

# Livelihood Restoration Plan

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## Jawa-1 Liquefied Natural Gas-to-Power Project (Republic of Indonesia)

Prepared by Jawa Satu Power for the Asian Development Bank

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# **Jawa 1 - LNG to Power Project**

## **Livelihood Restoration Program** **for Vulnerable Fishermen Affected by Offshore Facilities of** **the Project**

30 October 2019

**JAWA SATU POWER**

## 1. Project Description and Objective

### 1.1 Project Description

The PLTGU Jawa-1 LNG to Power Project (the Project) involves the development of a Combined Cycle Gas Turbine (CCGT) Power Plant, a Liquefied Natural Gas (LNG) Floating Storage and Regasification Unit (FSRU) and a 500kV power transmission line and Substation. These project elements will be developed within the Subang, Karawang and Bekasi Regencies of West Java, Indonesia.

The Project has been developed by PT Pertamina (Persero), Sojitz Corporation and Marubeni Corporation via the project company named PT. Jawa Satu Power (JSP). The construction work has commenced since December 2018, anticipating commercial operations in 2021.

The Project includes the following main components:

- A) Installation and operation of an FSRU (in Karawang/Subang);
- B) Construction and operation of seawater intake and seawater discharge pipelines (in Karawang);
- C) Construction and operation of an onshore gas receiving facility (ORF) (in Karawang);
- D) Construction and operation of a jetty (in Karawang);
- E) Gas supply pipelines, both subsea and terrestrial (in Karawang/Subang);
- F) 1,760 MW CCGT power plant and associated facilities (in Karawang);
- G) A 52 km 500 kV transmission line (in Karawang/Bekasi); and
- H) An electricity substation (in Bekasi)

JSP will construct and operate (for 25 years after Commercial Operation Date for the power plant) the offshore facilities listed in A), B), D), and E) above in Karawang and Subang Regency (the Offshore Facilities), which will have impact on the fishermen who have made livelihood by fishery activities in the offshore area. In order to assess such impact to the livelihood of the fishermen, ERM, as JSP's environmental advisor, conducted a Fish Catch Survey, the first one in October 2018, the second one March 2019 and the third in June 2019 to properly assess the impacted fishermen.

This Livelihood Restoration Plan (LRP) has established the programs for the vulnerable fishermen who have been identified as the group potentially impacted by Project based on the latest Fish Catch Survey and the criteria outlined in this plan.

### 1.2 Objective of LRP

The objectives of this LRP are to:

- 1) Restore the livelihood and welfare of fishermen to be affected by the Project's Offshore Facilities, who are identified as "Vulnerable Fishermen" in Karawang and Subang Regency based on the criteria explained in the Section 2; and

- 2) Support the Vulnerable Fishermen in achieving sustainable growth in their business and lifecycle

This LRP is set for “3 years program” during the construction period of the Project and shall comply with IFC standards and ADB Safeguards requirements. The implementation of the first three-year program of the LRP for the fisherfolks will be properly monitored based on the key indicators as stated in table 2. During project operations phase, the LRP will be extended to address the likely impact of project operation activities on the fisherfolks. The LRP for the operations phase will be prepared based on further impact assessments and the monitoring results of the first phase LRP.

## **2. Beneficiaries Target**

The LRP will target 275 fishermen impacted by the Project’s construction work of the Offshore Facilities and who are categorized into the following groups: Muara, Cilamaya Girang, Rawameneng and Blanakan villages in Karawang and Subang Regency. As described in the third Fish Catch Survey (June 2019), it is estimated that these 275 impacted fishermen will lose the income more than 10% due to the estimated increase of the cost for them to move farther away from their current fishing grounds.

Of the 275 impacted fishermen, 54 fishermen are categorized as “Vulnerable Groups” based on following criteria:

- Households with an income below the poverty line of IDR 354.866/month/capita as set by the National Statistical Bureau’s for West Java Province year 2017;
- Households headed by an elderly (older than 65 years old assumed to be an unproductive group); and
- Female-headed households

This LRP establishes the specific and priority program for the Vulnerable Group as shown in Table 2.

