

Sharing Inspiration of Goodness for the Future





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Community Involvement & Development

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Sharing Inspiration of Goodness for the Future

PHE Subholding Upstream engages the community in different development programs with various sustainable benefits. In addition, we would like to share positive values for people to replicate. Through Community Involvement Development (CID), we have collaborated with the community to develop programs with inspiring realizations and achievements throughout 2021.

We also direct the inspiration from the CID program that we have developed to support the achievement of the Sustainable Development Goals (SDGs) in Indonesia.

On September 1, 2021, the corporate process of PT Pertamina Hulu Energi's establishment as a Subholding Upstream was completed, which was marked by the issuance of a Circular Resolution of Shareholders of PT Pertamina Hulu Energi concerning the execution of the Legal End-State of the Subholding Upstream dated September 1, 2021, for the takeover or transfer of all shares owned by PT Pertamina (Persero) in a subsidiary of PT Pertamina (Persero) to PT Pertamina Hulu Energi as the Upstream Subholding. In its operations, PT Pertamina Hulu Energi ("PHE") as the Upstream Subholding manages 8 subsidiaries in the upstream oil and gas sector, 2 subsidiaries in the oil and gas supporting services sector (hereinafter referred to as "AP Services") and PT Badak NGL. The mention of PHE in this report underlines that PHE is a single entity, while the mention of PHE Subholding Upstream refers to PHE and all subsidiaries of the upstream oil and gas sector which are divided into 5 regions, 2 AP Services, PT Badak NGL and affiliated companies.



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Message



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PHE Subholding Upstream is committed to delivering sustainable benefits, both to the community and to the surrounding environment.

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Dear stakeholders,
Hopes for a better future have always been the foundation for us, PT Pertamina Hulu Energi as the Upstream Subholding, in carrying out all company activities. We believe, what we do now is the life we live in the future. Therefore, we continue doing our best in all aspects of activities, which include implementing environmental, social, governance (ESG) management, and managing its impact on the Company and stakeholders.

PHE Subholding Upstream is committed to delivering sustainable benefits, both to the community and to the surrounding environment. We have been supporting efforts to achieve the Sustainable Development Goals (SDGs) by 2030 Agenda as a form of our concern for this commitment in line with the sustainability principles, which aside from aiming at making profits, we also support the

preservation of nature to meet the needs today and the future for the next generations, based on People, Prosperity, Planet, Peace, and Partnership (5P) with orientation towards the SDGs. Through community involvement and development (CID) programs, we are inviting the community and other stakeholders to collaborate to build a sustainable future.

PHE Subholding Upstream has been supporting programs based on clean and affordable energy in various regions across Indonesia that take advantage of local potential. The management and utilization of this energy have had a positive impact on the health, education, agriculture sectors, as well as household and community economic activities. Through the Desa Energi Berdikari (Energy Self-sufficient Village), we encouraged and assisted the community in taking advantage of the existing energy potential and making it a sustainable



resource. Our energy program is part of an effort to provide access to affordable, reliable, sustainable, and modern energy for all to support the achievement of Goal 7 of SDGs, Clean and Affordable Energy.

Through empowerment programs, we invite, encourage, and foster communities around our operating areas to be self-reliant, become independent, and self-sufficient. Our programs support the efforts to create employment and job opportunities that are in line with local wisdom and the needs of local communities. Thereby, our programs can support inclusive and sustainable economic growth and provide decent jobs for all.

In the education sector, we support innovation and integration with other aspects of life for Indonesian children to have a more promising future. We have collaborated with various stakeholders to support sustainable learning systems, including when facing challenges during the COVID-19 pandemic. Learning through radio, early childhood education that is integrated with environmental awareness, as well as support for efforts to increase community literacy, showed our commitment to collectively educate the nation.

On the other hand, we would not a promising future if our environment is overlooked. We carry out an environmental conservation program that also supports efforts to control and mitigate climate change on SDG 13: Climate Action. Our environmental programs are built in collaboration with communities, government, and various stakeholders, thereby creating mutually reinforcing responsibilities and concerns. Our environmental program is integrated with empowerment that the community also enjoys sustainable benefits from a sustainable and prosperous environment.

The theme of the CID book “Sharing Inspiration of Goodness for the Future” is the story of a journey that we encapsulate from our operating areas in Indonesia. For us, this book is a lesson and reflection for PHE Subholding Upstream Officers (Perwira) to continue doing their best as an embodiment of dedication to the country.

And for all stakeholders, I hope the story of this journey can become an inspiration and encouragement for us to jointly protect the environment and build Indonesia. From now on, we fulfill our needs today by taking into account the fulfillment of our future needs in a sustainable manner.

President Director

Budiman Parhusip

PT Pertamina Hulu Energi



Foreword



PT Pertamina Hulu Energi, as part of Subholding Upstream, is committed to supporting the achievement of the Sustainable Development Goals (SDGs). One of our ways to support this is through community involvement and development (CID) as the implementation of CSR. We carry out the CID program as part of our environmental, social, and governance (ESG) performance. Our CID program is designed according to the the community needs based on local potential by considering value creation in the future. It is not only aimed for the economic impact, but the wellbeing that integrates environmental, social, and sustainable governance aspects.

The CID program is developed through collaboration with the community and multi-stakeholders who mutually support, strengthen, and complement each other. We make all these efforts as a foundation for empowerment to achieve self-reliance. Thus, the CID program can provide comprehensive added value, not only for the community, but also for the Government and the Company.

Together with the community, we have made innovations and utilized renewable or alternative energy. We also continuously called on beneficiaries to use water efficiently, as the water sources are dwindling, thus their

utilization must be optimized. We have also joined hands to improve innovative educational programs and raise awareness in maintaining health. This is our hope in educating the younger generation together to narrow the knowledge gap while building a healthy environment.

We encourage the community to be creative and hone their skills to be able to achieve independence. By doing so, the community is expected to get decent jobs that can also support economic growth. We, together with the community, also utilize new and renewable energy. These efforts indirectly can help in dealing with climate change. As our responsibility for offshore business activities, we also strive to always preserve the marine ecosystem through various programs.

Governance is our foundation in carrying out all CID activities. Therefore, we build good governance, from program planning, implementation, monitoring and evaluation, up to reporting. This CID book is our form of reporting to all stakeholders.

Let us continue: "Sharing Inspiration of Goodness for the Future" so that our stories would not end here but always become an inspiration of goodness. We wish this book on our work and concern will be an inspiration to build Indonesia together.

Corporate Secretary

Arya Dwi Paramita

PT Pertamina Hulu Energi



Awards

International



Global Corporate Sustainability Award 2021

Great Practice Award, Gampong Tampur Paloh Berdaya Program, Pertamina EP (PEP) Rantau Field, Zone 1, Sumatra Region

Selected paper at the Asia Responsible Enterprise Award (AREA) 2021 event,

Integrated Agricultural Program, the Social Innovation System of Setaria Group, PEP Sanga Sanga Field, Zone 9, Kalimantan Region

Selected Paper at the 22nd Biennial

Conference of the ICSD Kelingan Covid-19 Program, PEP Tarakan Field, Zone 10, Kalimantan Region

The 13th Annual Global CSR Award: 6 Awards

Platinum Award for Women Empowerment Category:

Women's Group Empowerment Program at PHE WMO and PHE Jambi Merang

Best Community Program

Gold: Polyculture Program, Innovation for Optimization of Pond Yield, PEP Tambun Field, Zone 7, Java Region
Bronze: *Desa Cinta Bumi*, PHE Jambi Merang, Zone 1, Sumatra Region

Best Environmental Excellence

Gold: Labuhan Coastal Ecotourism Program PHE WMO, Zone 11, Eastern Indonesia Region
Silver: *Jejak Setapak*, EP Subang Field, Zone 7, Java Region

Excellence in Provision for Literacy & Education:

Gold: Pelita Program (Environmental Education for Children), PEP Subang Field, Zone 7, Java Region

National

13 Awards

Nusantara CSR

45 Awards

Indonesian Green Awards 2021

1 Awards

Best Social Innovation 2021
Petani Maju Program

6 Awards

PR Indonesia Award 2021

11 Foster Villages

with ProKlim Title Ministry of Environment and Forestry ProKlim

13 Awards

Indonesian Sustainable Awards (ISDA) 2021

1 Award

Healthy Living Community Movement (Germas) from Ministry of Health of Republic of Indonesia



Value Sharing

1,800 hours of employee volunteering within the Upstream Subholding environment, through **2** projects in the Dynamite Program - Project to Community, Eduvisit PHM pertaculture (<https://dynamitemahakam.phi.pertamina.com/>) and web-based digital app.

The emission reduction contribution from the Desa Energi Berdikari (Energy Self-sufficient Village) program reached **189,202.61** tons CO₂eq.

More than **660** MSMEs are empowered and productive, including those in remote areas, women's groups and indigenous peoples.

22 featured programs have calculated SROI with an average score of **1:6.08**.

Provide scholarships to more than **690** students, including the indigenous people of the Anak Dalam and Sakai Tribes, teachers in remote areas, and selected students at AKA Migas.





PT Pertamina Hulu Energi at a Glance



In operational aspect, PT Pertamina Hulu Energi (PHE) as the Upstream Subholding manages eight subsidiaries in the upstream oil & gas sector, two subsidiaries in the oil & gas support services sector and PT Badak NGL. PT PHE as Upstream Subholding manages Working Areas based on five regions based on aspects of production volume, regional and operational complexity. Until the end of 2021, PT PHE has 68 subsidiaries and six joint venture companies.

As a company engaged in the upstream oil & gas sector, we run a sustainable business and manage environmental, social, and governance (ESG) aspects. In the social aspect, we carry out community involvement & development (CID) activities in accordance with ISO 26000 Social Responsibility.



Create and Share



*You reap
what you sow*

PHE Subholding Upstream cares about the sustainability of the community’s lives and the environment where they live. The CID activities that we are carrying out today have been designed to give sustainable values and benefits to the communities and stakeholders involved. The activities that we have developed are also aimed to support and contribute to the achievement of Sustainable Development Goals (SDGs).

CID Activities at PHE Subholding Upstream



Managing Natural and Marine Resources



Preserving the Earth, Maintaining Beautiful Environment



Boosting Creativity, Breaking Boundaries



Developing Skills, Fostering Self-reliance



Maintaining Health, Appreciating Life



Educating Youth, the Indonesian Generation



Utilizing New Renewable Energy through Energy Self-sufficient Village



Preserving Water Resources, Sustaining Lives



**PHE Subholding Upstream
with the Community**



In developing CID programs, we have adapted to the issues and problems in the neighborhood and the needs of the community. The activities involved and was supported by the local government. In addition, our employees whom we call PERTAMINA Wira or Perwira also shared the core competency of the Company as an oil and gas company to the community, through the empowerment programs. The core competencies that we shared were expected to be integrated in the CID program and implemented by the community, as well as have a positive impact on their social life and the surrounding environment.

In order to continue working and sharing as well as developing employee competencies based on project assignments, Subholding Upstream also involves employees to participate voluntarily in projects outside of their roles/responsibilities (employee volunteerism). The pilot project of employee volunteerism called the 'Dynamite Program' was carried out in 2021, with one of its main activities being 'Project to Community Contribution' through the involvement

of officers (Perwira) in CID activities. The Dynamite Program's slogan was 'Do Your Next Assignment, Make It Excellent'. The officers were voluntarily involved in creating innovations that benefit the community and the environment around the Subholding Upstream's working area. From the registration to further stage of selection, there were 9 Subholding Upstream Officers involved in the Dynamite Program - Project to Community in 2 pilot project locations at PHE WMO and Pertamina Hulu Mahakam (PHM) which is part of Zone 8, Kalimantan Region. The results of this activity include a web-based digital application for marketing the products of PHE WMO's fostered partners that can be accessed publicly at <https://bakaoo.id> and the development of Pertakultur Virtual Education Program for Petani Maju 4.0 at PHM location, which can be accessed at <https://dynamitemahakam.phi.pertamina.com/>. Going forward, the employee volunteerism activities are expected to continue to evolve and new innovations to emerge through the involvement of Subholding Upstream Officers going forward.



Utilizing New Renewable Energy through Energy Self-sufficient Village



Energy moves life. Energy management is important and cannot be done alone. Therefore, PHE Subholding Upstream, the community, and related stakeholders work together to optimize the use of local resources to produce new renewable/alternative energy through various sustainability programs.



Together with the community, we optimize the use of local resources to produce clean and affordable energy. Through an independent energy program, the community is not only able to be empowered and independent, but also gain a multiplier effect from economic growth.

Indonesia's regions have diverse alternative energy potentials. The local resources are a strong foundation for community energy security. We encourage them to take advantage of the existing energy potential and make it a sustainable resource through the **Energy Self-sufficient Village**.

Energy Self-sufficient Village is a manifestation of Pertamina's ESG commitment supported by PHE Subholding Upstream to support the achievement of the 7th Sustainable Development Goal of Clean and Affordable Energy.

Through this program, PHE Subholding Upstream along with the community, government, and other stakeholders join hands to overcome the challenges while creating a better life, by providing access to energy that is more affordable, reliable, and sustainable.

In various regions, we have been developing renewable energy in empowerment programs based on the potential, needs, and characteristics of local communities. Until today, there are 10 renewable energy innovations in locations with minimal access to energy in which the Suku Anak Dalam (SAD) tribe live. Among them, the Solar Cell Innovation to meet and support the activities of the SAD community who have not had access to electricity. In addition, the innovation of a solar-powered salted fish drying machine



has managed to shorten the time to dry the salted fish from 3 days to 1 day. Another innovation was the RAPAMPA (Swing Water Pump Engineering Water Filtration), in the form of innovation in filtering water from the Pejudian River which has been the the main source of clean water for the SAD community. The use of Rapampa's innovation has also supported the reduction of emissions from operating generator by 1.09 tons CO₂eq.

Electricity Self-sufficient Village of Tepian

The Electricity Self-sufficient Village Program of Tepian was developed by Pertamina EP (PEP) Tarakan Field, as part of Zone 10, Kalimantan Region using solar cell home system for electricity supply in Tepian Village, Sembakung District, Nunukan Regency, North Kalimantan Province. Tepian Village is in a border area with limited access to transportation and communication and does not have access to electricity, clean water, and adequate education and health facilities.

The Energy Self-sufficient Village Program in Tepian Village began in 2016 through the Self-sufficient Village (Desa Mandiri) initiative and the provision of a solar home system to start the transition from a diesel generator to a communal solar cell. PEP Tarakan Field also facilitated the formation and assistance of a communal solar cell and clean water management group that has become an empowered Village Owned Enterprise (BUMDes) and capable of generating extra income.

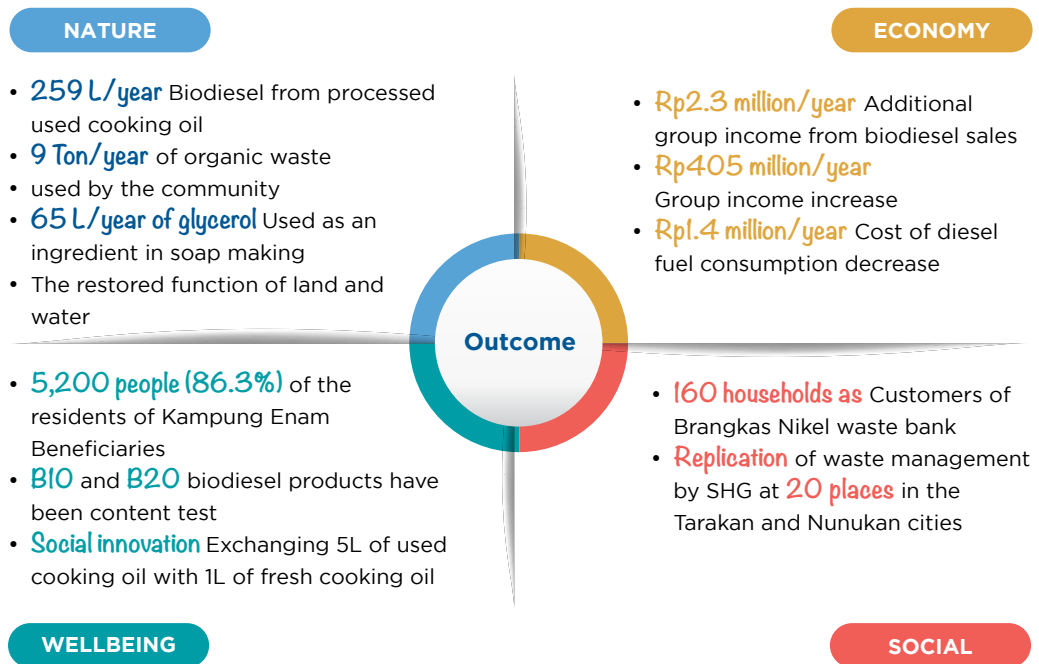
The provision of SHS to replace the use of generators with communal solar cells has provided benefits for 1,080 people. Until the end of 2021, Tepian Village has become a pilot project for Self-sufficient Village in North Kalimantan. Tepian Village continues to be managed and developed, to continuously become an example of a self-sufficient village for other villages.





Lebah Enbarter

In other areas of North Kalimantan, Pertamina EP Tarakan Field, a part of Zone 10, Kalimantan Region, also joined hands with the Community Self-Help Group (SHG) Ramah Lingkungan in Kampung Enam Village, East Tarakan, developed the Waste-Based Education, Ecology and Economic Services and Waste Utilization for New Renewable Energy or Lebah Enbarter program. This program has successfully processed used cooking oil as raw material for certified B10 and B20 biodiesel, as well as processed waste into organic fertilizer and liquid fertilizer. Biodiesel is sold to a limited number of people to be used as fuel for plastic crushing machines and generators.



SHG Ramah Lingkungan sorted waste into compost, recycled materials, and bioethanol from the distillation of organic seaweed waste. It has 160 households as customers of the waste bank in Kampung Enam Village, Tarakan.



A total of 259 liters of used cooking oil are processed into biodiesel per year, which reduces cooking oil waste by 21%. Some 1.2 tons of seaweed waste has also successfully been processed into bioethanol every year. Aside from waste reduction, the SHG Ramah Lingkungan's innovation also has a significant economic impact. By utilizing this alternative fuel, the group's fuel consumption costs decreased by Rp1.4 million/year. This program has succeeded in creating shared value (CSV) between the group and PEP Tarakan Field. The effort has made Kampung Enam Village one of the pilot Climate Villages in North Kalimantan Province.



