible and release the 2024 Shrimp Cultivation Cluster activities implementers from any lawsuits from any party.
Thus, this statement is made truthfully and without coercion from any party.

……..., ……

Knowing,

10,000 duty stamps, and signature

Head of Fisheries Agency
Jepara District
NIP: ……..

Landowner

Appendix 8.

Summary result of initial public consultation meeting

REPORT OF PUBLIC CONSULTATION ACTIVIY

Today, Wednesday, **June 22, 2022**, we conducted a public consultation for IISAP in **Sinjai District**, South Sulawesi Province. The public consultation was attended by relevant institutions from Directorate General of Aquaculture, MMAF, BPBAP Takalar, Fisheries Agency of Sinjai District, head of Sinjai Timur Subdistrict, head of Sinjai Utara Subdistrict, Head of Pasimarannu Village, Head of Lappa Village, Head of Samataring Village, fish farmer group, and extension worker (attendance list are attached).

The Public Consultation Meeting (PCM) was conducted at Fisheries Agency Office of Sinjai District and attended by 50 people (7 women and 43 men), 38 of whom were the representatives of fish farmer group *(Kelompok Pembudidaya Ikan, POKDAKAN),* and fisheries extension worker from Tellulimpoe, Sinjai Timur, and Sinjai Utara sub-districts.

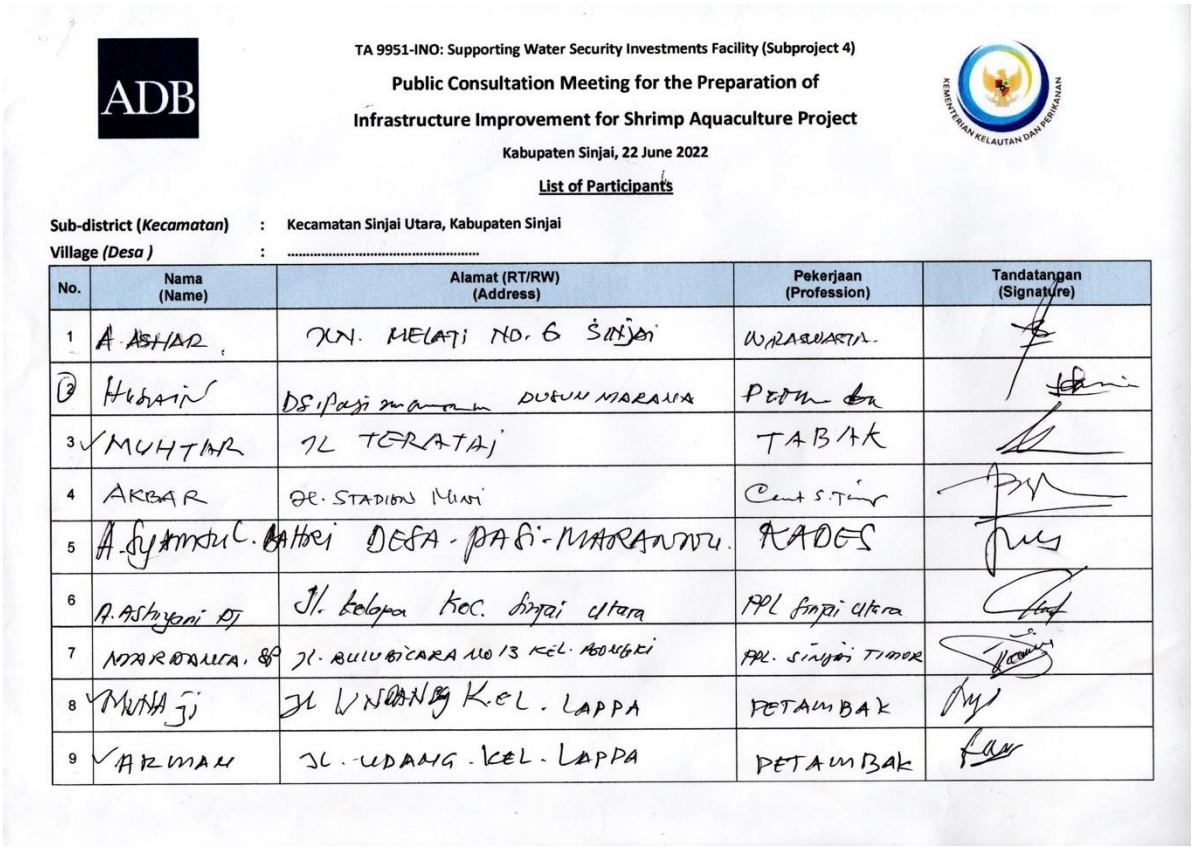
Key Discussion
(i) The coastal area in Sinjai District are 612 hectares consisting of 715 fish farmers.
(ii) BPBAP Takalar will synergize with IISAP to reach the target 2 million tons Shrimp production until 2024.
(iii) Participants has been explained the 3-project output and activities of project.
(iv) Public consultation is carried out to ensure participation of local. communities and stakeholders during project design, preparation and decision making.
Concern raised by the participants and Project team response:
(v) **How to ensure the transparency of Project and involvement of village and sub district office. Project response:** Project ensures the transparency and accountability through developing and implementation SOP, technical assistance, discloses the project' plans and activities and internal and external monitoring that involve head of village and sub district office.
(vi) Problems of the Shrimp cultivation in Sinjai are flood and damage of canals and embankments. Project response: The construction of embankments on the coast is not the district's authority as there is no budget. It Will coordination with related agency.
(vii) **Settlements occupying conservation area, degrading the water quality, land status, price fluctuation of shrimp. Project response**: Project will assess the problems and coordinate to solve the problem through project activities.
(viii) **The design of pond cluster. Project response**: The design of pond using cluster concept with reservoir pond and an WWTP (wastewater treatment plant).
(ix) **Group Selection Procedure. Project Response**: Regulation and procedure for farmer group selection will be prepared.

