

# Analysis of The Social Innovation Program "Mamanda Village" In Balida Village, Balangan Regency the Year 2022

Aan Nurhadi\*, Heriyanto Andilolo\*, Muhammad Zulfadeli Rahman\*, M. Arief Munadi\*, Akhmad Fiteriyadi\*, Jatmiko Wicaksono\*, Andri Hamdani\*, Muhammad Azwar Ramadhani\*\*, Agung Wisnuwardana\*\*, Ajiddin Noor\*\*, Adinda Ainun Mardiah\*\*, Muhammad Lutfhan\*\*, Umi Salawati\*\*, Reza Agustian\*\*, Rio Rizky Kurniawan\*\*, Muhammad Safrie\*\*, Agus Maulana\*\*, Lenie Marlinae\*\*\*, Muhammad 'Azmi Ma'ruf\*\*\*

\*Corporate Social Responsibility PT Adaro Indonesia, Balangan

\*\*PT Jarank Sasat Tenteknika, Martapura

\*\*\*Faculty of Medicine, Lambung Mangkurat University, Banjarbaru

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**Abstract-** The "Mamanda Village (Independent & Empowered Community)" program is a form of community development carried out by PT Adaro Indonesia's CSR, which began in 2018. The Company seeks to change the mindset and behavior of the community with the Mamanda Village program. The Mamanda Village Program develops local cultural arts, eco-tourism, business development, and biodiversity development. These activities can absorb labor, develop local institutional capacity and improve the environment's quality. The Mamanda Village Program synergizes several significant potentials in Balida Village, such as active cooperation, the self-help pattern that is still growing, and the existence of local (endemic) plants. This average population is aware of education and high school graduates. The method used in this study is analysis with primary data in the form of in-depth interviews and Focus Group Discussions conducted on three elements, namely representatives from companies, governments, and Civil Social Organizations (CSOs), calculation of social return on investment (SROI) and secondary data from stakeholders. Interested. Based on qualitative analysis, the Mamanda Village Program has been based on the Vision, Mission, and Values as well as the Company's CSR Policy, Social Problems, Community Needs, and Local Potential, meets the element of novelty, is evident from the results of the transfer of knowledge and skills from the Company to the community (Core Competency), aligned with the Company's Life Cycle Assessment analysis, has a positive impact (creating market access, empowering vulnerable groups, Quantitatively, based on the calculation of the Social Return On Investment (SROI) ratio that has been carried out, it is known that for every 1 Rupiah invested, you get a benefit of Rp. 5.41 means that the value of the Mamanda Balida Village Program benefit is greater than the investment value. The payback period is short enough that for an investment of IDR 715,000,000, it will take only 6.65 months before a value equivalent to that investment is realized.

**Index Terms-** CSR, Mamanda Village, Balida Village, Adaro Indonesia

## I. INTRODUCTION

PT Adaro Indonesia is a limited liability company under the PT Adaro Energy, Tbk group of companies. PT Adaro Indonesia's coal mining activities have started since the signing of the IUPK (Special Mining Business

Permit) Number SK 11/1/IUP/PMA/2022 on September 13, 2022, with an area of 23,942.00 Ha. Looking at the strategic aspects and values of Coal produced since 2007, PT Adaro Indonesia has become one of the National Vital Objects (OBVITNAS). It was confirmed by the

Minister of Energy and Mineral Resources No. 1762 K/07/MEM regarding the Protection of vital national objects in the Energy and Mineral Resources Sector at PT Adaro Indonesia. The mining locations are in Tabalong Regency and Balangan Regency, South Kalimantan Province.

The mining industry must implement community empowerment programs to benefit the environment and socio-economic community around the mine. So, in addition to carrying out production operations, coal companies also carry out corporate social responsibility activities, also known as Corporate Social Responsibility (CSR), by creating unique programs in the community based on resources owned by the region. It is carried out to provide positive feedback to the community around mining operations, which are directly or indirectly affected to increase independence and welfare in terms of environmental, economic, and social aspects.

Along with business activities that are in the midst of society with all its dynamics, the Company's awareness arises to be involved in community life as a corporate social environment, namely through the implementation of Corporate Social Responsibility (CSR) which is increasing from time to time, not only because of the existence of corporate social responsibility. Juridical demands with the presence of laws and regulations governing the implementation of CSR, but also because of the Company's desire to participate in creating sustainable development goals through various CSR programs carried out by the Company together with the surrounding community so that the Company gets social benefits in the form of trust (trust) for community acceptance. It implements programs that are the community's needs in building independence [1].

The Mamanda Tourism Village Program is a form of PT Adaro Indonesia's CSR community development which started in 2018. The Mamanda Tourism Village (Advanced and Empowered Community) is an integrated program that aims to solve village problems around the operational area through increased participation in sustainable community empowerment following the potential village by prioritizing the role of BUMDes. The Mamanda Village Program in Balida Village has carried out village tourism activities since 2019 through the development of the Racah Ablelang Cultural Market with the attraction of traditional arts through cultural market events, educational tours through endemic flora conservation, and family tourism facilities. This program has positively impacted the socio-economic context of

the community, where residents who are members of the Tourism Awareness Group formed from BUMDes have received additional income since the Racah Capablelang Cultural Market on January 21, 2020, by the Balangan Regency Government. In addition to regional art performances, the Racah Kalianlang cultural market also provides an excellent opportunity to improve the economy of local MSME business actors.

The Mamanda Balida Village Program, through racah bisalang tourism, also contributes to the environment through rice field tours with a 350-meter bamboo bridge in the cultural market area, conservation of 20 endemic tree species, and seven bamboo variants.