WASTECO (Waste to Energy for Community)

Pertamina Hulu Mahakam (PHM), as part of Zone 8, Kalimantan Region, has invited the residents in Manggar Baru sub-district to work together with the Manggar Waste Final Disposal Site (TPA) in Balikpapan to make use of waste as an alternative energy source for the community.

This program is prompted by the high methane gas from waste released into the atmosphere. However, it was not utilized optimally as a potential new renewable energy source that can provide social and economic impacts on the community in Manggar Village. The volume of waste at TPA Manggar reached 132 tons in 2021.

The WASTECO (Waste to Energy for Community) program in the form of the Integrated Utilization of Methane Gas was developed by PHM. Aside from attempting to reduce the volume of waste in the community, this program has managed to turn waste that was previously worthless into a source of energy as well as additional income.

The WASTECO program converts waste and wastewater (leachate) into energy sources in the form of methane gas. The gas is then managed and streamed through pipelines for use by the community and SMEs. A total of 200 residents in 4 neighborhood units in Manggar Baru sub-district, Balikpapan, have directly benefited from methane gas house connections for their daily needs and managed to save household expenses up to a total of Rp180 million/year in 2021.



This program has succeeded in boosting the distribution of methane gas utilization and the innovation of waste treatment at the TPAS Manggar from inorganic waste into fuel. The WASTECO program is also able to change the community's awareness of waste management and established a waste management group that has economic value. The community formed a methane gas management group which has been legalized by Balikpapan Mayor's Decree.



462,680 m³ tons/year
Waste has managed to be processed into methane gas

Emission reduction was 181,145 tons CO₂eq/year



This program has supported the energy self-sufficiency of the Manggar Final Waste Processing Site (TPA) as well as empower the community around the TPAS Manggar.

NATURE

- **462,680 m³/year** Utilization of methane gas by residents
- **96 m³/year** Saving on firewood for the tofu factory
- **3,650 watts/year** Fuel savings for internal TPAS
- **181,145 ton CO₂eq/year** Reducing greenhouse gas emissions

ECONOMY

- **Rp180 million/year** Family cooking cost saving
- **Rp33.6 million/year** Methane Gas contribution
- **Rp52 million/year** Increasing the income of SMEs managing cafes and outlets

Outcome

- **1 methane gas management agency** Renewable energy campaign driver
- **1 volunteer group** Trained to mitigate disasters and emergencies
- **SROI Result: 1: 10.08**

- **10 SMEs, 10 stalls** and **2** tofu & sugar factories
- **200** Home Connections (SR)
- **640 residents/196 families** Able to use methane gas safely
- **26 Women** have the capacity to manage the sustainable distribution of methane gas

WELLBEING

SOCIAL



Changes in perception, behavior, and raising people's confidence in using methane gas as the main energy source that is safe, efficient, and environmentally friendly also boost the sub-district accomplishments by winning the title of ProKlim Utama 2020 from the Ministry of Environment and Forestry of Indonesia.



Kembang Bersinar

PHM also has other renewable energy utilization programs from solar energy. One of them is conducted in a remote area of the Mahakam Delta, in Muara Kembang Village, Muara Jawa District, Kutai Kartanegara Regency, East Kalimantan, under the name *Kembang Bersinar*. This program aims to replace diesel-fueled generators with solar power plants by providing 70 units of solar home system (SHS). The program is managed by a local economic institution, the Solar Electricity Implementing Agency (BPLTS). This program has overcome the limited access to electricity and fuel shortages that were previously often faced by local communities.

Muara Kembang Village won the ProKlim Village 2021 title from the Ministry of Environment and Forestry

NATURE

- **198,789.55 kg CO₂** Emission reduction due to reduced use of generators in 2021
- **74,520 liters/year** Reducing diesel consumption
- The formation and strengthening of the management group for **Solar Power the Electricity Management Agency (BPLTS) Pegah Bersinar**
- The establishment of regulations, including SOPs, **articles of association, and rules for the BPLTS business management scheme**

ECONOMY

Rp372.6 million
Household cost saving from replacing diesel with SHS

Outcome

More than **70 households** or around **286 residents** and **1 village** polyclinic have access to Solar Power

WELLBEING

SOCIAL



Through this program, the community managed to reduce expenses for diesel fuel purchases. As many as 70 households or 286 residents have benefited from this program and saved the cost of purchasing diesel fuel up to a total of Rp372.6 million/year. With secured access to electricity, children can study better at night and people can develop their economic activities.

Sharing Renewable Solar Energy (BEST)

PHM also has a similar program in Tani Baru Village, Anggana District, Kutai Kartanegara Regency by developing a solar home system (SHS) management through the Renewable Solar Energy Sharing or BEST program. This program is managed by the BUMDes business unit to replace diesel-fueled generators. This program has successfully replaced the community's reliance on diesel. PHM has provided 67 units of SHS managed by local BUMDes.



Tani Baru Village receives Climate Program Village 2021 award from the Ministry of Environment and Forestry

NATURE

- **176.82 tons of CO₂ /year** Reduced emissions from reduced use of generators
- **136.22 liters/year** Reducing diesel consumption by use of SHS

ECONOMY

Rp331.43 million
Household cost savings from replacement of diesel to SHS

Outcome

- **Tani Baru Village Community** and Government appointed Tani Baru BUMDes as Manager
- The establishment of regulations, including SOPs, Memorandum of Association/Articles of Association, and **rules for business management schemes and village regulations related to BUMDes**

- **67 households** or **360 residents** provided access to solar power
- **17 public facilities** for 3,700 residents of New Farmer Village

WELLBEING

SOCIAL

Through this program, BUMDes Tani Baru has a new business unit as the village's source of income and local government's services for the basic needs of the community. In addition to residents' houses, 17 public facilities that can be used by 3,700 residents have also been electrified.



Preserving Water Resources, Sustaining Lives



“

Water is the source of life. Responsible use of water is not only about access to clean water with good quality and safe for consumption, but also sustainability of natural resources. Support for water supply is realized by PHE Subholding Upstream through various initiatives that provide access to clean water around the operating area.

”

Water Supply System (WSS) for Saliki Village Community

The Water Supply System (WSS) program developed by Pertamina Hulu Sanga Sanga (PHSS), Zone 9, Kalimantan Region, has addressed the limited access to clean water in Saliki Village, Muara Badak District, Kutai Kartanegara Regency, East Kalimantan. The existing water had a high iron content, threatened health, as well as damaging equipment and clothing.

The community based WSS program provided clean water facilities that are integrated with drinking water services managed by BUMDes Mekar Sejati in Saliki Village. This program supplies consumable water to the community through a water purification process with aeration technique, by increasing oxygen level in the water to improve its quality. The aeration process can remove 75% of the iron content in the water.

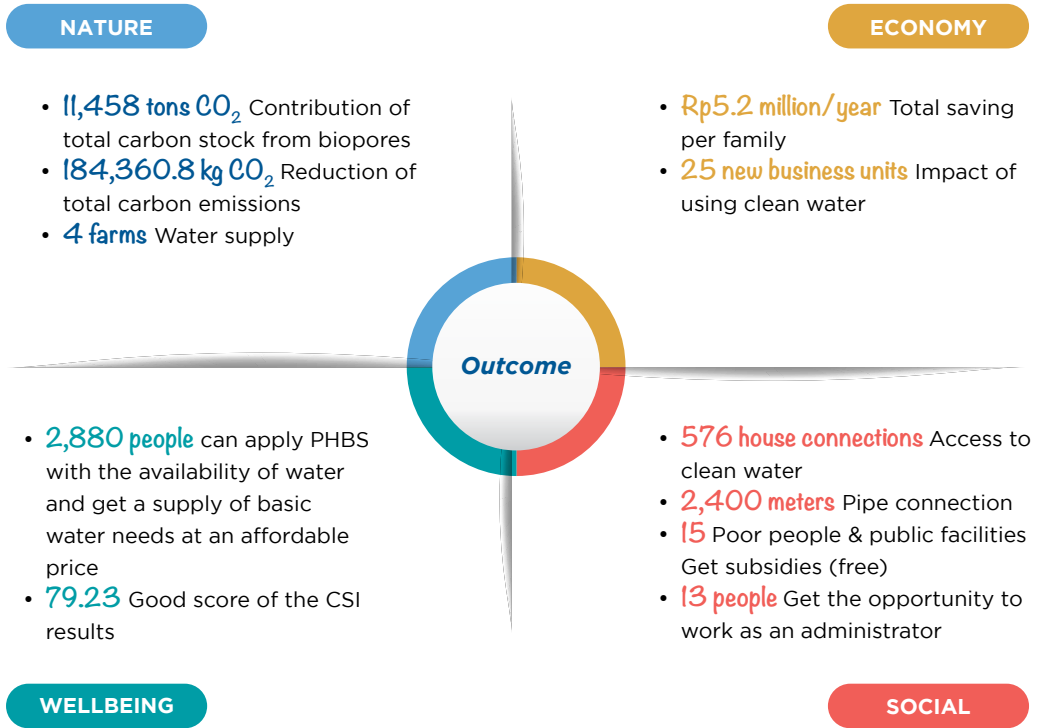


The WSS Saliki program has been operating since 2018 and has now managed to supply clean and safe water for consumption to more than 400 residents' homes. Residents have also been able to save on water cost because they no longer need to pay Rp100 thousand per month for electricity to get water, they only need to pay a water fee of Rp40 thousand.



Water Solutions for Dondang Village Community

Berkah Air Dondang is a collaborative program by Pertamina Hulu Mahakam (PHM) BSP Field to overcome the limited access to clean water in Dondang Village, Muara Jawa District. This program provides community-based access to clean water by building Clean Water Facility (SAB) which is independently managed directly by the community for the community. The program also promotes the implementation of Clean and Healthy Living Behavior (PHBS) which can become a driver for the community’s quality of life improvement in a sustainable manner. PHM BSP also carries out a strategy for clean water management institution capacity building by forming and mentoring 13 clean water managers.





Berkah Air Dondang Program began in 2015 with the construction of 1 unit of drilled well with a depth of more than 110 meters and a discharge volume of 4 liters/second, along with 2,000 meters of pipeline. The community participated as self-help workers in the construction process. PHM also built a water reservoir with a capacity of 576 m³ to collect water from the well before being distributed through the pipeline.

In 2018, PHM BSP increased the length of the pipe to 2,400 meters to provide more residents with access to clean water. The additional network stretches to the residential area of Karya Tauladan farmers group, which is expected to boost

agricultural and plantation ventures in Dondang Village by reducing dependence on rainwater. As many as 4 agricultural lands get water supply and 25 new business units emerged as a result of using clean water. Currently, 576 houses have access to clean water and more than 2,880 people have access to affordable water supplies. A total of 2,880 families have also practiced better PHBS.

PHM BSP Field also preserves water resources amid barren conditions and landslide prone in the surrounding hills. Therefore, the Berkah Air Dondang program was also followed with the planting of 1,250 fruit and bamboo plants as well as the conservation of 1.2 hectares of water catchment areas to prevent erosion.





HIPPAM Sumber Barokah

In East Java, PHE WMO as part of Zone 11 of the East Indonesia Region has developed Sustainable Clean Water program by the drinking water user association HIPPAM 'Sumber Barokah' which has managed to address water scarcity faced by residents, particularly in Bandangdajah Village, Tanjungbumi District, Bangkalan Regency, on Madura Island. Through HIPPAM, the residents have been able to independently manage clean water to meet their needs. The number of HIPPAM's clean water users reached 400 families. To maintain the sustainability of clean water sources as well as groundwater conservation, PHE WMO together with the people of Bandangdajah Village manage the efforts to conserve clean water resources using biopori. The access to clean water has also succeeded in increasing local economy and revitalizing local agriculture with the concept of eco-edu farming.

NATURE

- **6.6 million m³** surplus water allocated for agricultural activities
- **1 ha** Utilization of idle land for demonstration plots and 2 Replication lands
- **300 kg** Utilization of cattle waste for organic fertilizer
- **6 tons** Cocopeat utilization to help save water

ECONOMY

- **Rp500 thousand-2 million** Increase in farmer group income for one harvest
- **5,154.3 kg** Eco Edufarming production and HIPPAM cashless payment
- **Rp23 million** Contribution of cashless payments per year

Outcome

- Access to vegetable nutrition in **7 villages, 3 districts**
- Rise of **farming culture** in community
- **92%** (3.69 of Scale 4) Community Satisfaction Index: Very Good

32 Empowered members of farmer groups and poor groups

WELLBEING

SOCIAL



Maintaining Health, Appreciating Life



“ *Health is the key to a better quality of life. A healthy, prosperous, and well-growing generation will determine Indonesia’s future. Health programs carried out by PHE Subholding Upstream support the efforts to shape a high-quality generation through integrated stunting prevention, innovation in the health sector, education on infectious diseases and drugs, as well as determination in facing the COVID-19 pandemic challenges.* ”

Integrated Stunting Program

Mama Miting

Stunting is one of the nutritional problems experienced by toddlers in the world today. In several working areas, PHE Subholding Upstream carries out sustainable programs to ensure mothers, infants, and toddlers get access to the services and nutritional intake they need.

JOB Pertamina-Medco E&P Tomori Sulawesi or JOB Tomori carried out joint stunting handling *Mari Bersama Menangani Stunting* (Mama Miting) program through the provision of Supplementary Child Nutrition Plus Plus (Nutanak++), turmeric and curcuma biscuits, and high-nutrition products. JOB Tomori also supports another stunting prevention program called *Tarik Unta* or *Datang Periksa Unggah Pantau* (Come Check Upload Monitor), to reach out more to the community.

This program has trained 10 village development cadres, 4 village midwives, and 2 PKK groups on knowledge and practices of stunting handling, and more than 400 mothers and children received stunting related education. In 2020, the stunting rate in Ring 1 area decreased by 44%. The Mama Miting program becomes JOB Tomori’s flagship program which contributes to the achievement of PROPER Gold in 2020.

Until the end of 2021, this program continued to run and involved 69 cadres of integrated health post (Posyandu) and various parties such as the Banggai Health Agency, Public Health Faculty of Hasanuddin University Makassar, District Health Center, District Government and local village Government to jointly support the handling of stunting in the JOB Tomori operating area.



JOB Tomori also made the nutrition quality intervention to the Loinang Tribe who had relocated to the Hamlet of Maleo Jaya Village through the provision of Nutanak++ and herbal food products every month. The majority of the Loinang tribe are categorized malnourished and experience infant mortality rate due to malnutrition. Together with partner institution, JOB Tomori also has provided access to clean water for public facilities to support PHBS practices of Loinang Tribe.

SEHATI Program

In other area of Banggai Regency, PT Pertamina EP (EP) Donggi Matindok Field in Zone 13, Eastern Indonesia Region, carried out the SEHATI (Health Program for Children and Mothers) program focusing on child health issues, such as malnutrition in infants, pregnant and lactating mothers, infant mortality cases, and stunting cases in children. This program has been running since 2019 and has managed to reduce cases of death and abnormalities in infants.

In addition, this program has succeeded in raising awareness of pregnant women and breastfeeding mothers in fulfilling their nutrition.

During the COVID-19 pandemic, SEHATI gave birth to an innovation called Pickup Ball which provided posyandu services

door to door. In 2021, this program also received an appreciation from the Ministry of Health as the Most Inspirational Program for Mother and Child Health, as well as appreciation from the National Population and Family Planning Board of Republic of Indonesia (BKKBN) for the Stunting Prevention Innovation through the SEHATI program carried out by PEP Donggi Matindok Field.

Posyandu Kenari

In Kebun Rantau Village, PEP Rantau Field in Zone 1 of Sumatra Region developed the integrated health post, Posyandu Kenari, in Kebun Rantau Village, which is integrated with efforts to deal with the COVID-19 pandemic. Until the end of 2021, the Posyandu Kenari provided health services for 846 infants and toddlers. Posyandu Kenari also has 12 PHBS cadres and influencers, 2 baby massage instructors, and 12 people who have the expertise to make hand sanitizers according to WHO standards. In the following years, according to the roadmap 2024, Posyandu Kenari will be strengthened through the development of infrastructure, business, and product quality to become an Independent Posyandu. In developing products and innovations, Posyandu Rantau has synergized with the Gampong Community Enterprise (BUMG) to produce the citronella (Serai Wangi) hand sanitizer.



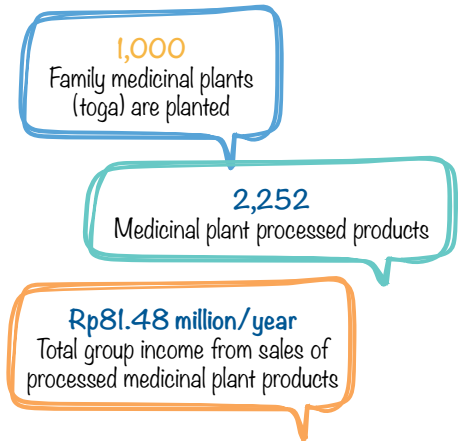
Innovation in Health

Improving the community's health quality also needs to be supported by new ideas and innovations. In Hurip Jaya Village, Babelan District, Bekasi Regency, PEP Tambun Field carried out the Community Processed Family Medicine Garden program (Toko Obat) which aims to improve health through organic medicinal plants management by optimizing community gardens. This program was a response to the potential land and opportunities for the herbal industry that can be an alternative to increase body immunity, as well as to prevent and treat diseases.

The program includes the development and optimization of medicinal plant processing, marketing expansion, and training to improve the competence of 10 herbal practitioners who have been certified by the BNSP. This program has also empowered 40 members of the group who were given training and mentoring, as well as 1 group who has replicated the program.

The *Toko Obat* program is also integrated with the utilization of 90 kg of herbal waste into maggot feed. A total of 100 bottles of plastic waste were also reused as an effort to preserve nature.

The Community Satisfaction Index for this program was 3.2 or under A (Very Good) category and the Independence Index reached 17.5 in the Independent category. In 2020, Hurip Jaya Village and Samudra Jaya Village have become the pilot for Herbal Village program.



In South Batui District, Banggai Regency, JOB Tomori has carried out the Siaga Kalibastan program (South Batui Herbalist Community). This herbalist community has made an innovation in producing herbal antiseptics from betel leaf that are safe and environmentally friendly. This innovation has produced a variety of products, including hand sanitizers, vegetable and fruit antiseptic liquids, and liquids for disinfectant booth.

In addition, the Herbalist Community also produces herbal ingredients that are useful as immune boosters. This concoction is called Herbal Kitorang or 'herbs for all', to spread the spirit of protecting ourselves from COVID-19. During the pandemic, sales of herbal products increased by 68.7%.