The Fish Catch Survey looked out for a criteria of fishermen operating simply as crews (rather than captains or vessel owners) of 0-3 GT vessels where their fishing grounds are located within the vicinity of the Offshore Facilities activities in Muara, Blanakan, Cilamaya Girang and Rawameneng Villages. Based on this criteria, 54 fishermen are identified as Vulnerable Group as listed in Table 1 below.

The fishermen who use smaller vessels (0-3 GT) generally don’t have the flexibility to relocate their fishing grounds to avoid the Offshore Facilities of the Project compared to those with larger vessels. As such, inflexibility in reaching a new fishing ground is also an important factor for the consideration and analysis of the Vulnerable Group.

It is confirmed that there are no Female-headed households nor Indigenous Peoples and ethnic minorities in the impacted fishery group.

**Table 1:** Vulnerable Fishermen Groups

	Age	Sex	Family member	Boat Size (GT)	Total Monthly Income	Poverty Line	Poverty Line for Family (on HH basis)	Vulnerable Category
<b>Muara</b>								
1.	60	Male	2	2	3.000.000	354.886	709.772	Elderly Group
2.	55	Male	5	1	3.000.000	354.886	1.774.430	Elderly Group
3.	50	Male	4	1	1.500.000	354.886	1.419.544	Close to poverty line
4.	56	Male	3	1	3.000.000	354.886	1.064.658	Elderly Group
5.	62	Male	3	1	2.500.000	354.886	1.064.658	Elderly Group
<b>Cilamaya Girang</b>								
6.	58	Male	3	1	2.400.000	354.886	1.064.658	Elderly Group
7.	56	Male	3	1	2.400.000	354.886	1.064.658	Elderly Group
8.	61	Male	2	1	2.600.000	354.886	709.772	Elderly Group
9.	57	Male	2	1	2.550.000	354.886	709.772	Elderly Group
10.	60	Male	4	1	2.600.000	354.886	1.419.544	Elderly Group
11.	56	Male	4	1	2.500.000	354.886	1.419.544	Elderly Group
12.	61	Male	4	2	2.400.000	354.886	1.419.544	Elderly Group
<b>Rawameneng</b>								
13.	75	Male	2	1	1.100.000	354.886	709.772	Elderly Group
14.	61	Male	4	1	6.300.000	354.886	1.419.544	Elderly Group
15.	71	Male	1	1	4.850.000	354.886	354.886	Elderly Group
16.	59	Male	2	1	7.580.000	354.886	709.772	Elderly Group

	Age	Sex	Family member	Boat Size (GT)	Total Monthly Income	Poverty Line	Poverty Line for Family (on HH basis)	Vulnerable Category
17.	56	Male	3	1	5.800.000	354.886	1.064.658	Elderly Group
18.	58	Male	2	2	6.540.000	354.886	709.772	Elderly Group
19.	64	Male	3	1	6.500.000	354.886	1.064.658	Elderly Group
20.	67	Male	2	1	2.700.000	354.886	709.772	Elderly Group
21.	65	Male	2	1	2.350.000	354.886	709.772	Elderly Group
22.	63	Male	3	1	4.750.000	354.886	1.064.658	Elderly Group
23.	57	Male	2	1	2.300.000	354.886	709.772	Elderly Group
24.	64	Male	3	2	5.825.000	354.886	1.064.658	Elderly Group
25.	55	Male	2	1	4.000.000	354.886	709.772	Elderly Group
26.	69	Male	2	1	3.890.000	354.886	709.772	Elderly Group
27.	65	Male	2	1	4.730.000	354.886	709.772	Elderly Group
	<b>Blanakan</b>							
28.	40	Male	5	1	1.500.000	354.886	1.774.430	Below Poverty Line
29.	56	Male	3	2	3.000.000	354.886	1.064.658	Elderly Group
30.	55	Male	3	2	2.500.000	354.886	1.064.658	Elderly Group
31.	47	Male	6	1	2.000.000	354.886	2.129.316	Below Poverty Line
32.	42	Male	2	2	500.000	354.886	709.772	Below Poverty Line
33.	66	Male	8	1	800.000	354.886	2.839.088	Below Poverty Line and Elderly Group
34.	69	Male	3	1	2.500.000	354.886	1.064.658	Elderly Group
35.	55	Male	4	2	1.500.000	354.886	1.419.544	Close to poverty line
36.	55	Male	4	1	1.500.000	354.886	1.419.544	Close to poverty line
37.	57	Male	3	2	2.000.000	354.886	1.064.658	Elderly Group
38.	50	Male	5	2	1.300.000	354.886	1.774.430	Below Poverty Line