Photograph of related public consultations

Attendance List

List of Participants

Project : IISAP for Sinjai District
Date : 22 June 2022
Venue : Fisheries Agency Office of Sinjai District



TA 9951-INO: Supporting Water Security Investments Facility (Subproject 4)

Public Consultation Meeting for the Preparation of

Infrastructure Improvement for Shrimp Aquaculture Project

Kabupaten Sinjai, 22 June 2022

List of Participants

Sub-district (*Kecamatan*) : **Kecamatan Sinjai Utara, Kabupaten Sinjai**

Village (*Desa*) : .....

No.	Nama (Name)	Alamat (RT/RW) (Address)	Pekerjaan (Profession)	Tandatangan (Signature)
1	A. ASHAR	JLN. MELATI NO. 6 SINJAI	WIRASWASTA	
2	HUSAIN	DS. PASI MARANNU DUSUN MARANNU	PETANI	
3	MUHTAR	JL TERATAI	TABAK	
4	AKBAR	JL. STADION MINI	Cent S.Tim	
5	A. Syamsul Bahri	DESA - PASI - MARANNU	KADES	
6	A. Ashriyani PJ	Jl. Kelapa Kec. Sinjai Utara	PPL Sinjai Utara	
7	NURHAYATI, SP	JL. BULUBICARA NO 13 KEL. ABOKKI	PPL. SINJAI TIMUR	
8	MUNAJI	JL WANANG KEL. LAPPA	PETAMBAK	
9	NARMAN	JL. UDANG KEL. LAPPA	PETAMBAK	

10	DARLINA	JL. UDANG G. KEL. LAPPA	DETA-UBAK	
11	SYAMSUL ALAM	JL. UDANG KEL. LAPPA	PEMBUDIDAYA	
12	H. SOFWAN	Jl. ~~Kelay~~ Sungai Tungka	CAMAT. S. UTARA	
13	MUH IKCAL	PANGKAJENE	BUDIDAYA	
14	AMIRUDDIN LATIF	JL. NENER, KEL. LAPPA	PEMBUDIDAYA	
15	ABDUL NURDIN	JL KH. AGUSALIM	Penyuluh	
16	BUDIYANTO	BTN 7 WALI INDAH	PENYULUH	
17	IRFAN.	JL. MINAS	Staf pribadi	
18	AGUS SALIM	M. BOMBANG	Peternak Lele	
19	M. ASRI	M Bombang	Petambak	
20	KURNIATI	Bajai	Turah Sanatris	
21	USMAN	TAJJOLO LAGOARI	Pembudidaya	
22	USRAN	TAJJOLO LAGOARI	Pembudidaya	
23	SAINUDDIN	TAJJOLO LAGOARI	TAMBAK	