The Siaga Kalibastan program has driven the community's economy through the community's medicinal plant processing



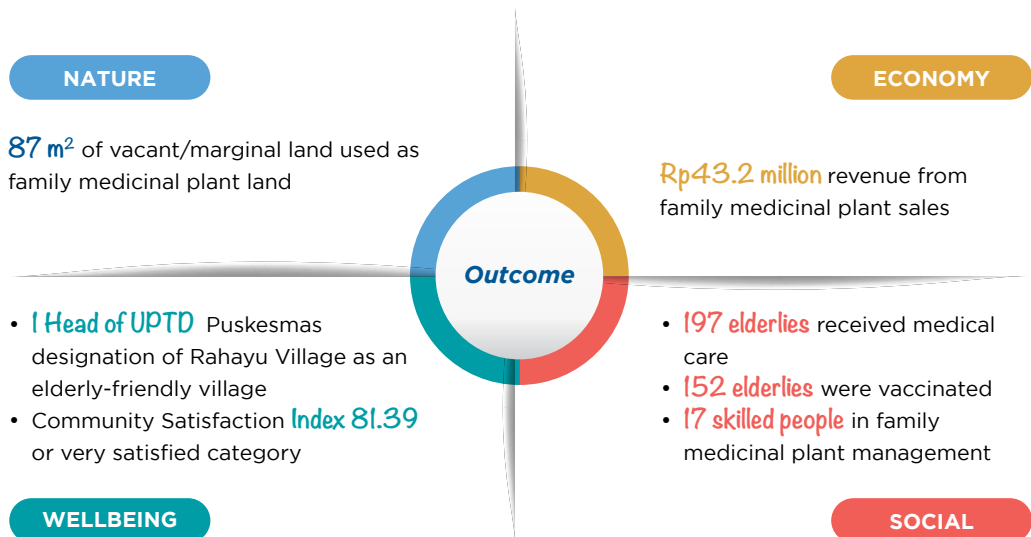
into innovative products. By 2021, the South Batui Herbalist Community has managed 166 herbal plants with sales turnover and group income reached Rp452 million/year. Six people have been certified as herbalists and four people have joined membership of the Indonesian Traditional Herbal Healer Association (Aspetri).



Pelangi Pagi (PERTAMINA Care for Elderly Synergize, Productive and Happy)

PEP Sukowati Field, Zone 11, Eastern Indonesia Region, has been sharing values with the surrounding community in the health sector through the Pelangi Pagi program. Pelangi Pagi targeted the elderly to be assisted in getting a swab/antigen test during the COVID-19 pandemic. One of the considerations for this program was that the elderly, as a vulnerable group, their health conditions have declined, and their families pay less attention to them. The results of the screening test for the elderly, recorded 475 people tested negative and 1 positive (died).

Through this program, the elderly received attention and early prevention from COVID-19. PEP Sukowati Field also conducted dissemination programs, vaccinations, free medical check-ups, and door-to-door ambulances to help the elderly. In addition, to boost immunity, the company also carried out exercise, sports, and medical assistance. The Company also has given the elderly opportunity to join the family medicinal plant (Toga) planting program to lift their spirits and make them healthy and productive.





Together Combating Drugs and Surviving the COVID-19 Pandemic

In Legok Sub-district, PEP Jambi Field, which is part of Zone 1, Sumatra Region, developed the No Drug Abuse Movement (Gentala) which is part of the Legok Kampung Bersinar program. Kampung Bersinar is an abbreviation of Drug Free Village. This movement was carried out as a response to the high level of drug abuse and the region is in the red zone of drug abuse. This causes the high potential for children to be exposed to drugs.

Gentala is implemented through various activities, including campaigns and school assistance, distribution of anti-drug picture stories as local content to 2,518 students in 9 beneficiary schools. PEP Jambi Field also held the Batik Bersinar Festival (*Barisan Anti Narkoba, Bersih dari Narkoba* or anti-drug front, free from drugs) as a form of education, as well as community empowerment through the development of the creative economy of batik and screen printing.

Through the *Kampung Bersinar* program, PEP Jambi Field also fostered the surrounding community to become batik artisans under the group name “Batik Sipin Jajaran”. In front of the Legok Sub-District Office, Jambi City, a Batik House was established for batik production to be a tourist destination for people who want

(BNMP Data 2019) Jambi Province is in the 4th place for drug abuse in Indonesia.

to learn batik. Currently, the “Batik Sipin Jajaran” group consists of 19 people who have become more skilled and have been innovating in developing batik. This group managed to get a patent for Bajubang fish batik motif.

PEP Jambi Field currently has been developing a youth activity program through Anti-Drug Themed Screen-Printing Crafts involving unemployed youths. In addition to empowering, this program also aims to keep young people away from drug abuse in the surrounding area. In this program, the Putra Sablon Jajaran group was formed with 14 members and four of them were former drug users.

The *Kampung Bersinar* program is expected to be able to give added value to the community around Legok through various positive activities to avoid the negative effects of drugs.



In Banggai Regency, JOB Tomori carried out a COVID-16 combat program called *Torang Lawan Corona 19* (Tolak -19) program. This program was implemented through various initiatives, such as providing 57,665 units of personal protective equipment (PPE), distributing aid to 11,900 people, increasing literacy rate for 279 children and teenagers. In addition, JOB Tomori also supported the formation of 237 health cadres and the establishment of 3 COVID-19 preparedness market locations.

In Musi Banyuasin, PHE Jambi Merang has the social innovation of COVID-19 Bank as residents' initiative to help each other. Through the COVID-19 Bank, other residents can 'save goodness' in the form of foodstuff packages to be distributed to people in need. As time goes by, the COVID-19 Bank is now not only providing assistance for food supply, but also community empowerment business loans. The loans have been used for free-range chicken farming, home-based businesses for UP2K-PKK women in the form of snacks, and fish farming in buckets (Budikdamber).

In 2021, as many as 60 residents have joined the COVID-19 Bank with total loans of Rp40 million. This program has had a sustainable impact and has supported the independence of residents who have started to actively manage loans for business capital.

The PHE Jambi Merang tourist area has also been affected by the pandemic. The tourism program in the pandemic or *Wisata Era Pandemi* (Sarapan), is an effort of adaptation to survive. In the tourist area of *Desa Cinta Bumi Tanggap Api*, PHE Jambi Merang assisted in the preparation of SOPs for Tourism Management in the Pandemic Era and added facilities to support health protocols and educational facilities. In addition, to attract visitors while maintaining protocol, tourist areas increase outdoor facilities, such as the provision of outbound activities, flying fox, and suspension bridges.

As a form of preparedness, PHE Jambi Merang has health volunteers (ReKas) who are integrated with the Budikdamber program. A total of 36 ReKas cadres have been given health training on breastfeeding and nutrition and 1,650 additional food packages have been distributed. ReKas also provides online monitoring of the health of pregnant women and babies under the age of two.



COVID-19 Response Care Village (Kelingan)

In Kampung Enam Village, East Tarakan District, PEP Tarakan Field supported the formation of a COVID-19 Response Care Village or Kelingan. Kelingan has 10 members of the Women Farmers Group (KWT) Kartini, which was established in 2015. With the support and empowerment from Tarakan Field, this group has become one of the spearheads in handling COVID-19 in the area of Kampung Enam Village.

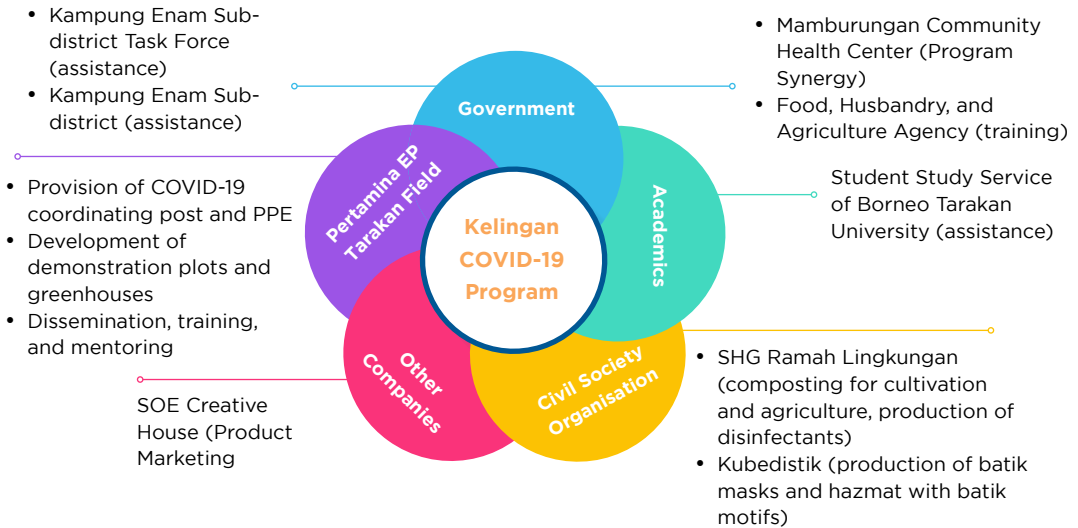
In handling the pandemic, Kelingan carried the spirit of Beyond Emergency Response which was implemented in four integrated programs as COVID-19 pandemic response.

The four integrated programs are social services, health campaigns, infrastructure support, and community business unit development.

Kelingan activities include distributing vitamins to the elderly and children, distributing masks, and producing and distributing disinfectants. In addition, Kelingan also initiated spraying in public places such as houses of worship and around the homes of residents who were confirmed to have COVID-19 by synergizing with the task force teams at neighborhood units and sub-district. Kampung Enam also has a COVID-19 post which is supported by the Integrated COVID-19 Handling System in Kampung Enam which directly involved 87 multi-stakeholders.

Kelingan paper entitled 'Kelingan COVID-19: Pertamina EP Tarakan Field Strategy to Empowering Communities During Pandemic' presented at the international event the 22nd Biennial Conference of the ICSD 2021 held online by Social Development, by the University of Johannesburg, July 2021.





In addition to COVID-19 handling, Kelingan has also developed herbal products *Jae.pongan* to boost the community's immune system. The herbal products were made from various spices such as ginger, turmeric, aromatic ginger, curcuma, lemongrass, and cinnamon. In addition to own consumption, these herbal medicines have also been distributed to patients who were confirmed positive for COVID-19 and those who have a family history of close contact. *Jae.pongan* has now also been marketed to the general public, even to Tanjung Selor, North Kalimantan, as well as sold to international market, particularly India and Singapore.

Kampung Enam sub-district is the only Integrated COVID-19 Village in North Kalimantan

Kelingan also utilized 134 m² of idle land for family medicinal plants (toga) such as ginger, aromatic ginger, turmeric, lemongrass, curcuma, as ingredients for herbal drinks. The land was also used for hydroponic plant cultivation, including kale,

tomatoes and melons. A total of 82 kg of compost from KSM Ramah Lingkungan has been used for this medicinal yard.

The presence of Kelingan has successfully controlled the spread of COVID-19 with the lowest number of confirmed

positive cases of COVID-19 in Tarakan City. With campaigns and dissemination from members of the Kelingan group, a total of 7,347 people were educated about COVID-19 prevention, health protocols, and the new normal to raise public awareness of the dangers of the COVID-19 outbreak.



Educating Youth, the Indonesian Generation



Knowledge will guide our path in life. By being broad-minded and open-minded, we can improve our lives as well as overcome social inequality in society. We care about the nation's children and are committed to taking part in shaping and building their minds.



Sustainable Education Innovation – Pelita amid the Pandemic

PHE Subholding Upstream implements innovative programs that are not only solutions to challenges that occur in society, but also innovations that build awareness and sustainability.

The spirit of teaching and learning must not be deterred during the COVID-19 pandemic. The Teaching and Learning Activities (KBM) at early childhood education PAUD Alam al-Firdaus must be adapted to these conditions.

Online learning has been carried out since 2020, while face-to-face learning has resumed with the health protocols remain in place. PEP Subang Field in Zone 7, Java Region and PAUD Alam al-Firdaus together with partners initiated the PAUD KBM Techniques during a pandemic. The training provided for teachers of PAUD Alam Al-Firdaus and focuses on how teachers and teaching staff adapt the KBM syllabus to the pandemic situation.

Under the Environmental Education Program for Children called *Pelita*, which was initiated by PEP Subang Field, there has been a significant increase at PAUD Alam Al-Firdaus, in terms of quality of education, social impact, economic strengthening and food security, as well as environmental awareness. The synergy between education and environmental conservation was developed by launching the Waste Management Learning Application. This application is aimed at optimizing online learning during a pandemic with a variety of features, including types of waste, e-books, animations of littering prohibition, games, and sharing as a consultation forum. Thus, it is expected to become an option for parents in educating their children in a fun way.

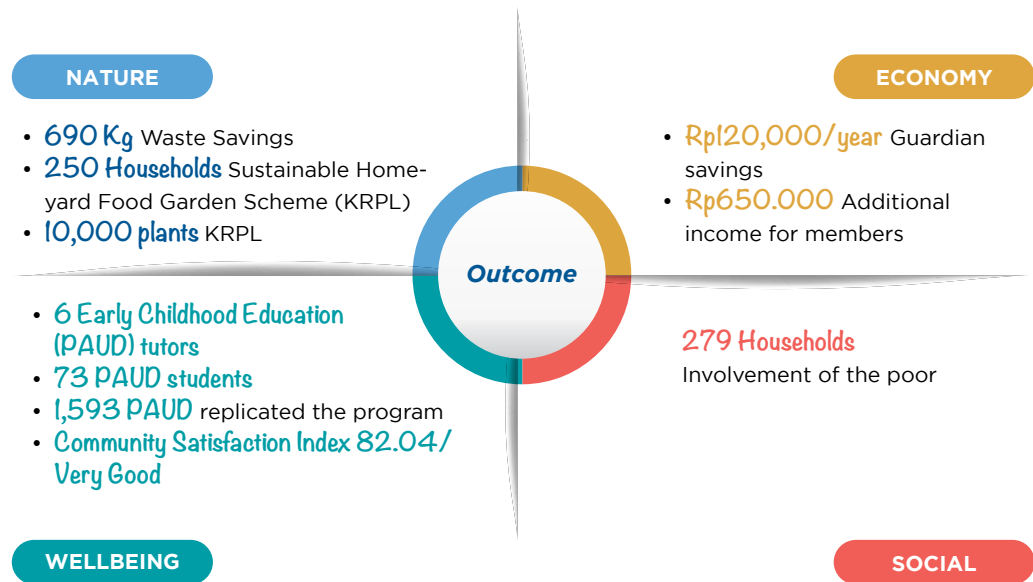


PELITA is also accompanied by capacity building training for teachers, students' parents, and the establishment of a sustainable home-yard food garden scheme (KRPL). This program not only teaches children to love the environment but has evolved into an agent of change for parents and the surrounding community. The community becomes aware that the waste that is managed has value.



In addition to being the first in Karawang, PAUD Al-Firdaus already has a wide reach and is a model for environmental-based educational innovation. The Thematic Waste Management Curriculum has been implemented and made local content at the PAUD level in Karawang, based on the Decree of the Education, Youth and Sports Agency No. 420/2514/Disdikpora.

The results of the SROI study showed ratio value of 7.89, which means that every Rp1 invested by the Company generated a social value of 7.89. These results indicated a positive impact on the program.





Kenali Asam Education Village

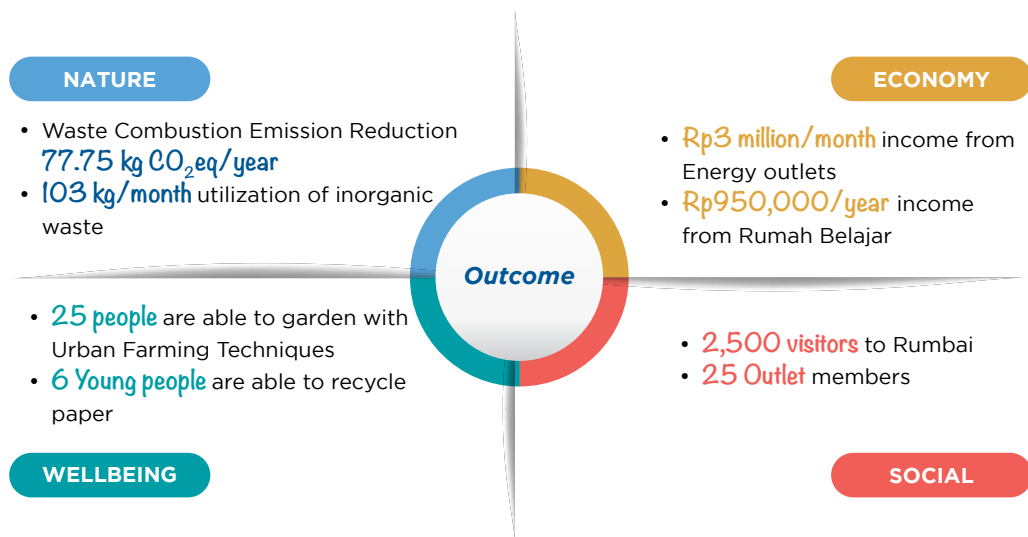
The integration of education programs and environmental management has also been carried out PEP Jambi Field, part of Zone 1, Sumatra Region through an umbrella program called *Kampung Edukasi* (Education Village) in Kenali Asam Atas, Jambi City. There are several programs in the Education Village, including the *Rumah Baca Pertamina* (Rumbai) library which was built in 2015.

Rumbai is an innovative program of literacy development activities for the community as well as an educational forum for environmental conservation. Through the 'Siku Sipah' program (*sikok buku, sikok sampah* or one book, one trash), children who want to read or borrow books are required to bring plastic bottle waste to be

exchanged for books. The collected plastic bottles are sold to collectors and the money raised is used to support Rumbai's operations. This program is also our effort to support Jambi City Government reducing the use of plastic waste, in line with the ban on plastic bags in modern shopping centers and modern retailers since early 2019.

In addition, Rumbai has made innovation in utilizing unused paper and then recycling it to be reused. The results of recycled paper are used for flyers and notices.

Aside from being a library, Rumbai is also known as an alternative learning place where visiting children are also taught to preserve Jambi's culture through school activities, poetry, and tales.





In the Kenali Asam Educational Village, in addition to the Rumbai Program, PEP Jambi Field has also built Gerai Energi (Energy Outlet), namely Green Edu Agrotourism Rumbai Energi, which focuses on educational activities with the Urban Farming concept. The *Gerai Energi* concept later became an education center for the residents of Jambi City in general and particularly Kenali Asam Atas. In line with the Strategic Plan, there will be several activities at the Gerai Energi in the future, including Hydroponics, Toga, Culinary, Mini Cafe, Flower Garden, Compost Utilization, Oyster Mushroom Cultivation, BSF Cultivation, Energy Museum, and Infinity Room.