	Age	Sex	Family member	Boat Size (GT)	Total Monthly Income	Poverty Line	Poverty Line for Family (on HH basis)	Vulnerable Category
39.	60	Male	5	2	1.500.000	354.886	1.774.430	Below Poverty Line and Elderly Group
40.	47	Male	4	1	1.500.000	354.886	1.419.544	Close to poverty line
41.	52	Male	7	2	1.600.000	354.886	2.484.202	Below Poverty Line
42.	70	Male	4	2	2.000.000	354.886	1.419.544	Elderly Group
43.	28	Male	6	2	1.000.000	354.886	2.129.316	Below Poverty Line
44.	55	Male	4	2	1.400.000	354.886	1.419.544	Below Poverty Line
45.	64	Male	4	1	1.000.000	354.886	1.419.544	Below Poverty Line
46.	65	Male	3	2	1.000.000	354.886	1.064.658	Below Poverty Line and Elderly Group
47.	58	Male	2	2	1.000.000	354.886	709.772	Elderly Group
48.	43	Male	3	2	1.000.000	354.886	1.064.658	Below Poverty Line
49.	35	Male	3	2	1.000.000	354.886	1.064.658	Below Poverty Line
50.	30	Male	3	2	1.000.000	354.886	1.064.658	Below Poverty Line
51.	32	Male	4	2	1.000.000	354.886	1.419.544	Below Poverty Line
52.	50	Male	3	2	1.000.000	354.886	1.064.658	Below Poverty Line
53.	62	Male	3	2	1.000.000	354.886	1.064.658	Below Poverty Line and Elderly Group
54.	44	Male	5	1	1.000.000	354.886	1.774.430	Below Poverty Line

Source: Fisherfolk Database, JSP, 2019

### 3. Livelihood Restoration Program

Based on the Fish Catch Survey and assesement described above, JSP established the following LRP. Please refer to the detail program in Table 2 hereafter.

- 1) Programs for Vulnerable Group – priority programs focusing on vulnerable fishermen to restore their livelihood and support a sustainable livelihood;
- 2) Impacted Fishermen – compensation to recover potential income loss

#### 3.1 Programs for Vulnerable Group

Through field assessments and focus group discussions for the detail LRP design, there are fundamental common issues identified among the vulnerable fishermen impacted by Offshore Facilities. These include the following:

- A) For operators of smaller vessels (less than 3 GT), it is relatively less flexible for them to move from their current fishing grounds where they have been doing the fishery activities for a long time;
- B) Use of poor fishing equipments due to limited access to capital sources and financing institutions to improve productivity/amount of fish catch;
- C) Lack of fishermen’s capacity to run their business sustainably (technical and soft skill, including less knowledgeable to the regional fishery map etc);

Based on the above considerations, JSP has developed the programs by seeking for sustainable livelihood and long term business growth and opportunity, focusing on the Vulnerable Groups.

Further more, a specific program for the Muara’s Vulnerable Group will be provided since the Muara fishermen might not find alternative fishing ground. As outlined in the 3<sup>rd</sup> Fish Catch Survey, it is anticipated that the Muara fishermen will experience potential long term and more adverse impact (compared to those in the other area due to installation of jetty and pipeline) during both construction and operation. As such, prior to the operations phase, the currently suggested program presented in item C Table 2 will be reviewed and updated based on the need of and demand made by the subject fishermen.