Based on PT Adaro Indonesia's Rapid Environmental Assessment on Disaster Study, the Mamanda Village Program is one of the programs that PT Adaro Indonesia continues to foster disaster sensitivity for the empowerment of small and medium enterprises (SMEs) in the Company's operational areas with a focus on racah bisalang tourism which can be a source of improvement in the community's economy after COVID-19.

The Corporate Social Responsibility (CSR) program in implementing sustainable development plays an important role. First, CSR program shows the concern of the Company to participate in thinking and developing the community both in terms of the social empowerment program and in terms of setting aside part of the Company's profit funds that are intended for empowering programs. Second, the CSR program shows the Company's participation in preserving the environment when exploiting and exploring natural resources so that the Mamanda Village program supports the SDGs Indicators.

Based on the results of research on the implementation of PT Adaro Indonesia's Corporate Social Responsibility Program as a Community Empowerment Effort, it is stated that the success of the CSR Program implementation has a high enough level, as evidenced by the Company's awareness that the programs provided must be able to empower and encourage community independence. The CSR team innovates and continues implementing programs tailored to the community's needs to realize each program sustainably. To minimize program failures, the CSR team conducts research first before implementing and continuing program planning [2].

## II. RESEARCH METHODS

### a. Social Innovation Study

#### 1. Primary Data

The primary data was an In-depth Interview and Focus Group Discussion (FGD). In-depth interviews were conducted with three elements, namely representatives from companies, government, and Civil Social Organizations (CSOs), to obtain qualitative data related to the positive Impact of the Mamanda Village Program based on community needs. The program can solve community social problems, increase community capacity, create roles and relationships in social life, in developing community capacity, in providing environmental impact, in providing economic impact, in delivering health impacts, in producing assets and human resources (HR), and in the sustainability of the Community Development Program. FGDs were conducted on three elements, namely representatives from companies,

#### 2. Secondary Data

The data is related to PT Adaro Indonesia's 2018 Operational Village Social Mapping document, Life Cycle Assessment (LCA) Document, Eco-Innovation Bamboo Conservation Program Document, Rapid Environmental Assessment on Disaster (REAOD) Document, and SDG's Indicator Document.

### b. Study of Social Return On Investment (SROI)

SROI was developed from social accounting and cost-benefit analysis (cost-benefit analysis). SROI places a monetary value on social benefits and then compares the benefits received by the public and private to the costs incurred.

### c. Analysis Type

Evaluative, carried out retrospectively and based on actual results that occurred during 2019 – 2022.

### d. Formulation

$$\text{SROI} = \frac{\text{Net Present Value of Benefits}}{\text{Net Present Value of Investment}}$$

### e. Study Parameters

This research was conducted concerning the SROI measurement methods, principles, and guidelines initiated by The SROI Network UK. These phases are by setting the scope and identifying stakeholders, mapping the outcomes of each stakeholder, setting indicators and values for each product, fixing impacts, calculating SROI, and reporting SROI.

### f. Principles of Analysis

The principles of analysis of the Social Innovation Study and SROI are as follows:

1. Engaging Stakeholders;
2. Understand what changed;
3. Give value (Rp) to the essential things;
4. Include only significant relevant changes;
5. Don't claim changes are too different (deadweight, attribution, displacement, drop off);
6. Transparent;
7. Verify calculation results.

In the analysis should also pay attention to the following:

1. Measuring the magnitude of the impact that is the result of the Organization's activities to reduce the risk of over-claiming;
2. Positive impact = (outcomes) – (deadweight, attribution, drop off, displacement);
3. Deadweight: any changes that will happen without you doing any intervention/activity or not;
4. Attribution: changes obtained from the intervention of other parties;
5. *Drop off*: calculate how much the effect of the activity will decrease over time;
6. *Displacement*: occurs when the benefits obtained are at the expense of others outside the program.

### g. Data collection

Data collection was carried out primarily through semi-structured interviews using the funnel technique. Namely, the interview pattern was arranged as a funnel or funnel.

### h. Research Respondents

The study respondents consisted of 3 elements: the government, elements of civil society organizations (CSOs), and elements of companies.

### III. RESULTS

#### Introduction to environmental conservation

Racah Capablelang Tourism introduces environmental conservation in the form of 20 endemic tree species with a total of 549 trees, including:

Table 1. Types of Endemic Trees

No	Local Name	Latin name	Number of Plants
1	Iron / Iron Wood	<i>Eusideroxylon zwageri</i>	5
2	Agarwood	<i>Aquilaria malaccensis</i>	5
3	Maranti	<i>Shorea sp</i>	20
4	Sungkai	<i>Peronema canescens</i>	40
5	Kalangkala	<i>litsea angulata</i>	5
6	Ramania	<i>Bouea macrophylla</i>	5
7	maritime	<i>Naphelium Ramboutanake</i>	4
8	Binjai	<i>Mangifera caesia</i>	5
9	Papakin	<i>Lahia kutejensis</i>	10
10	Durian	<i>Durio sp</i>	10
11	Rambai	<i>Baccaurea motleyana</i>	10
12	Langsat	<i>Lansium domesticum</i>	20
13	Nets/Jengkol	<i>Archidendron pauciflorum</i>	100
14	Mangosteen	<i>Garcinia mangostana L.</i>	10
15	Crystal Guava	<i>Psidium guajava</i>	50
16	Soursop	<i>Annona muricata</i>	50
17	Pucuk Merah	<i>Syzygium Oleana</i>	50
18	Trobesi	<i>Samanea Saman</i>	50
19	Eucalyptus	<i>Melaleuca leucadendra</i>	50
20	Ketapang	<i>Terminalia catappa</i>	50
<b>Amount</b>			<b>549</b>

In addition, there are also seven varieties of bamboo planted with a total of 360 bamboo trees, including the following:

Table 2. Types of Bamboo Trees

No.	Local Name	Latin name	Number of Plants
1	Paring Manis	<i>Bambusa sp</i>	200
2	Betung	<i>Dendrocalamus asper</i>	20
3	Haur	<i>Bambusa tuldoides</i>	10
4	Jakarta Bamboo	<i>Gigantochloa atter</i>	40
5	Chinese Bamboo	<i>Bambusa multiplex</i>	40
6	Paring Rope	<i>Gigantochloa smear</i>	40
7	Yellow Reed	<i>Bambusa vulgaris</i>	10

Table 3. Potential of Bamboo Stands on the Halong Riverbank

No	Types of Bamboo	D(cm)	Y'	Y''	X'	X''	Y'''
1	Local bamboo	12.7	9	9	1	19	167
2	black bamboo	14.3	6	6	1	19	122
3	Thai bamboo	12.3	9	9	1	10	90
4	Yellow haur bamboo	13.2	5	5	1	18	82
5	Green haur bamboo	14.1	6	6	1	20	125

Table 4. Calculation of Biomass Sampling and Carbon Stock of Bamboo Stands on the Halong Riverbank

No	Types of Bamboo	Biomass			Carbon		
		Per reed (kg)	Total (kg)	Per hectares (kg/ha)	Per reed (kg)	Total (kg)	Per Hectares (kg C/ha)
1	Local bamboo	5.4	31,583.9	136.7	2.5	14,844.4	1,427.3
2	black bamboo	3.1	1,285.5	5.6	1.5	604.2	58.1
3	Thai bamboo	3.1	3,912.0	16.9	1.5	1,838.7	176.8
4	Yellow haur bamboo	1.2	658.5	2.8	0.6	309.5	29.8
5	Green haur bamboo	0.2	201.0	0.9	0.1	94.5	9.1

Table 5. Estimated Biomass and Carbon Stock of Bamboo Stands (30,000 Clumps) in the Tabalong Watershed (DAS) in Halong Village, Kuranji Hamlet, Tanta, Karangan Putih, Masukau and Sulangai

No	Local Name	Latin name	Amount Seed plant	Biomass (W)	Carbon Stock (Tons)	Price Conversion Value (Rp)*
1	black betung	<i>Dendrocalamus asper</i>	5600	415,17	1,092.73	1,558,841,835.65
2	Thai betung	<i>Gigantochloa atter</i>	2600	564.21	689.46	983.555.133.48
3	Haur	<i>Bambusa tuldooides</i>	8000	400.18	1,504.68	2,146,509,609.79
4	Chinese Bamboo	<i>Bambusa multiplex</i>	6500	470.09	1,436.12	2,048,712,965,13
5	Yellow Reed	<i>Bambusa vulgaris</i>	7300	546.38	1,874.61	2,674,247,712.75
<b>Amount</b>			<b>30000</b>	<b>2,396.02</b>	<b>6,597.60</b>	<b>9,411,867,256.81</b>

Table 6. Calculation of Carbon Stock in Endemic Trees

No	Local Name	Latin name	Number of Plants	Specific gravity*	Bio-mass	Carbon Stock	Price (Rp)
1	Iron / Iron Wood	<i>Eusideroxylon zwageri</i>	5	1	7,459	0.018	25,074,315
2	Agarwood	<i>Aquilaria malaccensis</i>	5	0.45	3,357	0.008	11,283,442
3	Maranti	<i>Shorea sp</i>	20	0.86	6,415	0.060	86,255,644
4	Sungkai	<i>Peronema canescens</i>	40	0.53	3,953	0.074	106,315,096
5	Kalangkala	<i>litsea angulata</i>	5	0.45	3,357	0.008	11,283,442
6	Ramania	<i>Bouea macrophylla</i>	5	0.85	6,340	0.015	21,313,168
7	maritime	<i>Naphelium Ramboutanake</i>	4	0.54	4,028	0.008	10,832,104
8	Binjai	<i>Mangifera caesia</i>	5	0.45	3,357	0.008	11,283,442
9	Papakin	<i>Lahia kutejensis</i>	10	0.65	4,849	0.023	32,596,610
10	Durian	<i>Durio sp</i>	10	0.58	4,326	0.020	29,086,205
11	Rambai	<i>Baccaurea motleyana</i>	10	0.67	4,998	0.023	33,599,582
12	Langsat	<i>Lansium domesticum</i>	20	0.45	3,357	0.032	45,133,767
13	Nets/Jengkol	<i>Archidendron pauciflorum</i>	100	0.58	4,326	0.203	290,862,055
14	Mangosteen	<i>Garcinia mangostana L</i>	10	0.67	4,998	0.023	33,599,582
15	Crystal Guava	<i>Psidium guajava</i>	50	0.75	5,594	0.131	188,057,363
16	Soursop	<i>Annona muricata</i>	50	0.46	3,431	0.081	115,341,849
17	Red Top	<i>Syzygium Oleana</i>	50	0.76	5,669	0.133	190,564,795
18	Trobes	<i>Samanea Saman</i>	50	0.48	3,580	0.084	120,356,712
19	Eucalyptus	<i>Melaleuca leucadendra</i>	50	0.76	5,669	0.133	190,564,795
20	Ketapang	<i>Terminalia catappa</i>	50	0.59	4,401	0.103	147,938,459
<b>Amount</b>			<b>549</b>		<b>93,464</b>	<b>1,189</b>	<b>1,701,342</b>

Table 7. Value of Benefits of PT Adaro Indonesia's Mamanda Balida Village Program