24	CALA	ACHMAT PANGASA	TAMBAK	
25	ASKAR	TOJOLLO / LAGORI	Tambak	
26	FIRMAN	BUNGIN TARE II	TAMBAK	
27	MANSUR.	BUNGIN TARE II.	TAMBAK.	
28	Hermansyah	Ganggang Jaya II	Tambak	
29	Suarni	Lempa	[illegible]	
30	AHZANUL	PASIMARANNU	TAMBAK	
31	FITRA	— " —	— "	
32	NURWAHIDAH	SINJAI	PPB	
33	Saeva Ningrum	Sinjai	PBH	
34	SARGAWI	"	PETAMBAK	
35	Rudi Salam	Sinjai	- " -	
36	Wiwik Hardianti	Sinjai	- " -	
37	Nurul Fadillah	Sinjai	- " -	

38	H. M. Tayeb	Tongke-Tongke	pembudaya	
39	Abd. Kadir	—11—	—11—	
40	SUARDI	—11—	—11—	
41	KAMIL	Samataring	Pembudidaya	
42	HIJAU LESTARI	—11—	—11—	
43	Abdi Mustafa	Tarafai	Budidaya	
44	FAISAL	TERATAI	Budidaya	
45	Abdul Salam	Balangnipa	Petambak	
46	Kamaruddin	Lappa	Petambak	
47	H. Herman	Panaikang	Petambak	
48	H. Moh. Tayeb	Tongke - Tongke	Petambak	
49	H. M. Tayeb	tongke - tongke	petambak	
50	DARMAWATI	Panaikang	Petambak	
Total Number *(Jumlah Total)*				

PCM schedule

PUBLIC CONSULTATION MEETING
FISH FARMER GROUP (POKDAKAN) IN SINJAI DISTRICTS
Sinjai , 22 June 2022

No.	Time	Activity	Responsible Institution/Person
1	08.30 – 09.00	Participants Registration	Head of BPBAP Takalar
2.	09.00 – 09.10	Welcome Speech	MC
2.	09.10 – 10.00	Speech from Fisheries Agency of Sinjai District	Head of Sinjai District Fisheries Agency
		Opening Speech from Sinjai Utara Sub district	Head of Sinjai Utara Sub district
		Speech from BPBAP Takalar / Representative of Directorate General of Aquaculture, MMAF	Head of BPBAP Takalar
3.	10.00 – 11.00	Technical Aspects: Pond Cluster System, Irrigation Canal, Pond Repair and Communal Wastewater Treatment Plant	ADB TRTA (Bambang Sumartono)
		Social safeguard	ADB TRTA (Teguh Kuncoro)
4.	11.00 – 12.00	Discussion, Question and Answer (QA)	Facilitated by Sinjai District Fishery Agency
5.	12.00 – 12.10	Closing Speech	BPBAP Takalar
6.	12.10 –	Informal Discussion and fill out a questionnaire	MC/Balai Staff /TRTA

Appendix 9
Sample Pamphlet

Proyek ini dibiayai dari 2 sumber pendanaan, yaitu berupa Pinjaman Luar Negeri dari Asian Development Bank (ADB) dan berupa Hibah Luar Negeri dari Global Environment Facility (GEF). Kegiatan IISAP direncanakan berlangsung selama 5 tahun, yaitu dari tahun 2022 hingga 2027.

Arah dan kebijakan Kementerian Kelautan dan Perikanan (KKP) tahun 2020-2024

MENGOPTIMALKAN & MEMPERKUAT PERIKANAN BUDIDAYA

GAMBARAN UMUM PERIKANAN BUDIDAYA

Sesuai dengan amanat RPJMN 2020-2024, perikanan budidaya diharapkan dapat memberi kontribusi besar dalam menunjang perekonomian nasional. Terkait dengan amanat tersebut, KKP dalam hal ini Direktorat Jenderal Perikanan Budidaya berupaya untuk:

- Meningkatkan produksi perikanan budidaya menjadi 10,32 juta ton (termasuk di dalamnya udang sebesar 1,52 juta ton) pada tahun 2024 atau tumbuh 8,5 persen per tahun;
- Meningkatkan pertumbuhan volume ekspor udang 8% per tahun dan pertumbuhan nilai ekspor udang sebesar 250% dari tahun 2019 hingga tahun 2024.