During LRP implemantion, and in order to enhance JSP communication with the fishermen and to properly capture their concerns/grievances, JSP will conduct a regular safety awareness campaign (poster distribution) to all impacted fishermen. Intensive consultation with Impacted Fishermen and Vulnerable Groups will be done to ensure a proper implementation and close monitoring of the project’s impact. Grievance Redress Mechanism as per Stakeholder Engagement Plan will be applied.

#### 3.2 Programs for Impacted Fishermen



JSP has initiated a cost compensation program to all Impacted Fishermen for the 1st year program. The budget for this program has been secured based on the assessment of potential income losses described in the Fish Catch Survey. The Survey came to a conclusion of considering a potential income recovery for 4 months' productive work that would have lost during construction. JSP will implement this program through a one time payment to the Impacted Fishermen.

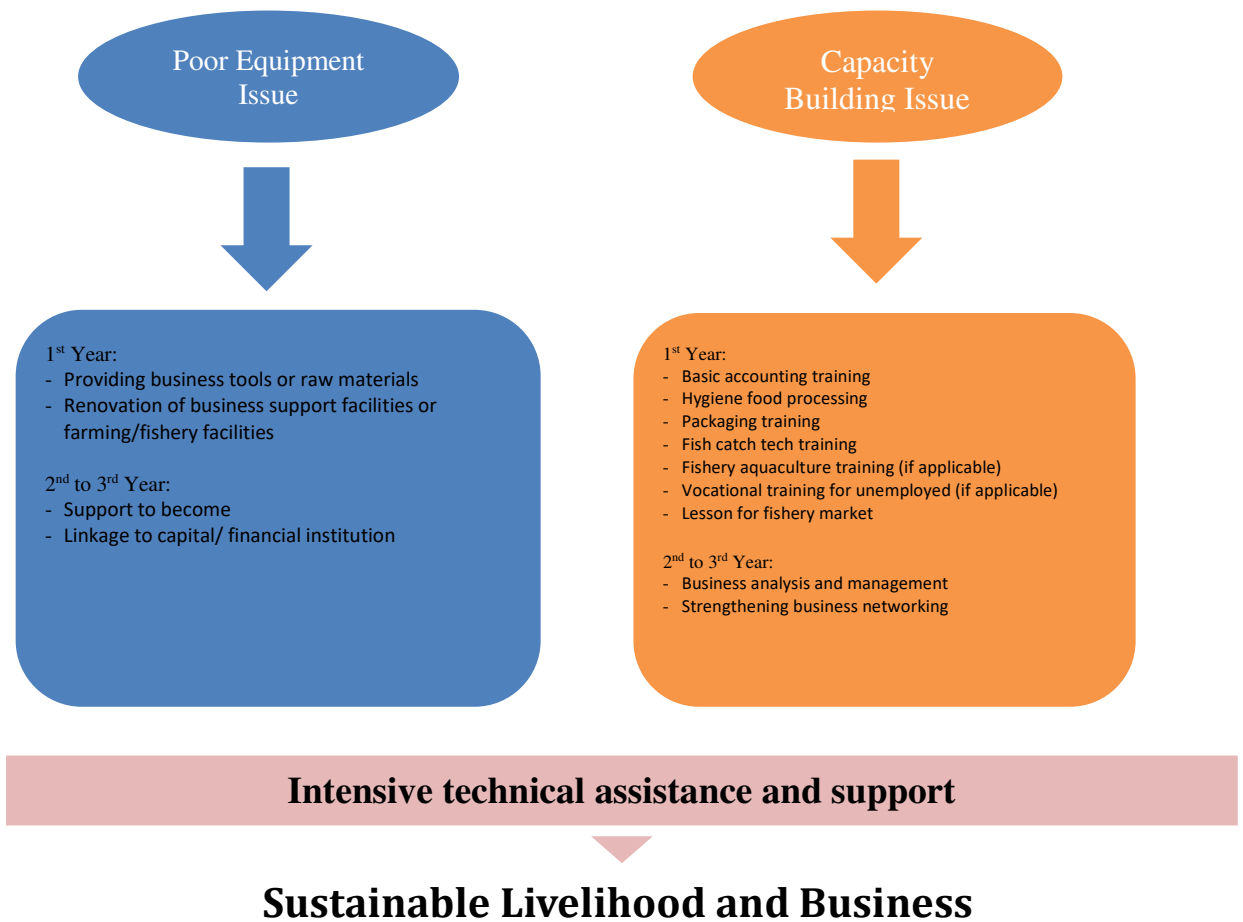
**Table 2:** Detail LRP for Impacted Fishery Group including Vulnerable Groups