No	Program Benefit Value		Total	%
<b>1</b>	<b>Environment</b>			
	<input type="checkbox"/>	Increased carbon stock (carbon stock) from endemic tree planting activities	11523.132	0.3%
<b>2</b>	<b>Economy</b>			
	<input type="checkbox"/>	Income from renting a place to sell MSMEs	32,611,093	0.8%
	<input type="checkbox"/>	Earn income from the sale of visitor admission tickets	113.671.572	2.9%
	<input type="checkbox"/>	Income (turnover) from the sale of products sold in the Tourism Village	421.752.145	10.9%
	<input type="checkbox"/>	Earn income from ticket sales revenue sharing	2,568,140	0.7%
	<input type="checkbox"/>	Earning income from performing arts in Mamanda Balida Village	28,417,893	0.1%
	<input type="checkbox"/>	Income from Mamanda's tourism management technical support	102.712.744	2.6%
	<input type="checkbox"/>	Get additional income from renting farmland	16,929,114	0.4%
	<input type="checkbox"/>	Earning income from the construction of Mamanda Balida Village	39,619,426	1.0%
	<input type="checkbox"/>	Increased ease of access to tourist attractions	152.177.816	3.8%
	<input type="checkbox"/>	Increasing Village Original Income	14,628,266	0.4%
<b>3</b>	<b>Social</b>			
	<input type="checkbox"/>	Changes in the mindset of MSME actors about the importance of tourism service skills	32.101.752	0.8%
	<input type="checkbox"/>	Improved service skills for tourists	17,976,981	0.5%
	<input type="checkbox"/>	Get referrals for unique and interesting village management models with multi-stakeholder collaboration	598,358,232	15.1%
	<input type="checkbox"/>	Have a sense of pride in being a resident of Balida Village after the fame of Mamanda Balida Balida Village	1,913,264.443	48.4%
	<input type="checkbox"/>	Obtain unique and interesting news material with the Mamanda Balida Village Program	2,334,946	0.1%
	<input type="checkbox"/>	The decrease in complaints/demos from the Balida community regarding the Company's operational issues	422,268,744	10.7%
	<input type="checkbox"/>	Increased public awareness of the Mamanda Balida Balida Village Program as a tourism village fostered by Adaro Indonesia.	21,368,822	0.5%
<b>Amount</b>			<b>3,868,531,863</b>	<b>100%</b>

#### IV. DISCUSSION

##### 1. Program Based on the Vision, Mission and Values , and CSR Policy of PT Adaro Indonesia

An essential vision as the embodiment of a leading company is to realize corporate social responsibility and obtain a social license to operate. The Company's mission to develop rural communities in Indonesia is currently using the IDM (Developing Village Index) benchmark, in which there are IKS (Social Performance Index), IKE (Economic Performance Index), and IKL (Environmental Performance Index). Currently, Balida Village is in the category of a Developing Village. Many things must be improved to become an Advanced and Independent Village. The state of Indonesia is currently intensively increasing the value of the HDI (Human Development Index). The Mamanda Village Program is part of PT

Adaro Indonesia's contribution to support efforts to increase HDI.

One of the Mamanda Village Program's activities is environmental conservation by planting and maintaining 20 endemic tree species and seven bamboo varieties to strengthen reforestation, reduce erosion rate, and benefit the carbon stock. This activity is a form of PT Adaro Indonesia's concern for environmental sustainability.

The Corporate Social Responsibility (CSR) program in implementing sustainable development plays an important role. The CSR program shows the concern of the Company to participate in thinking and developing the community, both in terms of social empowerment programs and in terms of setting aside part of the Company's profit funds that are intended for empowering programs. The CSR program shows the Company's

participation in preserving the environment when exploiting and exploring natural resources.

## **2. Programs Based on Social Problems, Community Needs, and Local Potential**

Based on the Balida Village Social Mapping document conducted in 2019, there were several personal and structural social problems. Besides that, there is also related potential. Based on this, the Mamanda Village Program is part of the solution to social issues, and a means to develop existing potential. The Mamanda Village Program develops local cultural arts, eco-tourism, business development, and biodiversity development. These activities can absorb labor, develop local institutional capacity and improve the environment's quality.

The Mamanda Village Program synergizes several significant potentials in Balida Village, such as active cooperation, the self-help pattern that is still growing, and the existence of local (endemic) plants. This average population is aware of education and high school graduates. Some of these essential potentials are combined in building Mamanda Village to solve several personal and structural social problems.

### **3. The Novelty Element of Social Innovation**

#### **a. New things implemented in Balida Village**

##### **• Environmental Conservation**

Racah Capablelang Tourism introduces environmental conservation in the form of 20 endemic tree species with a total of 549 trees. The types of trees planted in the Racah Capablelang Tourism area are local vegetation types to support biodiversity and reduce global warming with carbon stocks (carbon emissions absorption) that can be absorbed by plants planted in Mamanda Village, Balida Village of 1,189 Tons. In addition, seven varieties of bamboo are grown with a total of 360 bamboo trees.

##### **• Educational Outbound rides**

Racah Ablelang Tourism introduces educational outbound rides with children's dexterity arenas, shipwreck playgrounds, creative educational toy arenas, and a 48-meter-long rope bridge between trees to support creativity, increase adrenaline and support the development of tourists' motor skills.

##### **• New Innovations in Social Entrepreneurship**

The Mamanda Village Program shows innovations in social entrepreneurship by developing various village potentials to solve social problems in Balida Village. This program provides an opportunity for the community to be involved as business actors,

both local Food and Beverage MSMEs, Handicraft MSME actors, and so on in tourist locations as an alternative solution for people who have difficulty getting jobs.