Pada tahun 2019 produksi udang Indonesia mencapai 881 ribu ton, dimana kontribusi udang vaname sebesar 677 ribu ton atau 11,3% dari produksi dunia yang mencapai 5,4 juta ton. Produksi udang vaname Indonesia, berada di urutan ketiga produsen terbesar, setelah China dan India.

KENDALA DALAM PENGEMBANGAN BUDIDAYA UDANG DI INDONESIA

- **BELUM TERTATA**, Kawasan budidaya udang yang belum tertata dengan baik.
- **LOKASI TERSEBAR,** Indonesia memiliki kegiatan budidaya udang hampir di seluruh provinsi, tetapi lokasi tambak tersebut tersebar di berbagai tempat dan belum dikelola dengan baik.
- **BENIH**, Kualitas dan kuantitas benih dan induk udang belum memadai.
- **INFRASTRUKTUR BUDIDAYA,** Sarana dan prasarana pendukung tambak udang masih terbatas.
- **KESEHATAN,** Pelayanan kesehatan ikan masih terbatas dan belum memenuhi standar.
- **COLD STORAGE,** Jumlah cold storage yang masih terbatas di sekitar sentra-sentra budidaya udang.
- **PETUGAS PENYULUH,** Kapasitas pembudidaya udang dan petugas penyuluh perikanan masih perlu ditingkatkan.
- **TEKNOLOGI,** Fasilitas dan fungsi Unit Pelaksana Teknis (UPT) lingkup Ditjen Perikanan Budidaya dalam menghasilkan dan mendesiminasikan model atau percontohan budidaya udang yang berkelanjutan sesuai teknologi anjuran masih terbatas.

PENINGKATAN INFRASTRUKTUR UNTUK PROYEK BUDIDAYA UDANG BERKELANJUTAN

INFRASTRUCTURE IMPROVEMENT FOR SHRIMP AQUACULTURE PROJECT (IISAP)

STRATEGI UTAMA IISAP

Strategi utama yang digunakan untuk peningkatan produksi dan produktivitas budidaya udang, salah satunya adalah dengan melakukan penataan kawasan budidaya/areal pertambakan, perbaikan saluran irigasi tambak yang memadai dengan menerapkan pengelolaan intensifikasi lahan tambak yang terintegrasi dan dilakukan secara kolektif, berupa kluster tambak udang berkelanjutan dan ramah lingkungan. Sehingga memiliki daya ungkit tinggi untuk mencapai sasaran prioritas pembangunan.

PERLINDUNGAN SOSIAL

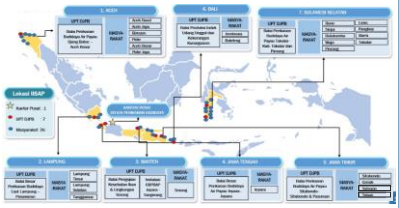
KETERBUKAAN INFORMASI DAN KONSULTASI YANG EFEKTIF

Tujuan keterbukaan informasi, konsultasi publik dan partisipasi meliputi:

- Menyebarluaskan semua informasi dan kegiatan yang terkait dengan proyek kepada masyarakat petani;
- Mengumpulkan ide, saran, keprihatinan, kebutuhan atau prioritas komunitas petani pada proyek dan intervensinya;
- Memastikan partisipasi masyarakat lokal dan pemangku kepentingan selama desain, persiapan dan pengambilan keputusan untuk proyek; dan
- Memastikan bahwa masyarakat lokal berpartisipasi dan diberitahu tentang semua keputusan yang terkait langsung dengan pendapatan, mata pencaharian, dan standar hidup mereka.

LOKASI KEGIATAN

Lokasi kegiatan berada di 29 Kabupaten dalam 7 Provinsi. Dari 29 Kabupaten tersebut terdapat 26 Kabupaten yang menerima bantuan Induk HSRT, Klaster Tambak Petani, pembangunan Saluran Irigasi, dan Perbaikan Konstruksi Tambak+Instalasi Pengolahan Air Limbah (IPAL)+Jaringan Listrik.



PERLINDUNGAN LINGKUNGAN HIDUP

Pengembangan dan revitalisasi/rehabilitasi tambak akan menggunakan konsep tambak berkelanjutan *(sustainable aquaculture)* dengan *sylvo-aquaculture*, yang ramah lingkungan. Dengan konsep tersebut pengembangan budidaya udang akan dipadukan dengan perlindungan terhadap kawasan bakau (mangrove) melalui program restorasi bakau pada saluran air tambak.