Target (Category of Vulnerability)		Planned Programs (Input)	Implementation	
			Input	Target Outcome/Key Indicator
<b>Vulnerable Groups</b>	<b>A. Poverty</b>	<b>1. Providing Materials for business improvement</b>	JSP to provide hard materials to efficiently improve their productivity/fish catch amount. It will be provided through micro credit scheme in cooperation with existing local institution (fishermen cooperative- KUD), and it is expected that their family could also get access to such finance institution.	
		(a) Providing Fish Catch Tool - more advanced than the ones currently used by the fishermen (25 GPS, 25 Fish Finder, 75 Life Jackets).	Fisch catch tools (25 GPS, 25 Fish finder, 75 life jackets for 25 boats) will be procured and distributed.	<ul style="list-style-type: none"> <li>100% of 25 boats (as targeted poverty group) will be equipped with more advanced tools and;</li> <li>85% of 25 boats will find new fishing ground</li> </ul>
		(b) Providing Fish Seeds, Shrimp Seeds and any other requested seeds for 10 Ha fish/shrimp pond (applicable in case the fishermen wish to change their type of the business.)	<p>The following items for pond improvement (for total 10 Ha) will be distributed to beneficiaries.</p> <ul style="list-style-type: none"> <li>- Fish seeds: Total 25,000 pieces (2,500 pieces/ha)</li> <li>- Fish feeds: Total 15 tons</li> <li>- Fishpond rehabilitation; 4 packages consisting of;                             <ul style="list-style-type: none"> <li>➤ Total 1 ton of limestone (kapur)</li> <li>➤ 100 kg of natural fertilizer</li> <li>➤ 75 litres of organic fish supplement</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>10 Ha of shrimp/fishpond will be re-constructed;;</li> <li>20-25 % income/per yield increase for beneficiaries</li> </ul>
		(c) Renovation of the fisheries meeting places to promote the opportunities for the constructive discussion of common issues/problems among local fishery groups, and for conducting technical trainings.	3 (three) fishermen group meeting places will be renovated/built	<ul style="list-style-type: none"> <li>Capacity of the 3 meeting places will be improved from 12 people to 50 people per place to enhance communication among fishermen and JSP.Frequency of meeting with/among communities will be improved from once a month to at least 2 times/month</li> </ul>
		<b>2. Capacity Building</b>	JSP to provide training programs by appointing relevant external experts and coordinate with the relevant fishery groups in the area	
		(a) Simple accounting and business management training	2 batches of basic accounting training will be conducted, expecting total 25 participants.	<ul style="list-style-type: none"> <li>85% of 25 people participants will have their capacity in basic accounting increased</li> <li>85% of 25 people will have basic accounting applied to either their own business or their family business.</li> </ul>