Until now, the community group organizes hydroponic tours. Hydroponics is not merely about selling vegetables, but also as an ededucational place for the community and a comfortable family tour in the middle of the city.

Sekolah Lewat Radio (SeLeRa)

The COVID-19 pandemic also poses challenges for the world of education. Distance learning is not easy to implement by some students and parents who do not have the appropriate devices nor adequate internet access. To address these challenges, in Bayung Lencir District, Musi Banyuasin Regency, PHE Jambi Merang supports the development of an innovative program, namely SeLeRa (*Sekolah Lewat Radio* or School via Radio).

Through SeLeRa, teaching and learning activities are carried out using the radio which is more accessible to parents and students because it reaches almost all corners of the village in Bayung Lencir District. At least there were 15,700 students from 59 schools who benefited from SeLeRa, so they don't fall behind in their studies. Almost all people also have radio equipment and can listen to educational materials. Radio learning activities are carried out during school hours where children can listen to the teacher and get assignments. There were 118 teachers who participate to teach on a rotating schedule.

Raising Students' Reading Interest, Establish a Reading Corner

Aiming at raising the students' interest in reading, PEP Papua Field, Zone 14, Eastern Indonesia Region, created a Reading Corner program. The Reading Corner was built at the Inpres 09 elementary school, Sorong Regency, Central Salawati District, West Papua.

The Reading Corner was welcomed enthusiastically by the students, teachers, and principals there. At least more than 350 books are neatly arranged on the shelves of the Reading Corner. The books consist of elementary textbooks and children's storybooks. It is hoped that students' reading interest will continue to rise that can support quality education in Indonesia according to the target for SDG 4 achievement.



Rumah Literasi Kreatif (RULIKA) Bunga Kertas

The Community Reading Center (TBM) Bunga Kertas was initially set up in the yard of a resident in Beringin Agung Village, Samboja District, Kutai Kartanegara Regency, East Kalimantan Province. He was motivated to support the children's interest of reading in his village. Over time, the activities at Bunga Kertas are not just reading books, but also painting, making calligraphy, English class, and dance. Pertamina Hulu Sanga sanga (PHSS), Zone 9, Kalimantan Region, saw the potential of the reading corner to be developed and provide great benefits to the community. After conducting needs assessment, followed by social mapping, PHSS then developed a program for the community reading corner and provided assistance for its continuity.

TBM Bunga Kertas later changed its name to Rumah Literasi Kreatif (RULIKA) Bunga Kertas, as the first step in transforming the community reading corner (TBM) into a center for community learning activities, and a social incubator, a place where every community member can express their creativity and potential as part of efforts to improve the community's literacy culture. This program has expanded and encouraged women's empowerment to form the Mama Muda Samboja (MAMUJA) group which organizes training in sewing,



embroidering, cooking, brooch making, and recycling used goods. MAMUJA's activities have resulted in various attractive products that are marketed online or through exhibitions and increase their income. The existence of RULIKA Bunga Kertas and the established groups have had a socio-economic impact on members.

PHSS has distributed assistance of books to add to the book collection, as well as various learning tools, and renovated the Bunga Kertas Creative Literacy House. Kak Rin as a local hero, hoped that RULIKA Bunga Kertas can become a literacy incubator for the wider community.



Rawa Hutan School

Tani Baru Village, Anggana District, Kutai Kartanegara Regency, East Kalimantan Province, is one of the remote areas that have difficulty accessing education.

This area faced challenges during the preparation of teaching and learning system, including:

- Swamp areas full of crocodiles that can only be reached by small boats.
- Remote areas that only rely on rainwater storage and without electricity.
- Half-collapsed walls of school building, broken doors, up to classrooms without ceilings, even inundated schools during high tide.
- Children who are not used to studying on regular basis.
- Language barrier.

These challenges did not discourage the teachers in Tani Baru Village, including Darta and Indria, the pair of teachers

who devoted themselves to making school not only as a means of learning but also a means to change the mindset of the community. The school that used to be only an elementary school with poor conditions, has now developed into elementary, junior high, and senior high schools. For his dedication, Darta won an award for the best school principal in Indonesia, and many other awards both personally and for the Rawa Hutan School.

Pertamina Hulu Mahakam (PHM) NPU is here to further explore the potential of the Rawa Hutan School in Mahakam Delta by implementing the Edupreneurship program. The program aims to improve the quality of environmental education with the main learning materials related to environmentally friendly ponds with economic value to create schools that have a spirit of “use and reuse” in their operations.





The Edupreneurship program provides benefits for students in environmental management through learning about pollution control and environmental conservation, as well as biodiversity. As a supporting facility of learning, the school has prepared an area of 250 m² for practicum of environmentally friendly prawn and crab cultivation. PHM-NPU also built a solar home system (SHS) installation to support school activities. The power supply from SHS can support the continuity of school activities without relying on power generators.

NATURE

- The average reduction in CO₂ emissions from the use of renewable solar energy was **1.46** kg CO₂/year and reached a maximum of **2.19** kg CO₂/year
- Average reduction of waste volume through the management of Waste Bank units was **24.9** kg/year and a maximum of **47.1** kg/year
- Water saving using WWTP since 2018 has reached **82.7** thousand liters/year

ECONOMY

- Increasing the average income of Filial Elementary School, Junior High School and Senior High School/PKBM in Tani Baru Village through Waste Bank management of **Rp6.2** million/year
- Fuel consumption cost saving using SHS of **Rp10.3** million from 2018 until prior to the COVID-19 pandemic

Outcome

- Capacity building for **18 educators** through assistance for 3 Mover Teachers in Tani Baru
- **2 students** who graduated from SMAN 1 Filial Senior High School Anggana received a Coastal Undergraduate Scholarship
- **14 students** graduated from SMAN 1 Filial Senior High School Anggana passed the selection to study at State Universities through the assistance for Mover Teachers in Tani Baru in the 2020/2021 period

- The establishment of **1 Unit** of Waste Bank in the Elementary, Middle, and High School Filial/PKBM in Tani Baru Village
- **The formation of the Environmental Volunteer organization** (Reling) from the initiative of SMAN 1 Filial Senior High School Anggana
- Synergy in the management and utilization of **1 unit** of School Boat with BUMDes Tani Baru

WELLBEING

SOCIAL



New Normal of Merdeka School

PEP Rantau Field is partnering with the Yayasan Anak Merdeka (YAMA) foundation to provide educational assistance of the junior and senior high schools for the children of Tampur Paloh through the development of the Junior High School and Islamic senior high school Madrasah Aliyah called 'Sekolah Merdeka'.

The school development has the impact of alleviation of poverty and declining number of child marriages in Tampur Paloh Village. Sekolah Merdeka carries the main mission to reduce the number of dropouts and produce dozens of graduates.

Tampur Paloh, a village in Simpang Jernih sub-district, East Aceh, in Indonesia's westernmost province, was once devastated due to flash floods in 2006. The remote location of the village, far from the city center and government, has caused education in Tampur Paloh Village to receive less attention and less developed. The the community's low education level has implications for social, health, and economic problems in the region, such as the high number of child marriages, vulnerable poor groups, and illegal logging that damages the environment.

The focus was initially on education through the Merdeka School, followed by the development of clean water installation



and during the program, in 2018 the Gampong Tiermi Ara Owned Enterprise was strengthened, as a community economic institution. The program was developed by integrating the Company's core competencies through the innovation of the Smokeless Lemongrass Distillation Equipment (SULE WANGI).

Merdeka School assistance was included in the strategic plan of PEP Rantau Field until 2021. Activities carried out for Merdeka School include building several infrastructures such as dormitories for male and female schools; decent bathing, washing, and latrine (MCK) facilities; and one library unit. In addition, learning supplies such as blackboards, books, and shelves, as well as computer units were also provided.

Training to improve the competence of teaching staff, especially regarding local content, was also provided. To support the school's self-sufficiency in meeting its operational needs, PEP Rantau Field



provided a stimulus in school fundraising, including gardens for the development of food security, areca nut cultivation and goat farming, as well as management of the lemongrass distillation in collaboration with Tampur Paloh Village Owned Enterprise.

in online learning or to take computer-based national examination (UNBK), with the construction and improvement of the Signal Catcher Tower. The tower is intended to provide internet signals and make it easier for students for the National Examination and online learning.

In addition, PEP Rantau has addressed the absence of internet signal that made it difficult for students to participate



Prior Program (2016)

The high rate of child marriage aged 13-15 every year

After Program (2021)

A significant decrease in the number of marriages in Tampur Paloh, there were no child marriages recorded in Tampur Paloh up to the end of December 2021



Prior Program (2016)

- Distance to school 50 km
- High dropouts (no high school and college students yet)

After Program (2021)

- Distance to school is 500 meters
- 100% graduation of students in junior and senior high school
- 41 students continue to university
- 100% of children follow the 12 year compulsory education

The establishment of the Merdeka Junior High School has significantly decreased the dropout rate in Tampur Paloh Village. In 2015, as many as 80% of Merdeka Junior High School graduates continued to senior high school. Three years later, all graduates managed to continue their education to the senior high school. This school also significantly decreased the number of child marriages and changed the community or parents' view on the importance of education for their children and denied child marriage. The significant decline in the number of child marriages in Tampur Paloh supports the vision 'Towards Golden Indonesia 2045'. The Indonesian government has expressed its commitment to eliminating child marriage by 2030 as the effort to achieve SDGs.



PEP Rantau Field hopes that, by giving assistance to Merdeka Junior High School and Islamic Senior High School, the education level of children in this village as well as the three neighboring villages will increase. Thus with higher education they can have better job opportunities in the future. The improvement in level of education also has a positive impact on increasing environmental awareness that can reduce the number of residents who work as loggers by more than 85%.

The SROI study conducted on the Gampong Tampur Paloh Berdaya Program, with one of the parameters was the Merdeka School activities, showed a score of 2.48. The SROI score indicated that the activities carried out at the school have proven outcomes. The existence of the Merdeka School can increase social capacity to address isolated educational problems that have begun to be solved.

Continuation of Formal Education for Anak Dalam Tribe

To realize quality and equitable education, PHE Subholding Upstream supports educational programs, including those for people in the frontier, outermost and least developed area, commonly known as 3T area, and for indigenous minority communities. Every program is implemented with the participation of local communities and stakeholders, including local community institutions.





One of our commitments to support the education of indigenous ethnic minorities is through the Anak Dalam Tribe Minority Indigenous Community Empowerment Program. Since 2017, PHE Jambi Merang has initiated this program with an emphasis on improving education and health, as well as building the community capacity without disregarding their culture, history, identity, and local wisdom.

79
Members of Anak
Dalam Tribe

10 residents
participated in
elementary school
equivalency program
(*Kejar Paket A*)

8 children of Anak
Dalam Tribe continued
their formal education
to junior high school in
Jambi

This program has had a significant impact on the Anak Dalam Tribe (SAD) community, starting from improving literacy, numeracy, and implementing exam for elementary school equivalency program (*Kejar Paket A*) for SAD school children. A total of 8 children have graduated and received a diploma from *Kejar Paket A*, thus they could continue their education to a higher level. PHE Jambi Merang in collaboration with the Jambi Community Learning Activity Center (PKBM) - the Education and Culture Agency, through the Learning Activity Center (SKB) provided opportunities of further learning for SAD children.

In 2021, as many as 8 SAD children were able to continue their formal education at Junior High Schools in Jambi in the third year. In this new environment, they lived in a dormitory and still received assistance from the Mitra Anak Dalam Institution which helped them with adjustment in the community.

The success of SAD children in formal schooling is part of the advocacy activities carried out by PHE Jambi Merang in the legality of the SAD community. The SAD community has been facilitated in making Family Register (KK) and ID cards, making it easier for SAD children to continue their education in formal schools.



Synergy of Education and Dance Culture

Indonesia has many cultures, including diverse traditional dances due to the influence of local culture. On the other hand, interest in dance and awareness to preserve culture has been diminishing, along with changes of interests in this modern era. Therefore, to revive the community's interest and awareness to promote culture, PIEP Pertamina Budaya carries out the Cirebon Free Dance School program.

The Cirebon Free Dance School program has been running since 2018, which was prompted by the plan to close SMK Pakung Wati vocational school due to the lack of interest in dance program participants. PIEP then provided assistance and institutional strengthening, as well as the revitalization of the Cirebon Kasepuhan Palace. In addition, the staff of the dance school is provided with assistance in dance school program management, diversification mapping, the introduction of dance culture to marketing and the wider community.

In 2021, the Cirebon Dance Free School Program won a Gold Award at the Indonesian Sustainable Development Goals Award (ISDA) event.



Currently, this Free Dance School program has grown rapidly. A total of 7 new dance varieties have been developed, namely Kembang Ronggeng, Sintren Ronggeng, Pesisir Cirebon, Burung Cirebonan, Topeng Samba, Topeng Losari, and Sekar Kaputren. The participants in the span of 4 years have grown to 221 people or a significant increase from initially 20 participants. Meanwhile, the number of trainers also increased quite rapidly, from 3 people to 10 trainers. The program continues to run during the COVID-19 pandemic, with several adjustments, including practicing dance online, developing virtual dance training videos, maximizing WhatsApp groups for communication, and creating a site to facilitate dance access at http://ptm.id/SekolahTariCirebon_CSRPIEP.



Developing Skills, Fostering Self-reliance



Independence supports sustainable prosperity. Every human resource potential that is employed properly can contribute to the wellbeing of the community's economy. Therefore, we support the achievement of community independence through the implementation of various skill development programs.



Juragan Sampah

Every day people generate waste which will become an environmental problem if not managed properly. The daily pile of garbage in local waste disposal sites (TPS) is not supported by adequate facilities and infrastructure that meet technical requirements, which resulted in unoptimized waste handling. On the other hand, the community's awareness plays an important role in waste management. Therefore, PHM BSP Field, especially in Senipah Village, initiated the Juragan Sampah program which focuses on empowering the Waste Bank unit group managed by women.



The Juragan Sampah established 1 Main Waste Bank and 23 Unit Waste Banks (BSU) with a total of 115 staff members. Currently, Juragan Sampah has gained 1,000 customers from 5 sub-district (Teluk Pemedas, Senipah, Handil Baru, Handil Baru Darat, and Sembilang). Customers will be trained to sort organic and inorganic waste before handing it over to the waste bank. The development program aims to support the economic, social, and environmental aspects of the beneficiaries, through the innovation of waste products, such as eco-enzyme disinfectant, ecobricks that can be used for household equipment, as well as souvenirs from 3R treated waste that are economically viable.



NATURE

- **1.2 tons/year** of inorganic waste volume reduction
- **400 kg/year** of organic waste used for agriculture

ECONOMY

- **Rp2.4 million/year** of residents' income from waste bank savings
- **Rp12 million/year** of Income from Waste Bank Unit
- **5 Women** Received job opportunities

Outcome

- Community Satisfaction Index **83.28, 'Very Good'** Criteria
- **320 Women** are able to manage the administration of the Main Waste Bank
- **20 Residents** produce disinfectant, souvenirs, and ecobricks

- **5 Sub-districts** Involved in waste management
- New Institutions Established: **1 Main Waste Bank and 23 Waste Bank Units**

WELLBEING

SOCIAL

“PESAT” Integrated Waste Management Pak Dalang and Sarah

The waste will keep piling up every day and will only pollute the environment if it is not managed. The National Waste Management Information System (SIPSN) data in 2019 showed Prabumulih City's annual waste pile reached 34.1 thousand tons. The majority of residents still have the habit of burning the garbage, causing air pollution, and throwing garbage into the river so that it pollutes the water. To solve the waste problem, PT Pertamina EP (PEP) Prabumulih Field, Zone 4, Sumatra Region, carries out the plastic recycling program called *Plastik Daur Ulang* or Pak Dalang program for inorganic waste management and *Sampah Jadi Berkah* (Sarah) program for organic waste management.

During the implementation of Pak Dalang, PEP Prabumulih Field provided supporting facilities for processing inorganic waste in the form of tubs and washing machines, dryers, press machines and revitalization of recycling centers. Then, groups were formed to be given initial dissemination and training. Currently, there are 14 group administrators who have been able to process inorganic waste into semi-finished recycled products. The sustainability of this program is supported by 185 families and 15 agencies as waste donors as well as 130 customers who have been able to sort waste independently.



The development of waste management continues. In managing organic waste, the community groups who joined the Sarah program are trained to be able to make processed foods and compost. As many as 345 people have received Sarah education and 79 administrators have been able to process organic waste into compost and processed food. The products include:

Processing
tofu dregs
into crackers,
brownies,
nuggets, etc

Processing
pineapple skin
into probiotic
drinks

Utilization of
used cooking
oil waste into
herbal soaps

Processing
household
waste into
compost

Processing
inorganic
waste into
semi-finished
goods

NATURE

- **480.87 tons** of organic and inorganic waste managed to be processed
- **24.87 tons** of CO₂e emissions have been reduced
- **2.4 tons** pile of tofu dregs managed to be utilized

ECONOMY

- **Rp20.1 million/month** SARAH group's Income
- **Rp34 million/month** PAK DALANG group's income

Outcome

- **345 people** have been educated about waste management
- **1 policy** to build the capacity of SARAH program by the Mayor of Prabumulih
- **15 stakeholders** participated
- **235 households** as SARAH customers
- PAK DALANG Community Satisfaction Index: **86.65 (Very Good)**
- SARAH Community Satisfaction Index: **88.46 (Very Good)**

- **9 products** produced by the group (trichompost, compost, cocopeat, herbal soap, crackers, soy flour, etc.)
- **79 members** of SARAH & PAK DALANG groups
- **2 KWT** Replication
- **185 households and 15 agencies** as waste donors

WELLBEING

SOCIAL

Based on the SROI study conducted in cooperation with universities, the Sarah program has an evaluative SROI score of 2.86, while the Pak Dalang program's score of 4.98. The results of these calculations showed that these programs had given positive impacts on the community in the social, economic, and environmental sectors.



Innovative Social Forestry

The Innovative Social Forestry program is one of the expansions of the Anak Dalam Tribe (SAD) community empowerment program. The program mainly aims to manage the potential of the forest and its surroundings to support their life and food security independently. New activities that were carried out in 2021:



In addition to new activities that were carried out in 2021, the SAD community continued the activities from the previous program developments such as: Floating Net Cages (Grouper), Water Care Team (Repair), and the use of innovations, such as kokotari, rapampa, dip-filters. pinocchio pump submersible filter, fish dryers, healthy housing, solar panels, and rides. The SAD community also continues to develop forest honey cultivation as one of economic activities that has been marketed to the community in general.