PEMILIHAN LOKASI

Penentuan lokasi tambak dan prasarana pendukungnya harus memenuhi kriteria teknis serta kriteria perlindungan lingkungan sesuai dengan peraturan dan perundang-undangan, antara lain:

JENIS KEGIATAN TAMBAK DAN PEMBENIHAN

- Sesuai dengan tata ruang wilayah (RTRW) dan Zonasi Wilayah Pesisir Dan Pulau-Pulau Kecil (RZWP-3-K) dan peraturan tata ruang terkait lainnya;
- Adanya sumber air, air pemeliharaan dan lahan yang memadai dan sesuai;
- Tidak berada dalam kawasan bakau atau kawasan lindung/konservasi lainnya dengan jarak sekurang-kurangnya 100 m dari batas terluar;
- Lokasi bebas dari banjir berkala (untuk kala ulang dua puluh lima tahun atau Q25) dan dampak pencemaran atau pencemar/bahaya lainnya untuk keamanan pangan;
- Tambak udang berada di belakang sempadan pantai seku- rang-kurangnya 100 m dan sekurang-kurangnya 100 m dari sempadan sungai sungai besar dan sekurang-kurangnya 50 m dari sungai kecil;
- Tekstur tanah dari lokasi tersebut memenuhi spesifikasi yang mendukung pertumbuhan pakan alami, kualitas air yang cocok untuk budidaya udang, dan mampu menahan volume air tambak dengan kebocoran yang dapat diabaikan (<10 % per minggu).

JENIS KEGIATAN JALAN PRODUKSI DAN PRASARANA PENDUKUNG

- Sesuai dengan rencana tata ruang wilayah (RTRW) dan peraturan terkait lainnya;
- Tidak berada dalam atau pada batas kawasan bakau atau kawasan lindung/konservasi lainnya;
- Berada di luar daerah milik sungai/sempadan sungai: sekurang-kurangnya 5 (lima) meter dari kaki sungai bertanggul di daerah permukiman; sekurang-kurangnya 100 (seratus) meter dari tepi sungai besar tanpa tanggul atau sekurangn- ya 50 (lima) meter dari tepi sungai untuk anak sungai tanpa tanggul di luar permukiman.

PENGOLAHAN AIR LIMBAH & SAMPAH

Prinsip pengolahan air limbah adalah melakukan perbaikan mutu air limbah (dengan cara teknis maupun alami) agar saat dibuang tidak mencemari lingkungan (perairan umum). Perbaikan mutu air limbah dilakukan dengan cara:

a. Memisahkan dan mengelola padatan (sampah) dan air buangan (air limbah);

b. Mengurangi bahan pencemar dari air limbah sehingga air hasil pengolahan IPAL memenuhi baku mutu yang ditetap- kan dalam peraturan atau setidak-tidaknya tidak lebih buruk dari lingkungan sekitarnya.

DOKUMEN & PERSETUJUAN LINGKUNGAN

Semua rencana usaha dan kegiatan, termasuk budidaya udang air payau wajib menyusun dokumen lingkungan sesuai dengan kategorinya. Ketentuan lebih lanjut mengenai jenis dokumen yang diperlukan serta wewenang untuk pengujian dan persetu- juan dokumen tersebut diatur dalam Peraturan Menteri Lingkungan Hidup Nomor 4 Tahun 2021 tentang Jenis Kegiatan Yang Wajib AMDAL, UKL-UPL atau SPPL. Peningkatan prasarana budidaya udang bukan merupakan kegiatan yang berdiri sendiri, tapi mencakup lintas sektor, maka penapisan lingkun- gan juga mencakup fasilitas pendukung lainnya seperti fasilitas pekerjaan umum (saluran air, penahan banjir, tanggul, jalan produksi, bangunan, instalasi listrik, dll).

PENANGANAN KELUHAN

Proyek ini telah menyiapkan tata cara penanganan pengaduan masyarakat. Sebagaimana telah diatur oleh Peraturan Meteri Kelautan dan Perikanan Nomor 56/Permen-KP/2020, di masing-masing UPT atau Balai telah dibentuk Tim Penanganan Keluhan (TPP). TPP di masing-masing UPT/Balai mempunyai tugas melakukan koordinasi penanganan, memberi respon awal terhadap penyelesaian pengaduan, memantau tindak lanjut penyelesaian pengaduan, melakukan komunikasi dan memberikan informasi penyelesaian pengaduan.