		(b) Group management training - to efficiently participate in the local fishery groups and strengthen the existing fishing communities	4 batches of conflict management training will be conducted, expecting total 80 participants.	<ul style="list-style-type: none"> <li>80 people will get trained in conflict management 80% of issues arising from the community conflict will be resolved at each fishermen group level</li> </ul>
		<b>3. Job Opportunities for the Project</b>		
		Hiring fishermen as non technical temporarily labors for the Project – e.g., the security patrol in offshore and fishery area. JSP to discuss with the fishermen to investigate the demands by the subject vulnerable groups	15 job opportunities for the Project as non-permanent workers (non-skill daily workers, security assistant) will be created	<ul style="list-style-type: none"> <li>15 fishermen will be hired.</li> <li>Number of security and social issue related to offshore work will be down to zero</li> </ul>
	<b>B. Elderly Household</b>	<p>JSP to provide a technical training for reading fishery map of the area so that elderly household can efficiently find alternative fishing area. The technical training: fishery map reading, understanding fishing calendar, navigating GPS , introduction to fish finders.</p> <p>(The other program for Poverty group will also be available for the elderly household upon their demand)</p>	4 batches of fishery technical training will be conducted to the elderly e (total 36 people and their family members if requested, with at least total 80 participants.	<ul style="list-style-type: none"> <li>New fishing ground will be identified</li> <li>10 % income increased for 36 beneficiaries (36 elderly households)</li> </ul>
<b>Fishermen in Murara who will be impacted permanently and unable to move to other fishing ground.</b>		<p>Vocational/technical training program for alternative income generation – skill for boat repair or fishing equipment repair , fishpond food processing, product marketing etc. The type of training is optional, depending on needs assessment</p> <p>This program will be applied to the fishermen who wish to have alternative means of livelihood still related to fishery activities. The program will be updated upon request by the vulnerable fishermen</p> <p>JSP will provide technical and vocational training for the fishermen adversely impacted on long term basis by the Project. Such training will be implemented by external experts. The content of the program will be adjusted (depending on how much knowledge they wish to acquire).</p>	4 batches of production techniques and business development training will be conducted for 80 fishermen in Muara	<ul style="list-style-type: none"> <li>80 fishermen will be trained on production techniques and business development</li> <li>3(three) new community business groups will be developed.</li> </ul>

<b>All Impacted Fishermen including Non Vulnerable Group</b>	(a) Compensation of additional cost increase due to longer fishing trips which is assumed to cause the potential income loss more than 10%. JSP will provide reasonable one time off compensation to fishermen to support them find new alternative fishing ground. This program is only applicable to 1st year.	One time payment of 100% compensation claim.	<ul style="list-style-type: none"> <li>• 100% of Affected Fishermen will receive the one time off compensation</li> <li>• Zero outstanding community grievance due to loss income during offshore construction.</li> </ul>
	(b) Safety Campaign related to Offshore Facilities including FSRU being a restricted area. JSP to do a regular campaign to fishermen regarding "restricted area", in terms of the Offshore Facilities safety and security.	4 batches of safety campaign events will be conducted, with 200 participants 100 posters of safety campaign will be installed at community public place at 4 villages	<ul style="list-style-type: none"> <li>• 200 fishermen received offshore safety knowledge</li> <li>• Zero accident and all of fishermen can find the safety new route around the project area.</li> </ul>
	(c) Socialization of potential alternative fishing ground JSP to advise the alternative fishing ground through the socialization and/or focus group discussion.	4 times of public consultation and socialization will be conducted with 200 participants	<ul style="list-style-type: none"> <li>• 200 fishermen received knowledge about potential new fishing ground</li> <li>• 4 new fishing grounds identified</li> </ul>

**Picture 1: Grand Design and Approach for the LRP**



#### 4 Implementation and Monitoring Plan

The Social and Local Affairs Manager of JSP, assisted by a Social and Local Affairs Officer, is responsible for the implementation and monitoring of the overall programs stated in CDP, including those set out for the vulnerable groups in this LRP for the affected Vulnerable Fishermen.

JSP will appoint a capable third party for support of the implementation of this LRP so that each item under the plan could be implemented properly and timely.

Basic implementation and monitoring plan for 3 years (construction period) are set out in Table 3. This LRP is applicable from the time of the Offshore Facilities construction (expected to be Q4 2019).