##### **• Windmill Attraction (Circle/Cup)**

The Mamanda Village Program also has an attraction in the form of thousands of colorful windmills installed in front of the location of the Racah Ablelang Cultural Market. The installed windmill is made of waterproof material so that it can last a long time as one of the components that attract the attention of tourists when entering the tourist area.

#### **b. Applied in a New Way**

##### **• A New Way of Packaging Travel**

Making the rice fields a tourist attraction with ten attractive photo spots, a 350-meter bamboo bridge around the rice fields, a viewing tower with a height of 7.5 meters to monitor rice field tours, and a cafe/bar in the middle of the rice fields where previously the rice fields were only used for rice cultivation. In addition to rice fields tourism, in the Racah Ablelang tourist area, there is also local vegetation in the form of 20 endemic flora types with a total of 549 trees and seven bamboo varieties planted with a total of 360 trees which help in absorbing carbon emissions so that they make a positive contribution in facing global warming.

##### **• A New Way to Enjoy Coffee With a Rice Field Tour**

A cafe in the middle of the rice fields that sells a variety of drinks and food from the traditional to the contemporary supports the habits of young people in the modern era who tend to like relaxing activities while enjoying coffee to increase productivity and find inspiration, supported by the delicate nuances of the rice fields, making it an added value in tourist sites.

#### **c. Elements of Originality and Unique**

##### **• Utilization of Bamboo as the Main Material for Tourist Spots**

In the Mamanda Village program in Balida Village, Bamboo is the primary material in tourist spots in the Racah Ablelang Cultural Market area, where this utilization is realized in the form of making the main stage for Banjar cultural arts performances. This bamboo bridge surrounds a 350-meter-long rice field, a viewing tower, poles lanterns, stalls selling MSME products, cafes in the middle of rice fields, interesting photo spots, gates, coin exchange counters, public

toilets, the primary material for windmills and the main material for making pinishi boats.

- Independent Banjar Cultural Arts Performance

The existence of the Racah Ablelang Cultural Market presents Banjar cultural arts performances carried out independently by the Balida Art Studio and in rural areas. *The various staged cultural arts are wayang gong, kuntu, panting music, gipang horses, and dance (Mandi-Mandi dance and begandah nyiru).*

- Biodiversity

The Mamanda Village Program in Balida Village presents an element of originality and uniqueness in supporting biodiversity and reducing global warming with the presence of local vegetation in the form of 20 endemic flora species totaling 549 trees and seven bamboo varieties planted with 360 trees contributing to the absorption of carbon emissions.

- Unique Buying and Selling Transaction Method

Existence, The Racah Ablelang Cultural Market also presents a typical Banjar rural culinary market with shopping transactions using racah coins. This method is unique because to make a transaction; tourists are required to exchange rupiah for coins made of wood first. The process of exchanging racah coins is carried out at the counter available at the Racah Ablelang Cultural Market. Coins that can be exchanged for rupiah have two versions: a square shape worth IDR 2000 and a round shape worth IDR 5000.

#### 4. Elements of Main Competency (Core Competency)

##### a. There is a transfer of knowledge and skills of the Company's Core Competencies

Elements of social innovation core competency can be seen from three indicators, namely 1) transfer of knowledge or core competency skills; 2) developed based on the analysis of the interpretation of the life cycle impact assessment; and 3) have elements of sensitivity and responsiveness to crisis conditions in the community due to disasters.

- Knowledge or Skills Transfer Indicator

The roles of transfer of knowledge or skills conveyed are:

##### a) Bamboo Cultivation Training starts from planting and caring for post-harvest processing of bamboo products into financial products for the Balida Community, which manages the Racah Ablelang Tourist Spot.

- b) QR Code (Barcode)-based local vegetation identification training to facilitate local vegetation education for the general public via mobile phones.
  - c) Provide additional local Vegetation collections that have the potential to be developed at the Racah Ablelang Tourist Spot to enrich Biodiversity in Balida Village.
  - d) Together with the Balida Community, they planted Local Vegetation in Balida in the form of endemic flora, including bamboo.
  - e) Facilitating visits/Comparative Study of Australian Newcastle Students to Balida to learn about post-mining patterns and community empowerment programs by Adaro Indonesia in Balida Village, especially about local culture and vegetation developed in Balida Village.
  - f) Institutional assistance and village tourism management.
  - g) Physical construction assistance for processed bamboo products for tourist spots at the Racah Ablelang Cultural Market, such as the construction of bamboo bridges, flyovers, art stages, and others.
  - h) Assistance in the management of household waste around the Racah Ablelang tourist spot.
  - i) Help change people's behavior to be more environmentally friendly and maintain the COVID-19 protocol, one of which is by shopping using coins at the Racah Ablelang Cultural Market.
  - j) Mobilizing various elements of society such as Bumdes, Pokdarwis, Youth Organizations, PKK, Children's Forums, and other details to be actively involved in the Racah Ablelang Cultural Market.
  - k) Facilitate making promotional media through social media on Instagram, Facebook, and Youtube so that the wider community increasingly knows this tourist spot.
  - l) Facilitating the Mamanda Village Program to gain recognition from independent parties at the national level.
- ##### b. Relationship of Life Cycle Assessment (LCA) with Mamanda Village Program

Based on the 2022 LCA study, the largest processing units for the Impact of Global Warming Potential are the OB stripping, hauling, and dumping process units at 53.3%, coal hauling PIT to ROM at 13.7%, and coal processing & loading at 3.6%,

resulting from the use of large amounts of fuel. Adaro has implemented a net zero emissions program through energy management ISO 50001:2018, energy audits, and an energy efficiency eco-list program in process units that are hotspots.

Through the community empowerment program, Adaro started the carbon offset program by developing bamboo plants in the community. In 2012, Adaro began trying to provide socialization to the community about the importance of bamboo plants for environmental sustainability. Based on the results of the Adaro Team's assessment together with the Tabalong Regional Government, Adaro conducted community development to be able to produce bamboo seedlings.