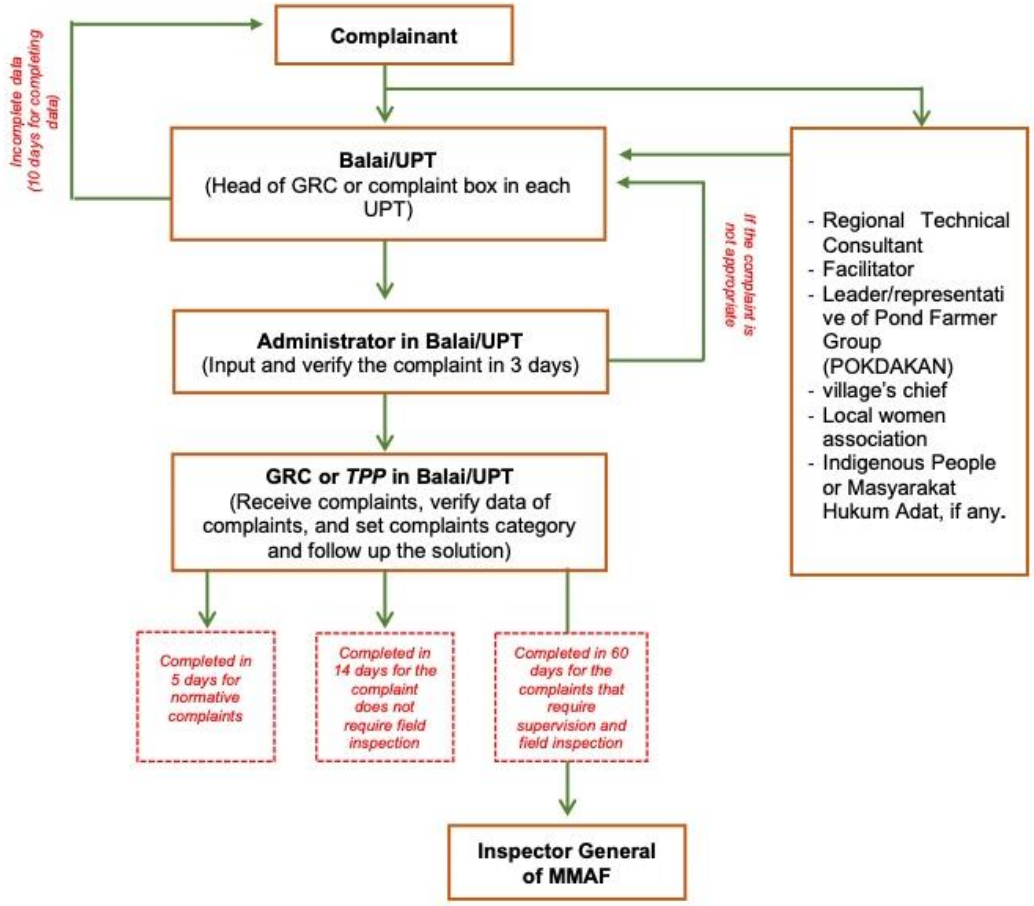
Mekanisme pengaduan dari masyarkat dapat disampaikan melalui saluran resmi meliputi:

- Website dengan laman **www.kkp.lapor.go.id** atau **www.lapor.go.id**
- Pesan singkat elektronik (SMS) dengan format: **KKP (spasi) isi aduan, kirim ke nomor 1708**
- Surat elektronik dengan alamat **pengaduan@kkp.go.id**
- Telepon dan whatsapp dengan nomor **0811989011**
- Surat nonelektronik ditujukan kepada Ketua TPP Kementerian Kelautan dan Perikanan dan Pengaduan secara langsung (tatap muka) dengan alamat **Inspektorat V Inspektorat Jenderal KKP Jalan Medan Merdeka Timur Nomor 16 Jakarta Pusat Kode Pos 10110**, atau kepada Ketua TPP di masing-masing UPT di lingkungan KKKP; dan/atau
- Kotak Pengaduan yang disediakan di Kantor Pusat dan UPT di lingkungan KKP.