**Table 3:** LRP Implementation and Monitoring Plan During Construction Phase

Year	Implementation	Monitoring
1 <sup>st</sup> year (Q4 2019 to Q4 2020)	<p>A) JSP to start providing training materials and technical skills (capacity building) as per Table 2.</p> <p>B) JSP to provide cost compensation for the additional cost to the impacted fishermen.</p>	JSP to monitor those materials and skills to be provided, and how these will improve their productivity. Monitoring will be done on quarterly basis in accordance with key indicator as per Table 2.
2 <sup>nd</sup> year (Q4 2020 to Q4 2021)	<p>A) JSP to provide material and technical skills for the fishermen to be impacted by construction of offshore pipelines</p> <p>B) JSP to review the program (as necessary) and provide supplemental support based on the monitoring result</p> <p>C) JSP to conduct additional fish catch survey to identify the result of this program and baseline data for the development of</p>	JSP to monitor the improvement of the fishermen's productivity and check their business "sustainability" in accordance with key indicator as per Table 2.

	the LRP for operation phase	
3 <sup>rd</sup> year (Q4 2021 to Q4 2022)	<p>A) JSP to provide supplemental support based on the monitoring result for 1<sup>st</sup> and 2<sup>nd</sup> year.</p> <p>B) JSP to implement LRP for operational phase in accordance with the findings and results in the survey in 2<sup>nd</sup> year</p>	JSP to summarize the whole 3 years program and consider further approach

For the operations phase, as required, JSP will extend and/or update the LRP in accordance with the monitoring and additional Fish Catch Survey results in the 2<sup>nd</sup> year of the program and the exact boundary of the “exclusive zone” for the Offshore Facilities. The fishery activities will be restricted only in “exclusive zone” around Offshore Facilities which will be identified based on the applicable regulation and final design of the facilities.

At least three months prior to the Commercial Operation Date, JSP will (i) have reviewed the overall monitoring results of the LRP implementation; (ii) establish a comprehensive engagement strategy; and (iii) prepare livelihood restoration plan for the continued engagement with Vulnerable Groups during project operations, which LRP might be integrated into the general CSR programs for operations phase as explained in the CDP.

## 5 Program alignment with JSP, Local Government and Community Priorities

The LRP for fishermen to be affected by Offshore Facilities will be aligned with the JSP vision/mission and engagement strategy developed in the CDP. It is also aligned with the local government policy that stipulates the economic development in the region.

## 6 Program Communication Plan

To leverage program impact, the LRP will be strategically communicated to related stakeholders, including using printed and electronic materials. The details of communication strategy and plan will be developed when the programs will be executed, in line with the CDP communication plan.

## 7 Budget for the Program

JSP is committed to ensuring timely availability of an adequate budget for successful implementation of the LRP. As such, an approximate amount of IDR 1,680,000,000 per annum (including the program which is applicable only to the 1<sup>st</sup> year) and IDR 4,450,000,000 (Approximately USD310,000) for 3 years is allocated to this program. JSP will further investigate the adequacy of the budget and will adjust the appropriate budget accordingly.

This budget will be used in line with the implementation and monitoring plan stated in Table 3.

In terms of budget for the operations phase, once JSP sets up the strategy and plan for a continued engagement with the Vulnerable Groups after construction period (3 months prior to commercial operation as stated Section 4 above), the new appropriate budget for another CDP (and LRP) will be developed and allocated for the operations phase.

**Table 4:** LRP Budget for yearly and total 3 years during construction phase

Programs	Budget per annum (IDR 000)	Budget for 3 years (IDR 000)
Providing of business tools, livelihood raw materials and/or business support facilities	600,000	1,800,000
Technical and soft skill training	550,000	1,650,000
Compensation of additional cost to impacted fishermen (*)	300,000	300,000
Project Management / Monitoring	150,000	450,000
Contingency	80,000	250,000
<b>Total</b>	<b>1,680,000</b>	<b>4,450,000</b>

(\*) Only for program for the 1<sup>st</sup> year