In 2019, Adaro continued community development in the context of environmental conservation. The Mamanda Village (Independent and Empowered Community) program is implemented in Balida Village, Paringin District, Balangan Regency, South Kalimantan. Adaro is trying to solve village problems around the Company's operational area by increasing participation in sustainable community empowerment through the environmental potential in the village by prioritizing the role of Village-Owned Enterprises (Bumdes). The Mamanda Village Program in Balida Village carries out village tourism activities through the development of the Racah Ablelang Cultural Market with the attraction of traditional arts through cultural markets, educational tours through the conservation of various endemic flora variants, and family tourism facilities.

Racah Ablelang has a bamboo tour in the form of a bridge that is 350m long and has 10 photo spots made of the primary material of bamboo. There is also a viewing tower with a height of 7.5 meters to monitor rice fields; there is a cafe/bar in the middle of the rice fields that sells a variety of drinks and food from the traditional to the contemporary.

The use of bamboo is dominant in the Mamanda Village program, especially in the Racah Ablelang Cultural Market. Adaro and the community develop bamboo cultivation in tourist spot areas for the main function of reforestation and the ease of obtaining bamboo raw materials if there is a need in the Cultural Market. So far, seven varieties of bamboo have been cultivated, namely paring sweet bamboo, betung bamboo, haur bamboo, Jakarta bamboo, china bamboo, paring tali bamboo, and yellow reed bamboo. In addition, there are already more than 30 types of

endemic flora that have been cultivated previously, such as Langsat, Durian, Pampakin, Rambutan, Rukam, Sangkuang, Tatap, Ginalon, Guava, Chocolate, Coffee, Rumbia, Hanau, Mangosteen, Ketapi, Binjai, Tandui, Sangkuang, Rambai, Rania, Level, Kulipisan, Hampalam, Hambawang, Kueni, Taraf, Kulipisan, Kapok, and Jengkol. Based on the environmental analysis that has been carried out of the many vegetation that has been developed in the Mamanda Village Program, it can contribute to the Carbon Offsite. The ability to absorb carbon emissions from 20 species of trees and seven types of bamboo is 9,885 tons of carbon stock with a total price of around Rp. 14,140,483,241.

The availability of carbon stocks (carbon sequestration) that can be absorbed by plants grown in Mamanda village, Balida village is 1,189 tons, which when converted to world carbon prices (European Union standard is 96 Euros or equivalent to Rp. 1,430,431.68), then the benefit value is Rp. 1,701,342,426,- (One million seven hundred one three hundred forty-two, four two six rupiahs).

#### c. Program Link with Eco-Innovation

Some of the changes made as eco-innovation are subsystem changes by planting bamboo species. Prior to the innovation, revegetation activities in the post-mining area used Legume Crop Cover (LCC) plants, fast-growing plants, and insert plants and did not use bamboo plants as Non-Timber Forest Products (NTFPs) with flexible and elastic stem properties, cruising range of roots that are many roots and economic value.

Several Eco-Innovation programs in the document "Improvement of Diversity & Bird Habitat in Post-Mining Land on Bamboo Vegetation" were also carried out in Balida Village, including Bamboo Cultivation Training starting from planting, care to process post-harvest bamboo products into financial products to the Balida Community, construction assistance physical materials for processed bamboo products for tourist spots at the Racah Ablelang Cultural Market such as the construction of bamboo bridges, flyovers, art stages, and others.

#### d. Elements of Sensitivity

Some of the REAOD implementations of the Mamanda Village program, namely currency exchange tools that were replaced using racah coins at the Racah Ablelang Cultural Market, Providing business capital assistance for the development of the Racah Ablelang Cultural Market by implementing the COVID-19

protocol, the Company providing aid to local MSMEs for the production of sasirangan cloth masks three layers so that MSMEs can survive during the COVID-19 pandemic, planting bamboo trees in the village of MAMANDA Balida to preserve the environment and increase carbon absorption.

e. Responsiveness to Critical Conditions in Society

The intervention of environmental conservation activities by planting 20 endemic tree species and seven bamboo varieties has produced carbon stock that is able to absorb carbon emissions of 9,885 tons of carbon stock with a total price of around Rp. 14,140,483,241 and will be even more significant in the future. This will help improve air quality and contribute to climate improvement. Future developments will have the potential to absorb water so that it will increase groundwater reserves and also the ability to withstand the rate of erosion so as to reduce the chance of disaster in Balida Village.

## 5. Elements of Social Innovation Status

The sustainability of the Mamanda Village Program's social innovation can be seen from the management capacity and supported by market opportunities for tourist visits. The power of tourism management under the Balida Village BUM, Pokdarwis, Balida Art Studio, and Village Children's Forum is an essential reinforcement for program sustainability because this capacity allows tourism management to run well, including creativity and innovation.

a. Sustainability Indicator

The Mamanda Balida village program, in terms of Mastery of program management techniques and institutional capacity building, is the principal capital for the sustainability of the program, then added unique types of tourism that do not yet exist in the area and information that has spread is an essential factor in the opening of the tourist visit market and management capacity—and supported by market opportunities for tourist visits to provide good sustainability value for the program. With the formation of the mamanda village program, the village BUM Institution becomes the leading manager of the Tourism Village, which embraces various village elements so that the community feels welcomed and protected, which results in more harmonious social conditions that become the capital start for sustainability.