KEMENTERIAN KELAUTAN DAN PERIKANAN • JL. Medan Merdeka Timur No.16Jakarta Pusat Telp. (021) 3519070 EXT. 7433 – Fax. (021) 3864293 Email: humas.kkp@kkp.go.id Call Center KKP: 141

Appendix 10

GRM Flow Chart Established in the Subproject and List of GRC Members and Contacts



Proposed Procedure for Grievances Resolution for IISAP

Stage 1: Submission of complaint

a. The complainant submits a written complaint to the head of GRC or complaint box (contact details of the contact person of the GRC will be indicated in the PIB that will be delivered to residents in the public consultation meetings after the GRC is established) in each UPT location, or as letter, or email (with attached signed letter).
b. Complaints can also be sent directly to the Regional Technical Consultant (RTC) and/or Facilitator, head of village, leader of pond farmer group, local woman association, Indigenous People (if any) (during implementation phase through a hotline number that will be posted for construction-related matters (such as noise, dust, access to property and other matters) which require immediate action. The RTC and/or Facilitator, head of village, leader of pond farmer group, local woman association, Indigenous People (if any) are required to register the complaint, and report to head of GRC (as representatives of the PIU present in the sub-projects) on complaints received and actions taken.
c. For customary communities, the grievance mechanism shall follow their internal grievance mechanism (if any), or any mechanism provided by local government based on community request. The affected APs may bring their complaints to the village leaders and/or customary leaders. The

village/customary leaders will settle the complaint within seven days working days upon receipt of the complaint notice. If this has not been settled, they may bring it to the project officers in the field office or subproject site office.

Stage 2: Registration, Eligibility Assessment, and Confirmation of Eligibility

a. The Administrator registers the complaint in a grievance registry and verifies whether the complaint is eligible for the GRM or not. If the complaint is deemed ineligible, the Administrator will return the complaint to the head of GRC if the complaint is not appropriate. The complainant is informed of the decision and the reasons for ineligibility. The complainant is given 10 days to complete the documents.
b. If the complaint is deemed eligible, the Administrator will submit to GRC of Balai/UPT.

Stage 3: Complaint Assessment, and Follow up action for solving the issue

a. GRC *(or TPP)* identifies how the complaints should be investigated and addressed and who will be responsible for these actions and informs the relevant parties accordingly. Options include: (i) the PIU; (ii) the RTC; and (iii) Facilitator of IISAP.
b. If the complaint is eligible, the entity identified under Stage 2(b) conducts an assessment and gathers information about the complaint to determine how it might be resolved. If outside experts or technical information is needed, the entity identified under Stage 2(b) may seek such guidance and may request all parties concerned (including the complainant, as relevant) to participate in the grievance redress process. The identified entity after the assessment will send the assessment letter including time-bound action plan to the complainant.

Stage 4: Implementation of Complaint solution and Redressal Action.

Implementation of the decision and action plan commences depending on the category of complaint. Requests for information and Complaints of a normative nature are completed within a maximum of 5 (five) Days. Complaints that do not have a level of supervision and/or do not require a field inspection are completed within a maximum of 14 (fourteen) Days. Complaints that have a level of supervision and require a field inspection are completed within a maximum of 60 (sixty) Days unless there is a Force Majeure.

a. If the recommendation on the results of the review of the Complaint has a level of supervision and requires a field inspection related to Maladministration and/or termination of the Complaint follow-up, then the Head of the GRC in the respective work unit submits a proposal for delegating the follow-up to the Complaint settlement to the Inspector General.
b. If the complaint received is not in accordance with its authority, then the Head of the GRC in the respective work unit forwards or returns the complaint to the UPT Administrator.
c. Communicating the received complaints from the UPT administrator with GRC members in their respective work units for follow up.
d. Monitoring the follow-up to the settlement of Complaints by GRC members in their respective work units.
e. Providing information to the UPT administrator regarding the results of the Complaint settlement to be inputted into the SP4N- LAPOR application!

Stage 6: Closure of Complaint

a. When the decision/actions are implemented and when monitoring is completed, the GRC prepares a final report which is shared with the complainant, PIU, the RTC, facilitators, head of village, leader of pond farmer group, local woman association, Indigenous People (if any).
b. The complainant confirms completion of the actions and agrees to the closure of the complaint. The grievance dossier is closed and filed in the project archive.