The SAD community has successfully managed and cultivated 22 hectares of land for productive farming, with agricultural products reached 434 tons and potential income of Rp448 million/year. Meanwhile, their grouper fish farming activities can produce 5.7 tons of fish per year with an economic value of Rp72 million/harvest. Currently, they have started their sales through e-commerce and managed to generate extra income from online sales.





NATURE

- **22 Ha** Area used for agriculture
- **495 Ha** Peatland ecology maintained
- **69 residents** Educated on environmental sustainability
- **3,886 Ton CO₂ eq/year** Reduction of emissions from forest and land fires
- **25 residents** as active Repair Member to mitigate water availability
- **10,800 m³** Water load utilized

ECONOMY

- **Rp72 million/year** Income of fish farming group
- **Potential Rp448 million/year** Income from productive agriculture

Outcome

- **20 SAD households** Joined the Forest Farmers Group (Gapoktanhut) Berkah Hijau Lestari
- **8 children** Received creative economic education

- **20 households** Settle in and socialize with Forest Farmer Groups
- Community Satisfaction Index score of **3.74 (scale 4)** 'Very Good' Category

WELLBEING

SOCIAL

Integrated Farming of Setaria Group Social Innovation System (Tante Siska)

PEP Sanga Sanga Field, Zone 9, Kalimantan Region, carries the Integrated Farming Program of Social Innovation System for the Setaria Group or commonly called Tante Siska. This program is a social entrepreneurship development activity through the application of environmentally friendly integrated farming with a circular economic system in Sarijaya Village, Sangasanga District, Kutai Kartanegara Regency.

Conventional agriculture is less economically and ecologically sustainable. The range of income earned by farmers is still below the UMR Kutai Kartanegara.



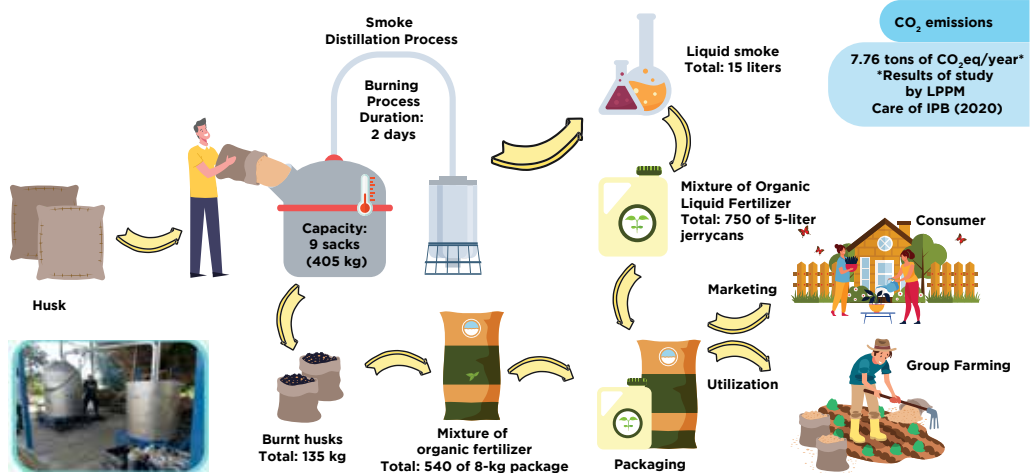


In this program, PEP Sanga Sanga Field has developed agricultural activities with a circular economy scheme that prioritizes efficiency and development of environmentally friendly product diversification. The program was conceived as a response to declining agricultural productivity with a roadmap from 2019-2023.

To support the community, PEP Sanga Sanga Field provides group assistance, training on fertilizer processing, fertilizer packaging, laboratory tests on fertilizers, laboratory tests for hand sanitizers, construction of nurseries and distilleries. The distillery house was built for citronella

plants processing into essential oils. The derivative of the essential oil is processed into hand sanitizers.

In addition, the integration of the Company's core competencies in the program in collaboration with the fostered groups has successfully produced a distillation device for burnt husk smoke (Damkar), which converts burnt smoke into liquid smoke and can be used as a mixture of compost and liquid fertilizer. This innovation has managed to reduce CO₂ emissions by 7.76 tons CO₂eq/year, based on the results of study from a university.





In the Tante Siska program, PEP Sanga Sanga Field also handles disaster by dividing it into three measures, namely prevention, preparedness, and recovery. In prevention measures, the disasters that have been mapped are climate change, floods, and landslides. To prevent the magnitude of climate change impacts, we implement greenhouse gas (GHG) emission reductions. While other efforts to prevent floods and landslides are to carry out land revitalization.

The COVID-19 pandemic has changed people's daily behavior. The community's awareness of hygiene has also increased to prevent the transmission of the virus. Therefore, we carry out preparedness measures through hand sanitizer innovation of citronella as support for the COVID-19 handling.

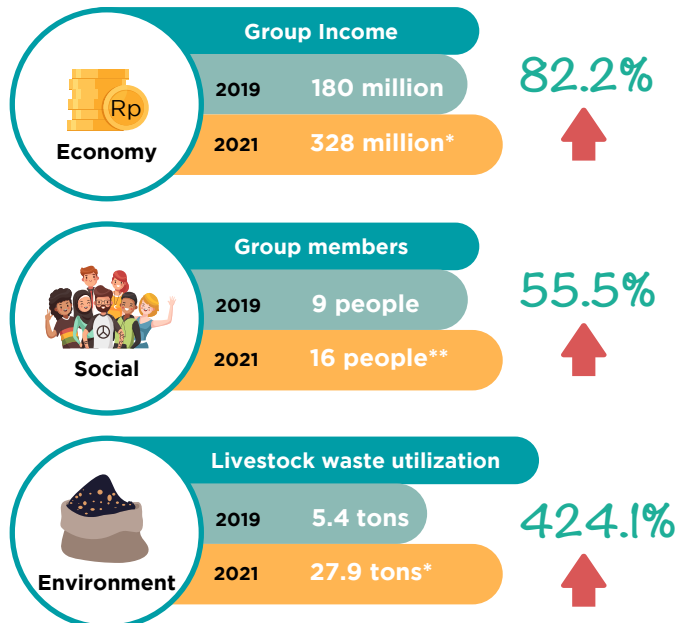
The recovery efforts carried out by Pertamina EP Sanga Sanga Field are categorized as rehabilitative and reconstructive measures. Our rehabilitative measures do, including optimizing sales of seeds and fertilizers, as well as supporting marketing of the product. We are redefining business strategy during the pandemic as reconstructive action on recovery efforts.

The Tante Siska program has increased the revitalization of 0.5 hectares of land in 2019 to 1.55 hectares in 2020, and 1.61 in 2021. In addition, there has also been an increase in group income, number of members and utilization of livestock waste.



CAPACITY

Capacity Building Sustainability



*Accumulation January-October 2021

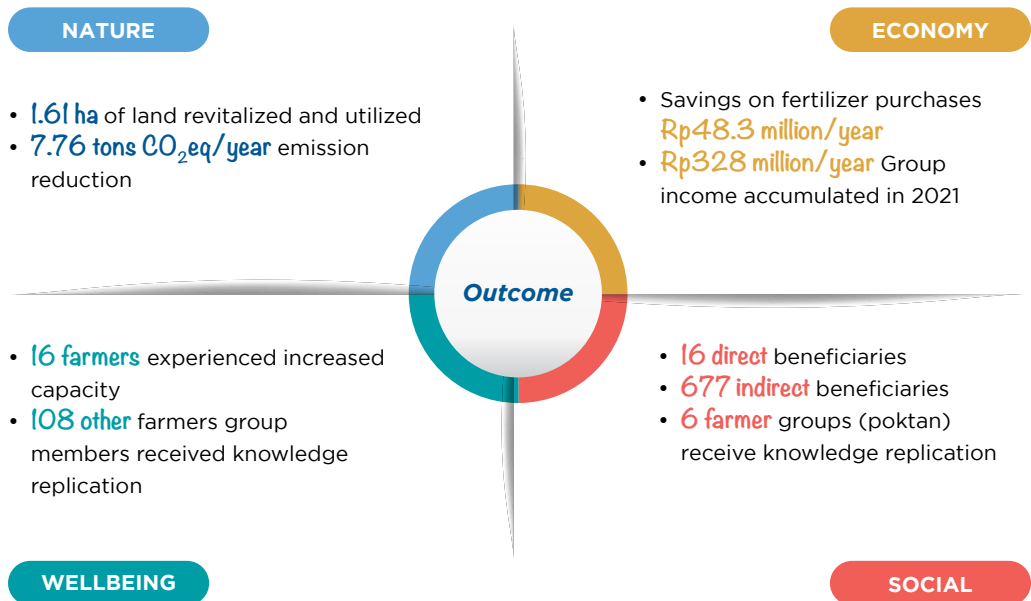
**Total per November 2021



The SROI study conducted in 2021 in partnership with a university managed to identify 35 types of impacts on stakeholders:



This study resulted in the SROI Ratio Value of 1:15.96.



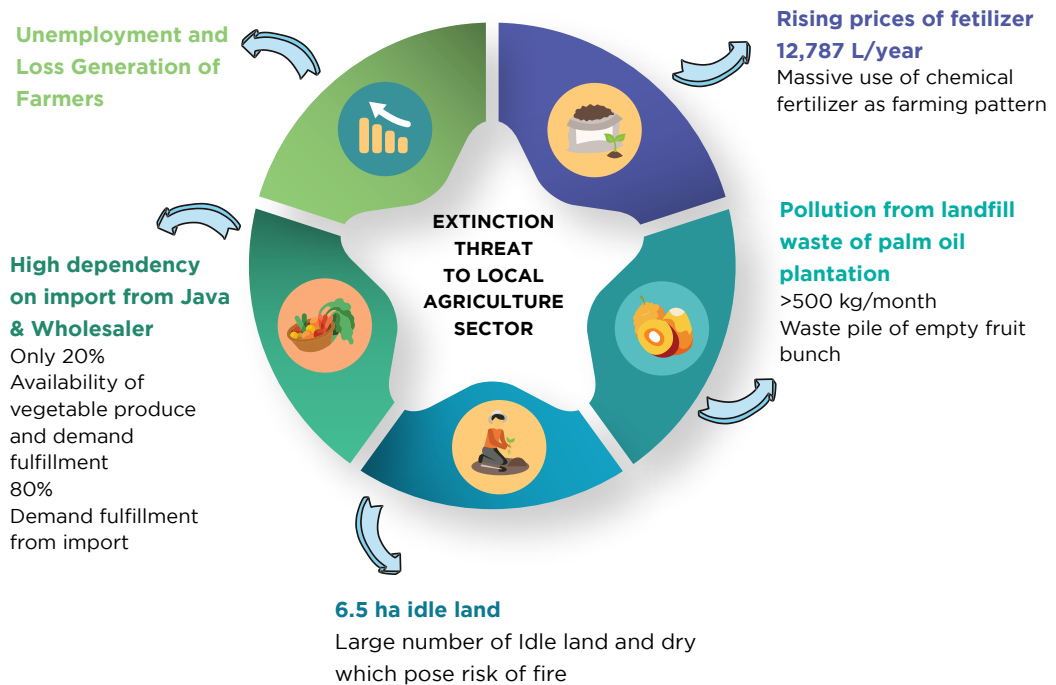
In 2021, Tante Siska Program paper entitled Social Empowerment: 'Revitalization of Post-Coal Mine Area through Integrated Farming: an Initiation from Tante Siska Project', named as selected paper and presented at the international event Asia Responsible Enterprise Award (AREA) 2021.



Pertakultur Method for Petani Maju 4.0

Pertamina Hulu Mahakam (PHM) BSP field, through the Petani Maju 4.0 Program contributes to farmer empowerment and facilitates the development of agricultural business management, which is supported by agricultural business support infrastructure, initiation of farmer group formation, farmer groups capacity building, and involvement of relevant government agencies, and business potential.

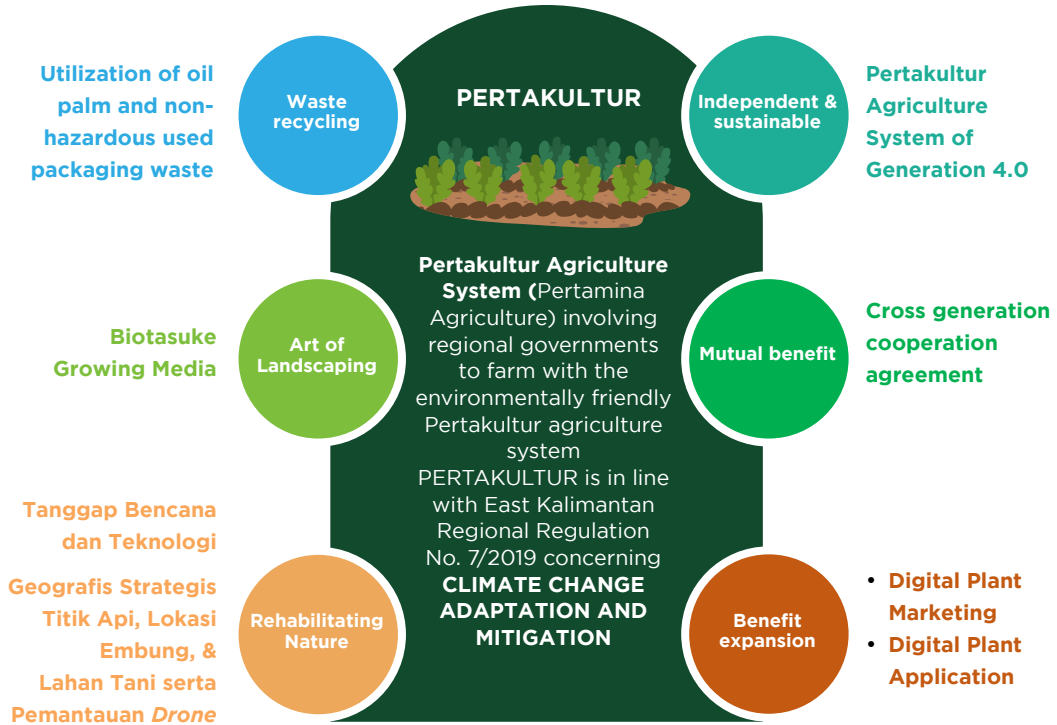
BACKGROUND



In this program, farmers are invited to apply pertakultur. Pertakultur is a farming method that utilizes energy, natural resources and is sustainable in order to minimize the impact of a garden area on the surrounding environment. Pertaculture has great potential, as a connection between planting sites and the surrounding environment.



Pertakultur System: A new system applied in Samboja District, Kutai Kartanegara



The Petani Maju 4.0 program applies core competency that we share for beneficiaries, to enable them to read geographical locations and monitor hotspots, as well as operate drones, which is one of the uniqueness of the program. Drones are used for monitoring and mitigating forest and land fires, as well as for monitoring irrigation in 2 reservoirs with a total area of 1,050 m³. The beneficiaries are also skilled and expert in the art of landscaping.



Local hero in 2021 Became Keynote Speaker at the National Webinar of Community Education Study Program, Mulawarman University, Samarinda City with 250 participants



The benefits of implementing pertakultur:



The COVID-19 pandemic and climate change across the globe is undoubtedly very alarming for all nations, including Indonesia. Pertamina Hulu Mahakam (PHM) responds to these conditions in various ways.

During the COVID-19 pandemic, people are required to always maintain their immune system in the face of the virus. Through the Pertakultur program, we developed fragrant ginger products as a preventive measure. To digitize marketing, we are also developing *Taman Digital* application which is also useful to reduce direct interaction during the pandemic. Preparedness efforts are also carried out by realizing Sustainable Home Food Garden Scheme (KRPL) for household-scale food security. This pandemic directly or indirectly has an impact on society, such as disruption of the economy. To recover from this impact, we encourage product diversification by processing agricultural

products into processed foods. It is expected to increase the community's income. In addition, another recovery effort is to build infrastructure for KWT production houses and Green Houses.

In response to climate change conditions, Pertamina Hulu Mahakam (PHM) made prevention efforts by planting 100 kaho trees (*shorea balangeran*) to ensure the availability of agricultural water. For energy security, we use renewable energy in the form of solar panels. We also attempted to reduce CH₄ emissions by 259.2 kg/year from Eco-Friendly Agriculture and maintain fertilizer availability. As a mitigation measure, we build irrigation ponds to reduce the risk of flooding and drought.

From the SROI study conducted in partnership with universities, found fixation on the impact of 18 outcomes. The SROI ratio was 1:2.33, indicating the program has made a positive contribution in addressing environmental and social problems.



NATURE

- **91.64 tons CO₂/year** Biomass stock carbon reduction
- **500 L Biotasuke** Decomposer Usage/Month Managed by Taruna Tani Bumi Seraiwangi
- **259.2 kg CH₄/year** of 2021 Reduction of CH₄ GHG emissions from plantation waste

- **49 women** Applying environmentally friendly farming methods
- **20 youths** Able to operate a drone
- **300 People** Use the Baanjung pavilion to study
- **5% Decrease** in the number of unemployment

WELLBEING

Eco-Friendly Farming in Bajo Village

Pertamina EP Cepu Field's Corporate Social Responsibility (CSR) program in Bajo Village, Kedungtuban District, Blora, continues to grow. Through the Sustainable Environmentally Friendly Healthy Agriculture program (PSRLB), the Bina Alamsri Bajo Village farmer group fostered by Pertamina is able to produce organic plants, including rice, vegetables, and herbal medicines. The number of members and the area of organic rice planting area also increased significantly. In 2018, there were only 16 members and now there are 51 people with a planting area that was

ECONOMY

- **Rp2.8/person/month** Women's income through the Women Farmers Group (KWT)
- **Rp2.4 million/land/year** Save on plant maintenance costs
- **Rp2.5 million/zone/month** Youth income
- **Rp1.2 million/year** Irrigation cost savings
- **Rp3.2 million/group/year** Group income from demonstration plot

Outcome

- **33 Youth** Engaged in agricultural activities and organize
- **3 Pavilion** of Agriculture supporting social activities
- **Established and become a learning facility** for residents
- **New Institution**
- Formation of **2 Women** Farmer Groups and **2 Youth** Farmer Groups

SOCIAL

originally only 1.1 hectares and now is 12.36 hectares. The additional land area of at least 30 percent.

Marketing of organic rice has reached big cities, such as Jakarta, Bogor, Bandung, Semarang, Yogyakarta, and Cirebon. This organic rice fostered by PEP Cepu Field also has been SNI and has an Inofice (Indonesia Organic Farming Inspection and Certification) certified. This organic rice has several varieties, including mentik susu, pandan wangi, rojo lele, sintanur, red, and black rice.