b. Indicators of Scaling/Replication

Replication of the program or part of the activities of Mamanda Balida Village occurs in the form of replicating the concept of a tourist village to Padang Panjang Tourism Village (Laburan Park Padang Panjang) and Jaro Tourism Village (Jaro Village Embung Sawah Tour, 2. Scaling also emerged when Balida Village became a center for Banjar culture education for local and international communities.

c. Systemic Change Indicators

The systemic changes that occurred in Balida Village with the Mamanda Village Program were also evident in changing mindsets, changing behavior, increasing personal and institutional capacity, increasing income, increasing job opportunities, increasing social roles in the community, and increasing the village's original payment. This is certainly different from the conditions before the program intervention, which experienced limitations in terms of capacity and income.

d. The Massive Impact of the Mamanda Village Program

The Mamanda Village Program has a massive impact on the environmental, social, and economic aspects of the Mamanda Village Program. One of the enormous impacts that have a significant effect on environmental elements is the contribution to the handling of global warming through conservation activities of planting endemic trees and several bamboo varieties that have an impact on carbon sequestration.

The massive impact that significantly influences the social aspect is the number of job opportunities or opportunities for the community to be involved in the Mamanda Village Program so that they are able to overcome social problems for people who have difficulty finding work. The massive impact that has a significant effect on the economic aspect is the opening of opportunities for MSMEs to market their products so that they can support the increase in daily income.

## 6. Positive Impact of the Mamanda Village Program

#### a. Programs Can Create Market Access

The mamanda village program does not only have a direct impact on government organizations and organizations in the community. With the existence of Mamanda Balida Village, various activities have emerged in it, such as developing local cultural arts, eco-tourism, local business development, and biodiversity development. These activities are able to absorb labor, develop local institutional capacity and contribute to improving the quality of the environment. Therefore market access and new jobs have been created for the community, which are indeed very helpful in meeting the needs of life. In terms of sustainability, the Mamanda Balida Village Program can also be seen from the management capacity and supported by market opportunities for tourist visits. Tourism management capacity under the Balida BUMDES, POKDARWIS,

#### b. Programs Can Create New Opportunities/Jobs for Local Communities

After the program intervention, members of MSME actors receive tourism service training so that they are able to participate in tourist services and improve service quality in Tourism Villages. with an income of IDR 100,000 per day, members of MSME actors receive tourism service training so that they are able to participate in tourist services and improve service quality in Tourism Villages. with an income of IDR 350,000 per piece, income earned by local builders from the development process of Racah Capableang Tourism with a gain of IDR 100,000 per day, income earned by artists from performances at Wisata Racah Ablelang with an income of IDR 50,000 per person, services obtained from involvement with income Rp 15,000-20,000 per person, services obtained on the participation with income Rp 15,000-20,000 per person,

#### c. Programs can empower vulnerable communities

The mamanda village program also contributes to improving the welfare of vulnerable groups around the program area. This is due to the duplication of programs in several areas, namely through the process of transferring knowledge and

skills from PT Adaro to the surrounding communities in need. PT Adaro's social care does not recognize people's backgrounds and regions. Share information both in person and online. Some of them include vulnerable groups, namely poor households, the unemployed, and orphans, as noted.

#### d. Programs Can Improve Capabilities and Cohesiveness of Vulnerable Communities (Marginal Communities)

The existence of the mamanda balida village has increased the capacity of the Balida village community. Currently, the number of community elements in Balida village has increased from 3 organizations to more than six organizations involved in the program. The district also has the ability to provide friendly services for tourists. Another ability that is increasing is the ability in the field of entrepreneurship. The community is creative in creating products that can be used as souvenirs by tourists visiting Mamanda village. Balida village has excellent product SMEs such as rattan and bamboo handicrafts in the form of miniature phinisi boats and Madu kelulut, which collaborate with various elements of society.

#### e. Programs Can Create Social Transformation in Society

- PT Adaro Indonesia has a core competency of business in the coal mining sector, which in its operational activities has an obligation to carry out reclamation and post-mining activities. Therefore, the Company already has competent Human Resources (HR) in the development of reclamation within the scope of restoring the initial post-mining ecosystem.
- The Company also has human resources in the field of CSR, who have competence in community and institutional development
- HR competencies owned by the Company are actively involved in coaching and mentoring the Mamanda Village Program
- There has been a transfer of knowledge or skills from PT Adaro Indonesia to stakeholders of the Mamanda Village Program.