Appendix 11
Subproject Implementation Plan (Gantt Chart)

Outputs and Activities	Remarks	Years																							
		2022				2023				2024				2025				2026				2027			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Allocate budget in 2023 Budget Implementation List (DIPA)				X	X																				
Output 1: Quality and Sustainable Inputs Production Increased																									
Output 2: Sustainable Aquaculture Infrastructure and Services Developed																									
2.1 Farmer-Based Enterprise Development and Strengthening																									
2.1.1. Select core farmers/groups who will receive infrastructure support and expansion farmers/groups who will get training only				X	X																				
2.1.2. Prepare modules on socialization and improvement of capacity of farmers for facilitators and ToT for extension workers/facilitators	Rely on available extension workers with additional facilitators to be recruited as needed TRTA to assess availability of extension workers for each location In coordination with the MMAF center for training and extension					X	X																		
2.1.3. Conduct socialization for the establishment and strengthening of farmer-based enterprises (cooperatives, micro small and medium enterprises, etc.								X	X	X															

Outputs and Activities	Remarks	Years																							
		2022				2023				2024				2025				2026				2027			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
depending on the situation)																									
2.1.4. Prepare and roll out a training program for farmers covering financial literacy, good aquaculture practices, social and environment safeguards, sustainable aquaculture, coastal and mangrove management, strengthening and farmer institutional empowerment										X	X														
2.1.5. Support farmer-based enterprises in getting legally established												X	X												
2.1.6. Support farmer-based enterprises and farmers groups in preparing Sustainable Aquaculture Development Plan							X	X																	
2.1.7. Facilitate preparation of proposals for farmer-based enterprises to access credits (micro credit or KUR, rural banks)														X	X							X			
2.2. Sustainable Aquaculture Production Facilities Developed																									
2.2.1. Develop detailed guidelines for sustainable aquaculture cluster	Review PITAP and other guidelines				X																				
2.2.2. Upgrade basic design (prepared for UPT) and prepare DED for farmers ponds for sustainable aquaculture (cluster/individual ponds) including climate and	Supported by regional technical consultants A tertiary canal block comprise 10 to 20 ponds. Each					X	X																		

Outputs and Activities	Remarks	Years																							
		2022				2023				2024				2025				2026				2027			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
disaster proofing, gender responsive and inclusive features and irrigation canals and drains rehabilitation; farm roads; and communal WWTP[b]	cluster to be provided with water treatment and other facilities																								
2.2.3. Procure civil works for sustainable aquaculture ponds									X	X															
2.2.4. Construct and supervise civil works											X	X													
2.2.5. Strengthen farmers groups capacity in water management groups												X	X												
2.2.6. Prepare technical specifications and bidding documents for pond equipment								X																	
2.2.7. Procure and install equipment (waste water, power generation, water pumping, paddle wheel, generator, high-density polyethylene liner, paddle wheel, shrimp feed (grower and finisher), water pump, spiral hose, plastic hose, DO meter, pH meter, refractor salinometer, etc.) to modernize production facilities										X	X														
2.2.8. Conduct trainings for farmers for sustainable aquaculture ponds and irrigation canals, drains, and roads (including pond equipment)														X	X										

Outputs and Activities	Remarks	Years																							
		2022				2023				2024				2025				2026				2027			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2.2.9. Plant mangroves or other species at inlet/outlet or other locations 2.												X	X												
2.3 Sustainable Aquaculture Production Practices Introduced																									
2.3.1. Train small-scale famers on (i) pond water quality, waste water management, and cleaning technology; (ii) feed management; (iii) disease and biosecurity; and (iv) mangrove management and replanting									X	X															
2.3.2. Procure and plant mangroves or other species seeds												X	X												
Output 3: Shrimp Aquaculture Value Chain Strengthened																									
3.1 Shrimp Handling and Traceability Improved																									
3.1.1. Prepare and roll out training programs to farmers and extension workers on (i) food safety; (ii) shrimp handling, (iii) certification processes; (iv) quality assurance system and food safety of aquaculture products; and (v) CBIB, CPIB, CPPIB								X	X																
3.1.2. Facilitate registration of farmers, into the INDOGAP system and transactions in STELINA												X	X												

Outputs and Activities	Remarks	Years																							
		2022				2023				2024				2025				2026				2027			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
3.1.3. Monitor and provide continuous technical support to farmers (large and small-scale) to ensure they comply with STELINA registration requirements												X	X	X	X	X	X	X	X	X	X	X	X	X	
3.1.4. Facilitate memorandum of understanding (MOU) between farmers-based enterprises with private sector (contract farming, technology provider, etc.)													X	X											
3.1.5. Monitor performance of MOUs between private sector and farmers-based enterprises													X	X											