Niat Mila Maduke Mas Pepi Samo Mbak Lisa (Sustainable Healthy and Environmentally Friendly Pertaganik)

Food security during the COVID-19 pandemic is crucial for people in various regions, including residents in Karya Mulya Village. PEP Limau Field, which is part of Zone 4, Sumatra Region, supported the efforts of food security and farmer skill development so that they can survive under every circumstance. PEP Limau Field initiated the Healthy, Environmentally Friendly, and Sustainable Agriculture Program (PPSRLB) or better known locally as 'Niat Mila Maduke Mas Pepi Samo Mbak Lisa'. The program mainly focuses on developing sustainable agricultural system to increase and maintain the high productivity by paying close attention to the supply of nutrients from organic material, minimizing dependence on inorganic fertilizers, improving soil biota and diversifying crops.

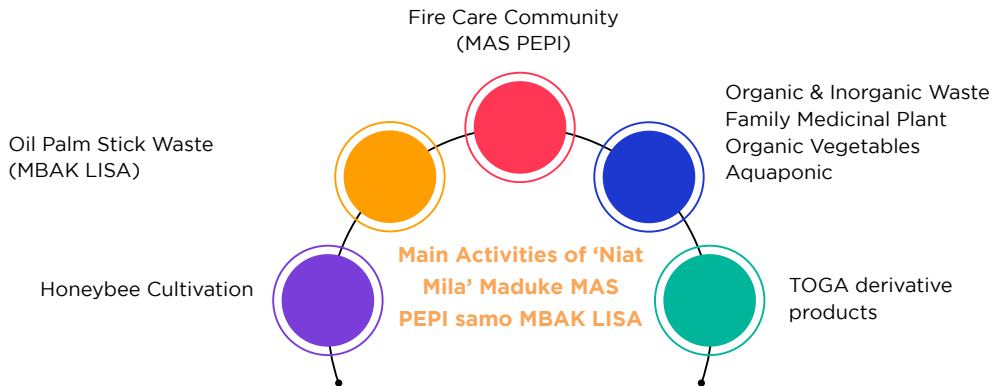


The PSRLB program has been running for 5 years since 2017. The developments of the program up to 2021 include:

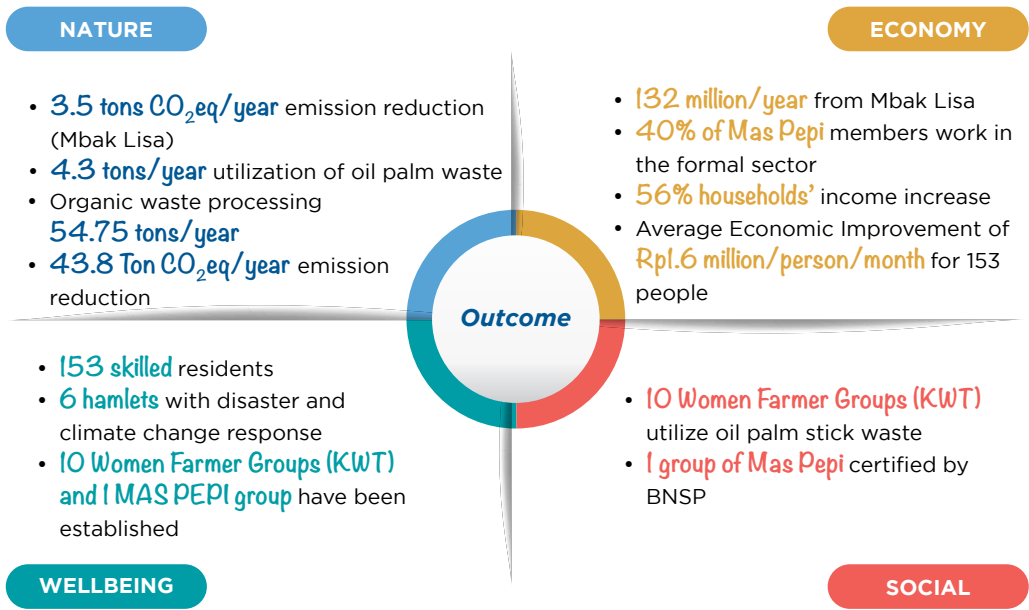
- Formation of the Rosela Women Farmers Group (KWT);
- Changes in product packaging to raise brand awareness;
- Producing organic fertilizers and pesticides;
- Cultivation of organic vegetables and fruits, as well as Family Medicinal Plants (TOGA);
- Producing herbal drink from medicinal plants cultivation;
- Management of food safety licensing for home industry (P-IRT);
- Producing hand sanitizers and Virgin Coconut Oil (VCO);
- Implementation of the Sriwijaya Expo exhibition 2021;
- Additional facilities and infrastructure;
- utilization of oil palm stick waste (MBAK LISA);

- Implementation of entrepreneurship training as well as training and establishment of a Fire Care Community (MAS PEPI).

Through the development of this program, the community, especially those with unemployed status, are trained to process and utilize oil palm stick waste into products of economic value. Palm sticks waste, which used to be burned and became a cause of land fires, is now reused as goods that have value, such as fruit baskets, pots, woven plates, and other forms of handicrafts. They also received training and the establishment of a Fire Care Community (MAS PEPI). MAS PEPI's members consist of 10 people who have been certified by BNSP. Through this program, PEP Limau Field has empowered and provided job opportunities for the unemployed.



This program has had impact on 163 residents whose skills and productivity increased. MBAK LISA has employed 153 workers, while MAS PEPI has 7/10 workers. Through Mas Pepi, PEP Limau Field officers can share their core competencies in OHS and basic fire fighting, while Mbak Lisa contributes various competencies in managing non-hazardous waste. This program has calculated the SROI with a result of 2.30 or has generated a benefit of Rp2.30 for stakeholders from every Rp1 invested by the Company. This collaboration has led Karang Mulya Village to win the ProKlim award from the Indonesian Ministry of Environment and Forestry in 2021.





Community Economic Improvement Program through Optimizing BUMDes Role

In order to improve the community's economy, Pertamina EP Cepu (PEPC) Zone 12, Region 4 of East Java & Eastern Indonesia synergizes with non-governmental organization partners engaged in community empowerment to carry out programs that involve BUMDes in Bojonegoro City. The program was prompted by the unoptimized role of BUMDes even though it has been formed since 2006. The BUMDes operations have not been fully effective and have not been able to contribute to community development in the village. PEPC saw this condition as an opportunity and a challenge to implement a community empowerment program with BUMDes as a potential target to be developed into one of the driving forces of the village economy. Laying chicken cultivation was then chosen as one of the BUMDes business units, considering the huge market opportunity in Bojonegoro which reached 9,217 tons per year, but egg production there was only able to meet no more than 10%/year of the total demand.

Based on the 2018-2021 program roadmap, activities are focused on institutional revitalization, strengthening, development, and independence of BUMDes, capacity building training, mentoring, and stimulating business unit development. The program ran well and had a positive impact on the BUMDes management and was even

replicated by other BUMDes management. Currently, there are 4 BUMDes participated in the program. As a result, approximately 85% of BUMDes management staff can earn above the regional minimum wage. A total of 61,403 households in Bojonegoro have become beneficiaries of this program.

Starting from 1,500 laying hens managed by BUMDes Makmur Rejo, Bandungrejo Village, now the cultivation of laying hens continues to grow with a production scale of 9,700 laying hens. The number of managing BUMDes has also increased, from 1 BUMDes to 4 BUMDes. In addition to BUMDes Makmur Rejo, the cultivation is also managed by BUMDes Bumi Makmur in Dolokgede Village, BUMDes Cakra Mandiri in Kacangan Village, and BUMDes Usaha Bakti Manunggal in Kaliombo Village.

Every year the average supply of eggs is 164 tons or about 2.6 million eggs/year, which can meet 12% of the egg demand in Bojonegoro City. Turnover from egg sales from 3 BUMDes reaches Rp3.27 billion per





year. The program has an impact not only on BUMDes management staff but also traders from shops that are supplied with the eggs. In addition, the program has also been able to contribute to village original income (PAD) every year. There are at least 108 local shops that buy the eggs at a price of Rp1,000 lower per kg compared to prices from other egg suppliers.



Broiler Farm of Harapan Baru Farmers Group

This program was formed to respond to the limited access condition on Bunyu Island, Bulungan Regency, North Kalimantan Province. Broiler Chicken Farm was chosen as one of the efforts to increase food security on the island. The high consumption of chicken meat by Bunyu community and the chicken meat that was still supplied from areas outside Bunyu Island was one of the potentials that needed to be responded to.

The broiler farm is managed by the Harapan Baru Farmers Group and is assisted by PEP Bunyu Field which is part of Zone 10, Kalimantan Region. In addition, the group members already have local knowledge in farming and animal husbandry. The Company contributed

to providing assistance and improving the group members' skills in institutional management and good and proper broiler chicken farming system.

Since the end of 2019 until now, the group has managed to raise the broiler for 11 periods. This has made the Harapan Baru Farmers Group the first to manage broiler farms collectively and become an innovator for other community groups to develop in the husbandry sector. In addition, through this program, as many as 15 group members earn an additional income of at least Rp300 thousand/period per member and the average group profit is Rp6 million/period of maintenance. The number of chicks has also increased, from the current 500 to 600.



Now, with strong institutions and compact members, the Harapan Baru Farmers Group seeks to develop broiler farm management by utilizing vacant land around the cage into a livestock-based Integrated Agriculture. Not only broiler farms, with the use of chicken manure, the group has succeeded in having an organic garden containing spice plants such as ginger, turmeric, curcuma and dragon fruit plants. The majority of these plants are still imported from outside the Bunyu Island area to meet the community's needs for these plants. This strengthens the Harapan Baru Farmer Group's efforts to realize the common goal of BUTANI "BUNYU KETAHANAN PANGAN MANDIRI" (Independent Food Security of Bunyu).

Local Contemporary Batik Training

PT Patra Drilling Contractor (PDC), a subsidiary of PT Pertamina Drilling Services Indonesia (PDSI), is taking concrete steps to support the Sustainable Development Goal 8. PDC realizes that some local Indonesian cultures are starting to be forgotten and need to be reintroduced through activities that can develop the potential of local communities.



One of the indications of the diminishing local wisdom is the difficulty to find Sakai Indigenous Batik. PDC responded to this by organizing a Local Contemporary Batik Training program in Simpang Belutu Village Hall, Kandis District, Riau. After going through the selection and specialization process, as many as 20 women were selected to participate in this program.



This program invites experienced instructors to provide batik training using the latest technology, as well as providing additional self-motivation material.

Through this program, PDC has a target to contribute to improving the community's welfare. The community is expected to be more creative and produce their works consistently to increase their income.

Kubedistik Batik Tarakan

The limited capacity of employment for people with special needs (disabled) prompted Sony Lolong to build a batik house for disabled people called Rumah Difabel in Kampung Satu, Central Tarakan District, Tarakan City. In that location, there are at least 278 people with disabilities who have the potential to be trained and empowered to improve their welfare. In addition, the establishment of the Rumah Batik Difabel is also driven by the potential for mangrove waste to be utilized and local batik artisans who have a concern for empowering people with disabilities.

Through the Tarakan Difabel Joint Business Group or Kubedistik program, PEP Tarakan Field conducts empowerment activities for people with special needs to live independently in the batik sector while preserving Indonesian culture at the same time.

Until 2021, there have been 22 people with disabilities who have become members of Kubedistik, consisting of 18 people who are deaf, 2 people with physical disabilities,



and 2 people with mental disability. These people with disabilities are given training to be able to dye with environmentally friendly coloring of batik with typical Tarakan motifs, as well as sewing and promotion. Within a period of 3 months, they can work professionally and are able to prioritize product quality so that they can run sustainable business for Rumah Batik Difabel.

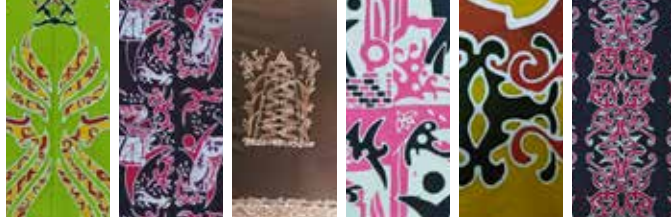
All stamped batik produced by Kubedistik are the original work of members of the PEP Tarakan Field fostered partner group, which were inspired by the oil mining potential in Tarakan City as the main sector of regional income. PEP Tarakan Field also provides facilities to file for copyrights of the batik motifs that have been created.



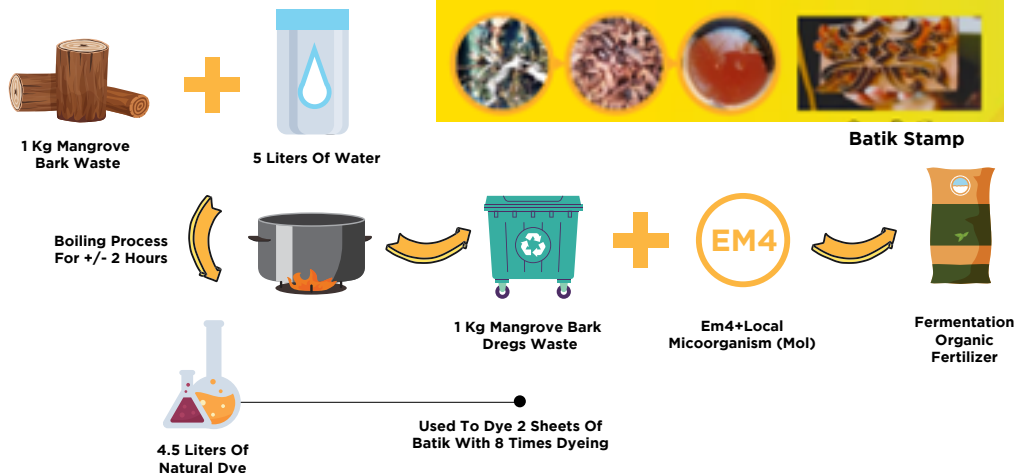
Producing
>500 batik fabrics
with 40 motifs in a month

The first environmentally
friendly batik maker in
Tarakan

Environmentally friendly
batik with 3 typical Tarakan
motifs and 3 motifs received
intellectual property rights
(HAKI)



The Batik dyes are made from environmentally friendly materials that also come from nature, by utilizing waste around the site, such as mangrove bark waste. Rumah Batik Kubedistik is the only one in North Kalimantan that treated its production waste at Wastewater Treatment Plant (WWTP), which is an innovation from the Company's core competency.



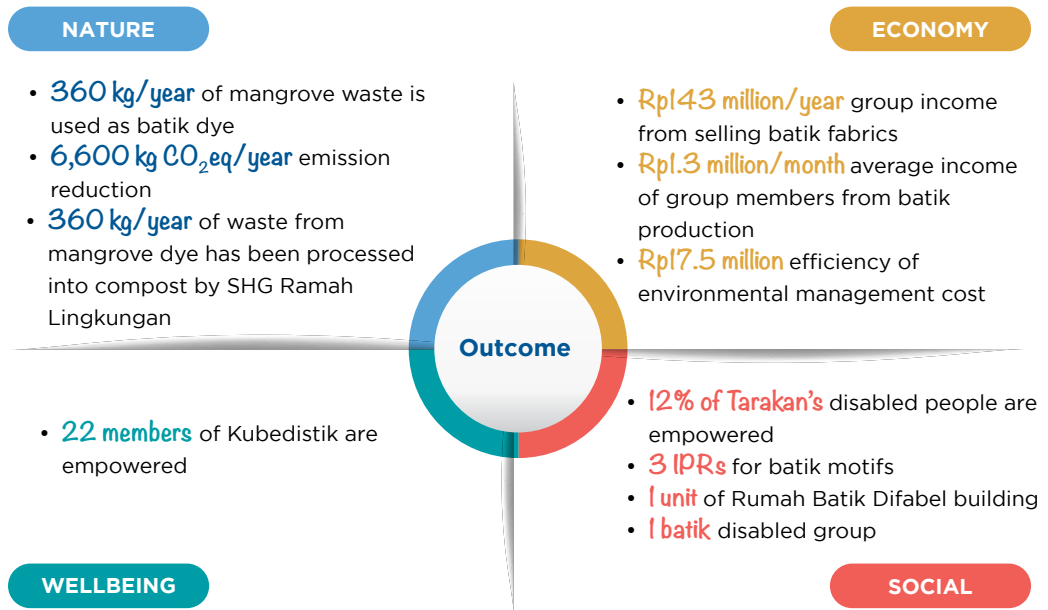
In order to maintain the existence of Kubedistik during the pandemic, Kubedistik has made innovations in producing Personal Protective Equipment (PPE), masks, face shields, and hazmat clothes with the typical Tarakan style. A lot of batik products from Kubedistik have even been marketed outside the city, such as Aceh and Papua. The typical Tarakan batik is expected to be recognized and marketed overseas. The price of the batik cloth is quite diverse, starting from Rp300 thousand to Rp700 thousand depending on the raw materials used. Kubedistik batik cloth has also been marketed through marketplaces nationwide.



Kubedistik is also actively contributing to the response to COVID-19. They made 1,500 masks and 25 hazmats which were then distributed to the general public. PEP Tarakan Field strives to continue to assist so that Kubedistik can be independent, develop, and survive with all the challenges that may occur. PEP Tarakan Field has initiated replication at the Al Marhamah elderly home. According to the program road map, PEP Tarakan Field targets to

reach other areas in Kaltara for program replication and independent business groups in 2023.

The SROI study conducted with partner institution, has identified 33 impacts on stakeholders including economic, environmental, wellbeing, and community impacts, with a ratio of 1:2.48. These results indicate that the program has been able to generate Rp2.48 in social benefits.





Emping Tike (Women) Empowerment

Emping tike is a typical food of Indramayu, especially in Jangga Tua area, Jumbleng Village, Losarang District, which is made from purun tikus (*Eleocharis dulcis*). The tuber of purun tikus is in the form of bulbous grass weeds and is commonly found in watery and muddy swamp areas. Unfortunately, the business potential of producing emping tike from Losarang has not developed well in terms of marketing since the business established in 1998. The margin earned by the community is still low because the product is only sold to collectors or to the market without a label or brand for the identity of the producer and is not directly sold to consumers.

PEP Jatibarang Field, which is part of Zone 7, Java Region, saw this problem and began to mobilize a women's empowerment program that aims to develop the emping tike business in October 2017. PEP Jatibarang Field hopes to be able to achieve increasing profits for

the community and making the Jangga Tua area, Losarang, as the center of emping tike crackers in Indramayu which later could also be called "Kampung Tike".