- After holding training on bamboo planting by PT Adaro so that the community participates in planting bamboo and caring for endemic trees as a form of concern for the environment and now there is the planting of 20 endemic tree species and seven types of bamboo, which is a form of carbon offset as an effort to reduce global warming potential impacts of the Company's operations, currently there are 467 endemic trees and 350 bamboo trees that are growing healthy and have been able to absorb carbon.
  - The mamanda village program by PT Adaro in which there is a Racah Ablelang Cultural Market with the presentation of a Banjar cultural art performance which is carried out independently by the Balida Art Studio accompanied by a typical Banjar rural culinary market with shopping transactions using racah/coin (each coin is worth: square shape Rp. 2000 IDR 5000) to make it easier to calculate, manage finances, change people's behavior to be more environmentally friendly and maintain the Covid-19 protocol.
  - The Mamanda Village Program provides benefits not only to those directly involved in the program (such as the Balida Art Studio, MSMEs, Pokdarwis, and BUM Desa) but also has a positive impact on many stakeholders (such as the Balida Village Government, Village Children Forum, Balida Village community, tourists). Local, environmental, and PT Adaro Indonesia).
  - The local community can change the rhythm of the social life of the people who used to live relying on the agricultural sector with limited communication between individuals, so now the community is busy with tourism activities to meet their needs and for tourists, so that there is a change in lifestyle, dress and better communication.
  - After the waste education in Mamanda village, there was awareness in the surrounding community about the importance of the impact of waste, and now people throw garbage with tourism activities into one place in the garbage dump that has been made by Mamanda village itself.
- f. Programs Can Create New Roles And Relationships In People's Social Life
- Balida Village BUMDes-POKDARWIS Balida Village: Balida Village BUMDes play a role in managing businesses, utilizing assets, developing investment and productivity, providing services, and providing other businesses for the welfare of the Balida village community in its application to the Mamanda Village Program assisted by the Balida Village POKDARWIS so that the implementation process in the management of Racah Ablelang tourism can run optimally.
  - Youth, Sports, and Tourism Office-POKDARWIS Balida Village: The Youth, Sports and Tourism Office of Balangan Regency establishes a cooperative relationship with the Balida Village POKDARWIS in promoting and monitoring Racah Ablelang tourism so that the potential for tourist visits can increase on a regular basis.
  - The Land and Environment Office of Balangan Regency-POKDARWIS Balida Village: The Balangan Regency Land and Environment Office have established a cooperative relationship with the Balida Village POKDARWIS to monitor endemic tree vegetation as a form of support for the Mamanda Village program, which has a positive contribution to carbon emission absorption through the program conservation of several bamboo varieties and 20 endemic flora species developed in Balida Village.
  - BUMDes Desa Balida-UMKM Desa Balida (local and non-regional SMEs): BUMDes Desa Balida establishes a cooperative relationship with the SMEs in Desa Balida to carry out product marketing activities in stalls available in the Racah Ablelang Cultural Market area.
  - Rice Land Owners-POKDARWIS Balida Village: Rice Field Owners have a cooperative

relationship with Balida Village-POKDARWIS to rent out their rice fields so that they can be managed as ecotourism-based rice field tourism spots.

- Rice Land Owner-Balida Village Government: Rice Field Owners establish a cooperative relationship with the Balida Village Government to rent out their rice fields so that they can be managed as ecotourism-based rice field tourism spots as well as coordinate the legality of cooperation.
- PT Adaro Indonesia-Local Government of Balangan Regency: PT Adaro Indonesia cooperates with the Regional Government of Balangan Regency to realize the Mamanda Village Program in Balida Village by building a partnership pattern to be able to increase the potential of local tourism in Balangan Regency.
- PT Adaro Indonesia-Balida Village Head: PT Adaro Indonesia collaborates with the Balida Village Head to realize the Mamanda Village Program in Balida Village by building a partnership pattern to be able to increase the potential of local tourism in Balida Village.
- PT Adaro Indonesia-BUMDes Desa Balida: PT Adaro Indonesia establishes a cooperative relationship with BUMDes Desa Balida to realize the Desa Mamanda Program in Desa Balida by building a partnership pattern, where BUMDes Desa Balida will play an active role in managing the business, utilizing assets, developing investment and productivity, providing services, as well as providing other businesses for the welfare of the Balinese village community.
- Balangan Regency Government-Balida Village Head: The Balangan Regency Government collaborates with the Balida Village Head to realize the Mamanda Village Program in order to develop ecotourism-based local tourism potential in Balangan Regency, especially in Balida Village.
- Balida Village Artists -POKDARWIS Balida Village: Balida Village Artists collaborated with Balida Village POKDARWIS in performing Banjar cultural arts at Racah Ablelang Market as

one of the parties that are able to increase tourist attraction by prioritizing aspects of local crafts.

- g. Analysis of PT Adaro Indonesia's CSR Policy Program Against SDGs. Indicators

The Mamanda Village Program supports SDGs Indicators in particular indicator 1 (No Poverty), indicator 2 (No Hunger), indicator 8 (Decent Work and Economic Growth), indicator 9 (Industry, Innovation, and Infrastructure), indicator 10 (Reducing Inequality), indicator 11 (Sustainable Cities and Settlements), indicator 13 (Climate change management and indicators), indicator 15 (Maintaining terrestrial ecosystems) and indicator 17 (Partnerships to Achieve Goals).

Related programs are creating decent jobs in the MAMANDA Balida Village program, reducing people living in poverty, and employing marginalized communities. The MAMANDA Balida Village program opens jobs other than the agricultural sector, such as parking guards, ticket guards, photographers, and others. And so on, so that people are able to meet their daily needs, are able to create decent jobs, entrepreneurship, creativity, and innovation, and growth of micro, small and medium enterprises such as shops selling honey and rattan and bamboo handicrafts.

Mamanda Village activities are able to increase the existence of culture and create jobs for artists, provide economic impact for the surrounding community with many guests who come to visit so as to increase the income of the surrounding community. The Balida MAMANDA Village Program supports economic development and human welfare by creating jobs for the local community. The surrounding community, the Mamanda Village Program has an impact on climate change through environmental conservation, namely the planting of endemic plants and bamboo trees, the preservation of more than 20 endemic plant varieties and seven kinds of bamboo plants, the formation of an artificial ecosystem of rice fields so as to provide improvements to sustainable development, The MAMANDA Balida Village Program is able to create collaboration between the

surrounding community and several parties, namely PT Adaro Indonesia and the Regional Government. 6.65 months before a value equivalent to that investment is realized.

## V. CONCLUSION

The Mamanda Desa Balida Program, which is the Company's Social Innovation Program, was developed based on environmental and social issues and based on community needs that are able to synergize with sustainable development and play a role in disasters, increase community capacities and capabilities, new roles and relationships in social life and develop assets and resources local people. Based on the calculation of the SROI ratio, it is known that for every 1 Rupiah invested, a benefit of Rp. 5.41 is obtained, which means that the value of the benefit of the Mamanda Balida Village Program is greater than the value of the investment. The payback period is short enough that for an investment of IDR 715,000,000, it will take only

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