PEP Jatibarang Field carries out various activities to support the program, including the formation of groups and institutions, providing training to educate foster partners with reading and writing activities, facilitation of fostered groups with capacity building (soft skills) for production, assistance in business legalities, testing nutrient content, and product certification, equipment procurement, packaging improvement, as well as marketing at various market levels. The target beneficiaries of the Jatibarang Field PEP empowerment program are 25 housewives who are members of Kuppas Bestari, while the other 102 are indirect beneficiaries who come from customers of Kuppas Bestari products who have received products with added value in the terms of legality, halal certified, and attractively packaged.

Total turnover ranges
Rp15-Rp300 million/month

25 people members of the
Housewife group 'Kuppas Bestari'

102 people
Beneficiaries





Now, emping tike products can be easily found in gift shops, minimarkets, and even supermarkets in the Ciayumajakuning area (Cirebon, Indramayu, Majalengka, and Kuningan) as a sign of progress of the PEP Jatibarang Field's fostered groups in marketing their products. The Regent of Indramayu even acknowledged the emping tike product as one of the 5 featured products in Indramayu.



The CID programs carried out by Upstream Subholding gives room for gender equality. Women who initially did not dare to express their opinion because they followed local culture which tended to follow the decisions of their husbands/men, have now undergone a more inclusive transformation with women's involvement in decision making and playing an active role in program development.

Pesisir Berdikari

On the coast of Karawang, PEP Tambun, which is part of Zone 7, Java Region, has developed an Independent Coastal empowerment program. This program supports the cultivation of seaweed and its processed products to improve the economic level of the community. The Pesisir Berdikari Program was initiated in 2016-2017 through the formation of a group of pond farmers in the Mina Agar Makmur Cooperative (KMAM) followed by assistance and administrative training as well as seaweed cultivation.

Seaweed cultivation has provided benefits to farmers and the environment. At least 2,000 kg/year of seaweed waste is utilized as fish feed material, thereby saving fish feed costs by 25%. Seaweed that is fit for processing will be processed with an

average of 14,000 pieces of products a year with a sales turnover of Rp77 million/year.

The development of seaweed with good and proper management will have a positive impact on the community's welfare. New innovations developed in the Pesisir Berdikari (Self-reliant Coastal Area) program are solar ovens and polyculture. The solar oven has a production capacity of 10,000 units of product with a drying time of 48 hours and can save energy up to 28,000 MegaJoules. This innovation has been awarded patent No. S00202107512. Meanwhile, polyculture is carried out to optimize ponds by cultivating 3 aquatic resources namely seaweed, milkfish, and shrimp in 1 pond at once. On average, in 2 months it can be harvested, 4 months of harvesting seaweed, and 6 months of harvesting milkfish.



Polyculture has provided benefits in the form of production of 678 tons/year of high-quality seaweed. Turnover from sales of polyculture products reached Rp4.75 billion/year. The polyculture has empowered 33 poor people. Currently, KMAM has 76 members with 722 beneficiaries including members and partners.



NATURE

- 66.7% land use saving
- 66.7% water use saving
- 2 tons of seaweed waste utilized

ECONOMY

- The cooperative's net income **Rp37.2 million/month**
- Processed product income **Rp77.6 million/year**
- Employee income **Rp5.4 million/month**

Outcome

- Beneficiaries **722 people**
- Empowered poor people **33 people**
- Community satisfaction **index 84.9** with a score of **A (very good)**
- Independence **index 17.5 (independent)**

- Feed members as many as **76 people**
- **53 people** affected by flood were helped
- Member of food processing **7 people**
- **9 members** of processed seaweed

WELLBEING

Sangatta Kelulut Garden

The Sangatta Kelulut Garden Program was formed given the potential of nature that supports honeybee cultivation, rubber vegetation, and human resources for honeybee farmers. This program is carried out by PEP Sangatta Field, part of Zone 9, Kalimantan Region in Sangatta, East Kutai. The Kelulut Plantation is managed by fostered group Trigona Reborn consisting of 25 farmers.

Currently, they carry out 6 main activities, namely the management of the kelulut (stingless bee) garden by providing colony assistance and building flower gardens. The next main activity is the production of packaged kelulut honey. In one month, the fostered group can produce and sell 30 liters of honey with the highest sales value of Rp18 million. To increase the amount of honey, the group made an innovation of Bee Sap, a honey harvesting tool, which is



capable of harvesting honey 2 to 3 times faster. The next innovation is Rombong Etam, an innovation in promoting kelulut honey bee products while still upholding the values of local wisdom. The fostered group initiated the use of eco-friendly flower pots called “POTBUNRALINK” with the aim of making the Kelulut Sangatta Gardens more beautiful and able to reduce waste. Another activity is empowering South Sangatta Posyandu cadres to process one of their family medicinal plant (TOGA) garden products, namely ginger to make kelulut ginger cookies combined with kelulut honey from the Trigona Reborn Group.



NATURE

- Environmental conservation covering an area of **3 ha** through the creation of a kelulut garden with flower and fruit vegetation.
- Recycling **85 kg** of plastic bottles and used rubber tires as a medium for planting flowers in the kelulut garden.

ECONOMY

- Assistance of **55 colonies** of kelulut bees and the kelulut garden vegetation with a total assistance of **Rp92 million**
 - The group was able to increase sales of honey by **30 liters** with a sales value of Rp18 million. Each member received extra income of **Rp720,000**

Outcome

- The birth of a **new educational tour** that benefits not only the beneficiary group, but also the residents of East Kutai.
- **Encouraging residents** around the kelulut garden to cultivate kelulut bees and plant flowers and fruit.

- Involving **25 members** of farmer groups as beneficiaries.
- The group **became an inspiration** for other farmers in donating honey to health workers during the COVID-19 pandemic.

WELLBEING

SOCIAL



Tourism Village in Riau

Pertamina Hulu Rokan (PHR) WK Rokan developed the Tourism Village Program in Kampung Patin, Koto Mesjid, Kampar, which was supported by SKK Migas, in collaboration with the Riau School of Tourism (STP Riau) and in synergy with the Kampar Regency Tourism Agency as well as the Riau Province Tourism Agency. The Tourism Village prioritizes multi-stakeholder cooperation by involving various elements that to successfully realize tourism potentials. The Tourism Village Program provides alternative livelihoods for local communities, who previously depended on the rubber plantation sector which heavily relied on weather factors.

The assistance in the tourism village program has started since 2019, followed by exploring village potential, identifying potential tourism objects, as well as exploring opportunities for multiplier effects from tourist visits. The assistance is also carried out to improve the skills of tour guides, increase digital marketing of product competencies, and increase community-based village governance competencies.

In addition to the Tourism Village, the community has also successfully developed a food industry based on local potential, catfish. Currently, there are 160 hectares of fish ponds capable of producing 15 tons of catfish per day and generating an income of Rp90 million per



day. The people of Koto Mesjid Village also produce various processed catfish, such as smoked fish or *salai*, fish nuggets, fish meatballs, skin crackers, catfish pudding, fish dumplings and fish shreds. In addition, the community has also developed various training facilities, such as training on fish hatchery, making fish feed, and fish processing.

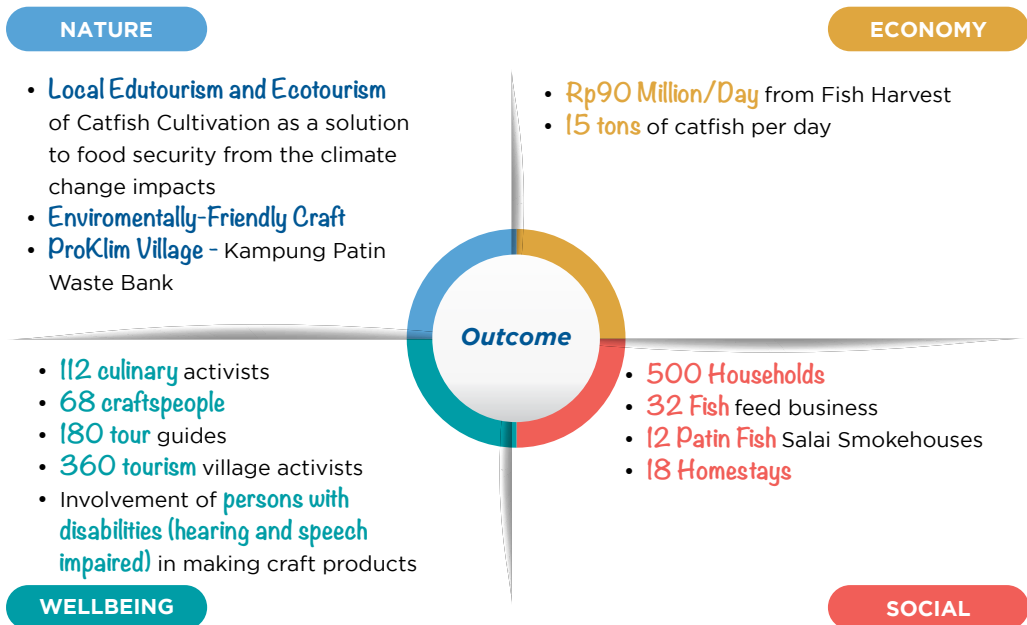
Koto Mesjid Village has also developed ecotourism, which combines the concept of natural and cultural tourism, such as Sungai Gagak Waterfall, Puncak Kompe, Lembah Aman Waterfall and Gelek Tobu attraction.

The success of Koto Mesjid Village in building multi-stakeholder synergy is an innovation that has gained appreciation, including:

- National 1st Place for Tourism Village Assistance Universities in 2020.
- Cleanliness, Health, Safety and Environmental Sustainability (CHSE) Certification in 2021.



- Second place in the Souvenir category at the 2021 Indonesian Tourism Village Award from the Indonesian Ministry of Tourism and Creative Economy.
- Sustainable Tourism Village Certificate from the Indonesian Sustainable Tourism Village Council Certification Institute in 2021.



In addition to supporting community economic development, PHR WK Rokan also supports the Climate Village Program (ProKlim) by developing a waste bank. The creative home recycle program, also make use of disposable waste products or paralon waste to be recycled into products with economic value such as pots, tissue holders, glass trays, wall hangings and rattan stick plates.

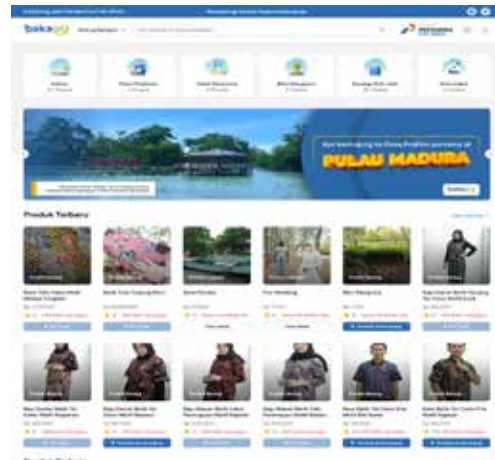
These activities also involves persons with disabilities (hearing and speech impaired) in making handicraft products made from bamboo sticks, rattan. Furthermore, PHR plans to replicate the best practices in Kampung Patin to be applied in other PHR operating areas.



Fostered MSMEs Go Digital

The significant number of Micro, Small and Medium Enterprises (MSMEs) in Indonesia plays an important role in driving the economy. PHE as Subholding Upstream and Kalimantan Region collaborated with Pertamina Balikpapan SOE House and Bank Indonesia (BI) East Kalimantan to increase the productivity of fostered MSMEs by the Kalimantan Region. This collaboration has facilitated 17 fostered MSMEs by the Kalimantan Region as pioneers in acquiring QRIS (Quick Response Indonesian Standard)/ barcodes as digital payments for purchase transactions. It is in line with Bank Indonesia's goal of implementing digital payments through the QRIS system, which is expected to be able to target MSMEs and the Indonesian people.

The fostered MSMEs receive assistance in using QRIS and are currently starting to be applied to payments at online and offline exhibitions. The use of QRIS has made it easier for MSMEs in the buying and selling process, especially for consumers who have the option of digital wallet payment methods. Aside from the MSMEs fostered



by the Kalimantan Region, we also have provided capacity building training for PHE WMO fostered partners, by utilizing web-based digital applications bakaoo.id as marketing media for their products that can be accessed publicly. Sales of marine products such as sea cucumber crackers, shredded, crab rengginang and others from 7 MSMEs and tourism service organizers can all be accessed on the 'Bakaoo' marketplace website. A total of 11 other products offered at bakaoo including Tanjungbumi batik and local delicacies, such as mangrove urap (salad with spiced shredded coconut) and mangrove coffee.



Civet Coffee Village of Prangat Baru Village (Kapak Prabu)

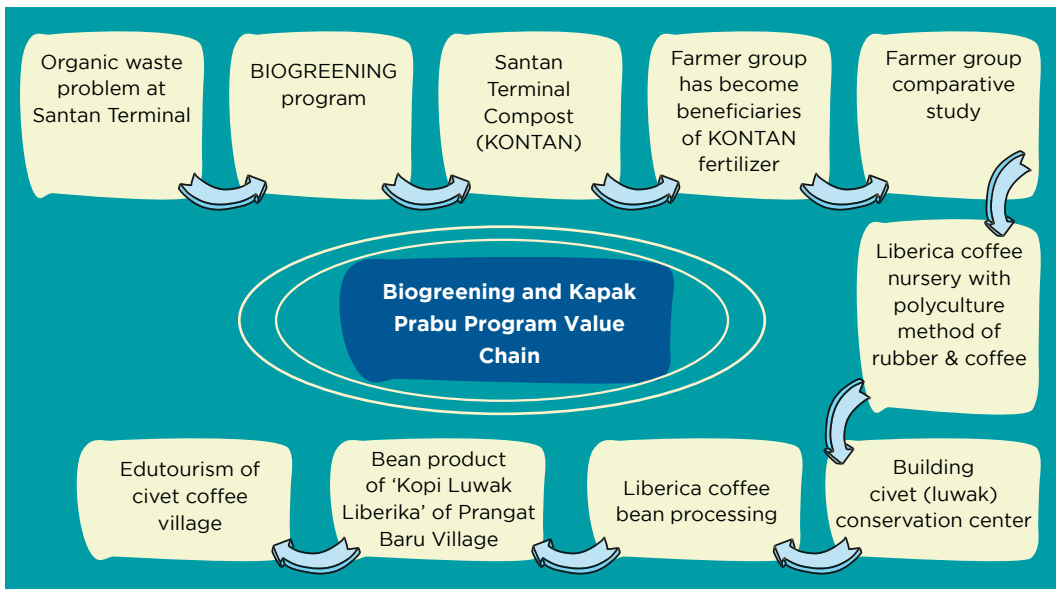
Kapak Prabu is a program to empower the civet coffee village farmer group in Prangat Baru Village which was initiated by Pertamina Hulu East Kalimantan Northern Operation Area (PHKT DOBU). The program centered in the cultivation of liberica coffee plants by fermenting coffee beans naturally by civets, locally known as luwak. This program aims to create added economic, social, and environmental value for the farmer group and community in Prangat Baru Village.

The civet coffee farmer group was formed in 2020, consisted of 34 members who most of them were previously rubber farmers with a passion in increasing sustainable agricultural resources, increasing the welfare of members, and diversifying Liberica coffee cultivation.

The application of polyculture method for rubber plantation is the original idea of the farmer group and the first time in East Kalimantan Province. This involves a symbiotic mutualism between liberica coffee farmers and wild civets in the coffee bean fermentation process. The innovation is biogreening, which is processing organic waste into fertilizer distributed to farmer groups.

Problems:

- The generation of food waste at Santan Terminal reached 100.55 tons
- Low productivity of smallholder plantation owned by community
- Monopoly on the prices of raw rubber by middlemen in Prangat Baru Village
- The decline in the prices of raw rubber from Rp14,000/kg to Rp4,000/kg

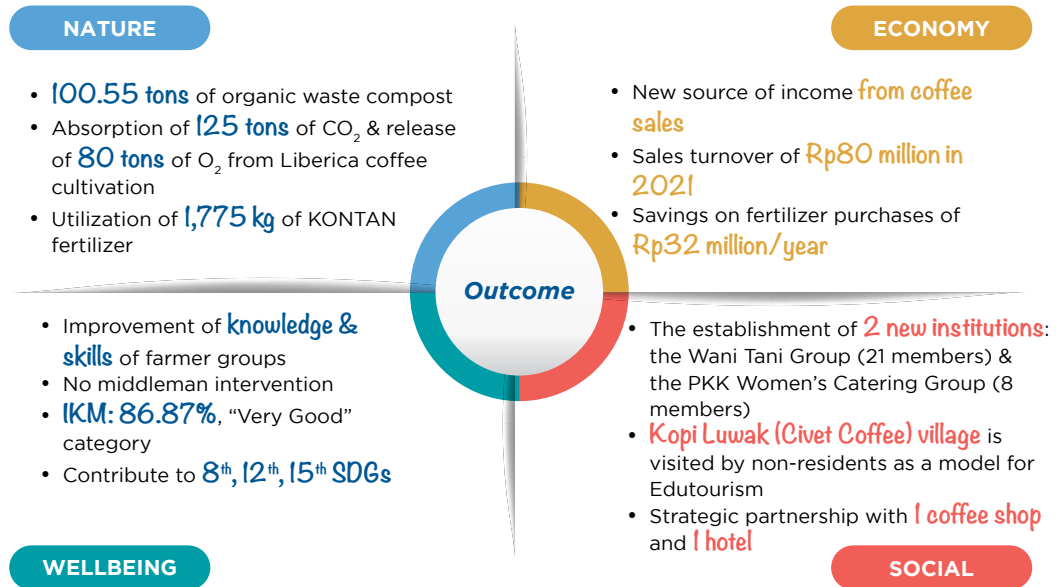




PHKT DOBU adopted the Social Innovation Program through the implementation of Corporate Social Innovation (CSI): BIOGREENING with the output of Santan Terminal Compost Fertilizer (Pupuk KONTAN). The organic waste processing by composting method (BIOGREENING) succeeded in processing 100.55 tons of waste.

In 2021, an additional 4,070 Liberica coffee seedlings were planted on an area of 4 ha by 15 group members.

The program has provided economic, social, and environmental benefits for the civet coffee farmer group in Prangat Baru Village and has a community satisfaction index of 86.87% or 'Very Good' category. In addition, the SROI results of 1.03 indicate that the program has made an impact on the members' self-reliance in conducting nurseries and improving skills with comparative studies.



Saung Pandu Integrated Eco-farming System

Badak NGL implements the 5P Concept in supporting the achievement of SDGs, through several activities, including the Integrated Agricultural Flagship Business or *Saung Pandu* program. Saung Pandu is a fostered partner of Badak NGL consisting of community groups from Berebas Tengah Village, Bontang City. This program focuses on the Integrated Farming System, which combines three types of activities, namely agriculture, fisheries, and animal husbandry as commodities.





Previously, Bontang residents concerned about several issues, such as disguised unemployment, disharmony between communities, and land disputes. Nevertheless, Badak NGL recognized the potential behind these problems, including productive land, human resources, and water resources from WWTPs, which will provide benefits to the community and even the environment if managed properly.

The Company collaborates with the community through Saung Pandu, in using land for integrated agricultural activities by making use of treated domestic wastewater which is periodically tested in the laboratory to determine its safety to be used for agriculture and animal husbandry, as well as new and renewable energy. On the land, several points of activity, such

as organic farming, aquaponics, solar panels, microhydro, freshwater fish farming, and magot houses. Vegetable products that can be found on Saung Pandu's organic farm are bok choy, beans, kale, eggplants, chilli padi peppers, cucumbers, tomatoes, and basil. In the fisheries sector, Saung Pandu cultivates two types of freshwater fish, namely catfish and silver catfish. Saung Pandu guarantees the freshness and quality of products it develops because they do not contain preservatives.

The Saung Pandu program has revitalized a land area of 3,843 m² with 46 group members. With the various benefits received, the Saung Pandu Program earned an IKM (Community Satisfaction Index) score of 3.36 out of a scale of 4 or 'Very Good' category.

NATURE

- Utilization of treated waste **94,608 m³/year**
- Electricity production from **2 units** of solar panels at **210 watts**
- Electricity production from microhydro power plant at **13.5 volts - 2 amperes - 27 watts**
- **1 group** can implement integrated farming
- **10 people** are skilled in fish farming (fish breeding and rearing)
- **7 people** are skilled at agricultural
- **1 resident** is skilled at managing micro hydro power plant and 1 resident is skilled at managing solar panels
- **1 group** is skilled at managing fishing ponds and stalls

WELLBEING

ECONOMY

Total sales turnover **Rp114.9 million** for 6 months of Cultivating Freshwater Fish and Organic Vegetables

Outcome

- **71 people** organized in Saung Pandu group
- **Establishing** a harmonious relationship between the community and the company
- **Community and company synergy** in doing productive agriculture

SOCIAL



Boosting Creativity, Breaking Boundaries



In community empowerment programs, we also apply innovations in them. We hope that the people involved to gain not only socio-economic benefits but also broaden their insight and boost their creativity by applying innovation and technology in the programs.



Turning Waste into Blessing – Utilizing Bioactivator Innovation

The Bank Management center of Joint Business Group (KUB) Peduli Sampah Terpadu Program is implemented by Pertamina EP (PEP) Adera Field, which is part of Zone 4, Sumatra Region, in the Ring I location of its operating area. The collected waste is managed with a touch of innovation and technology, which can turn into useful goods. However, waste management group's activities are not limited to waste processing. They are also making innovations, one of which is processing stale rice waste into bio-activators.

The bioactivator is in the form of liquid organic fertilizer which can also serve as a waste decomposer. Bioactivators can be used with organic waste, such as a mixture of straw to produce biogas and bioslurry in a special container called biodigester. The biogas production process also produces solid waste, aside from producing biogas and bioslurry. The solid waste is then used as fertilizer so that this innovation supports zero waste.

So far, the Rumah Peduli Sampah has managed to engage 20 marginalized youths in Tanah Abang Jaya Village. PEP Adera Field empowered the youths whose background are unemployed, drop out, as well as former drug users. They are now managing the Bank Management Center of KUB Peduli Sampah Terpadu.



Using GPS to Maximize Fishermen's Catch

Fishermen in Muara Pantuan Village, Anggana District, East Kalimantan who are members of the Pantuan Jaya Joint Business Group are equipped with fishing facilities by PT Pertamina Hulu Mahakam (PHM) – SPU Field. The Nelayanku Hebat program is an environmentally friendly and sustainable fisheries integration program that applies advanced technology and innovation to maximize fish catches. PHM SPU trained 12 groups with 170 members and collaborated with Marine and Fisheries Agency of Kutai Kartnegara.



The program was developed due to the need of managing economic, social, and environmental issues. Previously, fishermen used fishing gear that damaged the environment. The low number of catches could not cover the fishermen's high operational costs. Their fishing locations also intersect with the national vital object areas and general shipping lines which requires the management of safety issues.

PHM-SPU distributed FADs for fish to gather to replace the use of trawling. The FADs have been developed into 'Fish Apartments' which have a unique apartment-like design to attract more fish to gather. This innovation of fish apartment development is part of the core competency of PHM-SPU employees shared by the PHM Construction Division to fishermen, through apartment construction training.

PHM-SPU also introduces use of GPS and fish finder which will help fishermen to ensure the accuracy of fishing points when fishing. A total of 24 boats are equipped with GPS and 4 boats are equipped with solar cells. In introducing this innovation, the PHM Topography Division shared their knowledge through GPS and fish finder training, as well as assistance in using GPS. Meanwhile, the PHM Technical Division provides training on solar cell maintenance, assistance in charging GPS battery data and ship lights using solar power. As a result, fish catches increased by 54%, fishermen's income increased by 21% per month, and can save fuel costs of up to Rp2.4 million per month.



“ The innovations developed in the Nelayanku Hebat program have created shared value (CSV) in the form of the supply of seafood and processed fishery products to PHM catering. ”

NATURE

- **1 Coastal Village** (Sepatin Village) Declared as Climate Village (ProKlim)
- **7.68269 Tons CO₂eq**
- **32.4 Ha Mangroves** protected
- **8l Liters/month** The environment is protected from waste cooking oil

ECONOMY

- **Rp1.6 million/person/year** Increase in fishermen's income
- **Rp2.3 million/person/month** Operational cost savings
 - **Rp1.2 million/package/trip** Additional income from fishing trips for fishermen
 - **Rp60 million/group/year** Income of 4 MSME groups

Outcome

- **13 Fishermen (26%)** Not tied to courtiers (middlemen)
- **28 Fish Apartments** Self-help fishermen (12 groups)
- **4 SME Groups** Able to market to other villages
- **98.35% SMI** Score Criterion 'Very Good'
- **1:18.64 SROI Result**

- **56 Fish apartment points** Collaboration between fishermen
- **12 Fishermen Groups** Joined in Gapokkan
- **1 Pantuan Sinar** Abadi Workshop Formed and used by all fishermen
- **2 Persons with disabilities** Work as mechanic

WELLBEING

SOCIAL





Perisakti, Innovative Fish Cultivation Center of Kapar Village

The biofloc system innovation was developed by PEP Tanjung Field, which is part of Zone 9, Kalimantan Region, in the Perisakti program (Innovative Kapar Village Fish Cultivation Center). The problem behind the birth of this program and innovation was the risk of water pollution due to industrial activities of 100 fishponds in Kapar which were abandoned due to capital constraints and remote access. We saw the potential of a group of people who were interested in the fishery sector plus the government program of Gemar Makan Ikan (Gemari) or eating more fish campaign, which led to the birth of Perisakti.

Perisakti is carried out in Kapar Village, Murung Pudak District, Tabalong Regency, with the beneficiaries, such as the Berkah Tani Fisheries Group, the Madani Group, the Pertago Group, and the Paguyuban Taman 10K. The beneficiaries were given training about biofloc system fish farming and training to make prebiotics. PEP Tanjung Field collaborates with the Tabalong Regency Fisheries Agency, Desaru Kapar Government, community groups, and the private sector CV D'Papuyu Farm. The SROI study of this program involved 6 stakeholders and resulted in 19 impact outcomes. The SROI result was 1:4.36 and the program is declared to have provided social and environmental impacts that are effective in solving problems.

NATURE

- **9 biofloc** ponds
- Biofloc residual water contains nutrients with a neutral pH ranging from **6.5 to 7.0** which is good for soil fertility
- Utilization of residual biofloc water is **9,414 L**
- The area of agriculture that utilizes nutrient water from the remaining biofloc water is **100 m²**

ECONOMY

- Annual turnover **Rp48 million/year**
- **Rp12 million** group income per harvest (per 2-3 months)

Outcome

- **4 members** of the group are skilled in biofloc system fish farming
- **IKM 92,321 Very Good**
- **SROI: 1:4.36**
- **Sharing knowledge of local heroes** to the community Twice a year
- **3 farmer and 10K garden** groups
- **40 group** members
- **100 people** Indirect beneficiaries

WELLBEING

SOCIAL



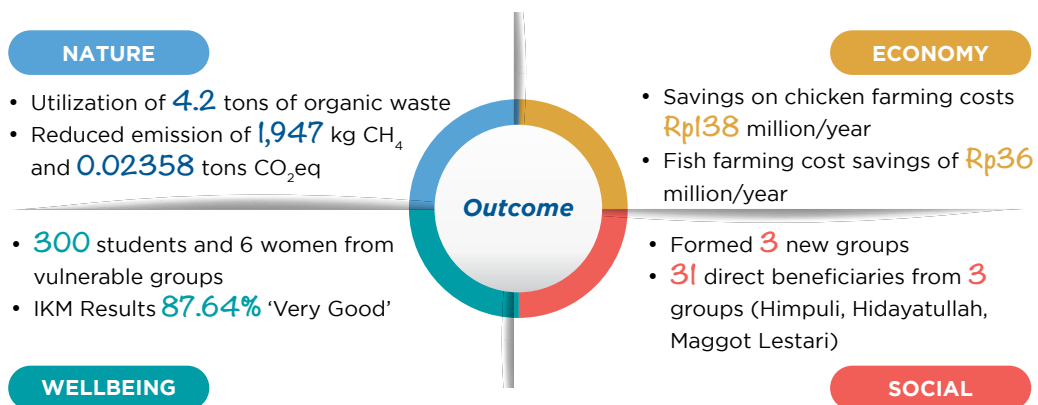
Processing Waste with Bulatih

PT Pertamina Hulu Kalimantan (PHKT) Southern Operational Area (DOBS), Zone 10, Kalimantan Region, developed the Black Fly (*Hermetia illucens*) or Bulatih Cultivation Program in Penajam District, North Penajam Paser Regency, East Kalimantan as an innovation in waste management. The Bulatih program is an integrated community-based organic waste management system using the Black Soldier Fly (BSF) bioconversion method as a response to the need for sustainable management, treatment and utilization of organic waste.

Bioconversion involves microorganisms to convert organic waste into high value products. The Bulatih program uses BSF (*Hermetia Illucens*), a black fly species, whose larvae (maggot) are able to degrade organic waste. Bioconversion by BSF larvae can degrade waste faster, odorless, and produce organic compost. The program begins with training and

knowledge transfer to the community, as well as the provision of facilities and infrastructure. The program's target community groups, such as Himuli (Indonesian Local Poultry Farmers Association), Hidayatullah Islamic Boarding School and the Maggot Lestari Group, are positioned as driving actors as well as consumers in organic waste management. Maggot or larvae from black flies can also be a good source of protein for chicken and fish feed, which can save animal feed costs. The animal feed as a derivative product of maggot has also been marketed to consumers. In this extracurricular, 300 students gained knowledge about maggot management and knowledge about business development from maggot cultivation. This extracurricular activity has also succeeded in raising the students' awareness of environmental management.

*First Eco -
Edupreneurship
at a Islamic
boarding school
in North Penajam
Paser through
extracurricular
activities*



The measurement of the social investment impact using SROI analysis has also been carried out in the Bulatih Program, with the ratio value of 1.183. This value showed that in the second year of the program, Bulatih has had a positive impact on stakeholders.



Managing Natural and Marine Resources



“

Natural resources and marine resources are blessings for human management. Natural resources provide us with food and clean air, while the ocean move all the systems that make the earth habitable. Preserving natural and marine resources and its entire ecosystem means protecting the earth and human being.

”



Coastal & Marine Biodiversity Reserve (CMBR) Lembung Paserer

In Lembung Paserer Sepulu District, Bangkalan Regency, Madura, Pertamina EP Poleng, Zone 11, Eastern Indonesia Region, carries out an environmental conservation program that is integrated with education and community empowerment through the Lembung Paserer Coastal & Marine Biodiversity Reserve (CMBR) program. This program integrates the development of marine coastal biodiversity reserves, environmental education, conservation of coastal ecosystems and the creation of alternative economic access opportunities for local communities.



The CMBR Lembung Paseser strengthens the community's local wisdom in preserving coastal ecosystems as stipulated in the Lembung Paseser Village Regulation on Coastal and Marine Area Management as an effort to preserve the environment number 01/433.308.15/2019. This village regulation regulates the protection of mangroves, coastal forests, coral reefs, and the biodiversity contained therein.

The establishment of the CMBR Lembung Paseser was also followed by dissemination and education to raise the community's awareness of the importance of coastal ecosystems to support their lives. The community is involved in every process to grow a sense of belonging. Now, their perception has changed. Mangroves, which were previously considered a nuisance in aquaculture, have now been preserved in a conservation activity.

The Story Behind the Program

The 34 ha mangrove area in Lembung Paseser is in critical status due to the conversion of the mangrove forest area into a tiger prawn pond. The balance of coastal and marine ecosystems is disturbed and has an impact on the majority of people who work as pond farmers and fishermen. The pond area has been abandoned due to disease and leaves an arid area of mud.

Coastal & Marine Biodiversity Reserve (CMBR) Lembung Paseser

Conservation

- **106,000** trees planted
- **95 ha** of mangrove conservation
- **16 ha** of mangrove rehabilitation
- **4 ha** of coastal forest plantation
- **25,000** seedlings in the Seed Bank of various types of mangroves
- **10** seagrass transplant plots
- **5** soft coral transplant plots

Research

- **69** bird species identified
- **1** species of Javan Wren (*Padda oryzyvora*) with Endangered status
- **34** species of mangroves; **2** species with Near Threatened status (*Cheriops decandra* and *Aegiceras floridum*)
- Total CO₂ sequestration **80,703.45** tons

Education

- Mangrove ecosystem conservation campaign
- Mangrove Sister School
- Natural Laboratory: the location of thesis research and internships by various universities
- Data Bank & Information: book publishing

Community Empowerment

- Mangrove Care Community Group Institution, Shrimp Cultivation & Tourism Group (Pokdarwis)
- Trigona honeybee cultivation pilot project
- Community shrimp farming



CMBR Lembung Paseser has also initiated ecotourism-based community economic business and its derivatives including enlargement of mangrove oysters, mangrove fruit processing, and environmentally friendly shrimp farming. The community in Lembung Paseser is provided with training, capacity building, and continuous assistance. All nursery activities, plant care, and infrastructure development involve local workers.

PHE WMO's Coral Reef Marine Tourism Park

The problem of abrasion had been resolved in 2017 with good mangrove forests, yet the coastal ecosystem apparently has not fully recovered without coral reefs. Coral reefs are the foremost wave and abrasion barrier, and PHE WMO intrudes in their habitat. Therefore, PHE WMO then developed the Labuhan Marine Tourism Park which focuses on coral reef conservation activities in Masaran Hamlet, Labuhan Village. The program began in 2018 in the 8-hectare area and was authorized through the Village Head's Decree on Conservation.

The method applied for coral reef conservation is to create a hollow dome innovation as a medium for coral reef growth and development. A total of 80 concrete domes containing 480 coral fragments have been sunk to improve the survival rate of corals and prevent abrasion. In 2021, coral survival reached 97% with an average annual growth rate of 19-22 cm.

The tutut coral reef conservation increases the biodiversity index of marine biota.



There are 36 species of fish, 34.56% seagrass cover with a density level of 65.67 m² and 65.44% of algae cover. The reef fish biodiversity index is 2.899 H'. In addition, 4 species of coral reefs with the status of Near Threatened (NT) were also found based on the IUCN Red List that needs attention and conservation. The biodiversity improvement also has an impact on other fauna such as birds because it means there are fish to prey on.

On the other hand, the increasingly fertile mangrove forests also have a positive impact on the surrounding habitat, and have a biodiversity level of 3.27 H'. Many species of birds are found around the mangrove forest. A total of 183 bird species caught, 12 of which were migratory birds.



76,050 accumulated mangrove and sea pine plantings from 2014 to 2021 with a total accumulation of carbon sequestration until 2021 of **16,875.77 tons CO₂ eq**

In 2021, Masaran Hamlet, Labuhan Village, won the ProKlim Utama Certificate from the Indonesian Ministry of Environment and Forestry

Carbon sequestration in mangrove forests helps reduce the potential impact of Global Warming. Coral reef conservation helps reduce the impact of marine ecotoxicity. We also calculate SROI every year. The last SROI calculation in 2020, the result is 1:4.20, that for every Rp1 that we invest, we receive a social benefit of Rp4.2.



Pesut Mahakam Comic (Endemic Conservation of Pesut Mahakam)

Tomb dolphin is listed as threatened due to its contaminated habitat. In the Pela Village area, Kota Bangun District, Kutai Kartanegara, the river is used as a waste dump which pollutes the river water. In addition, many fishermen do not use environmentally friendly fishing gear, which causes some 66% of Mahakam dolphins are entangled in gillnets. Therefore, 40 units of temporary waste disposal sites were made that can accommodate 18.36 kg/year to reduce the volume of waste thrown into the river. In addition to trash that was thrown carelessly into the river, there were still many fishermen using fishing gear that are not environmentally friendly that caused around 66% of Mahakam dolphins were entangled in gillnets. Pertamina Hulu Mahakam (PHM) SPU Field preserves endemic animals through collaboration with the RASI (Rare Aquatic Species of Indonesia) Conservation Foundation to protect the Mahakam dolphin (*Orcaella brevirostris*). The Pesut Mahakam comic was held in the Pela Village area, Kota Bangun District, Kutai Kartanegara Regency.



Documentation YK RASI

Activities that have been carried out include environmental campaigns and village clean-ups; revitalization of dolphin monitoring stations; dolphin conservation education; provision of boats to monitor dolphins; management of organic and inorganic waste; and providing fishermen with environmentally friendly fishing gear. Program activities continue to be developed, not only preserving the dolphins but also providing socio-economic benefits for the surrounding community by improving the environment and establishing homestays. Environmental management is carried out by planting trees around the rivers and conducting water quality surveys. After that, a dolphin population survey was conducted to determine the impact of environmental changes that have been made on the dolphin's survival rate.



NATURE

- **98%** Reduction in the use of fishing gear (stun).
- **18.36 kg/year** Reduction of the volume of waste disposed in the river.
- **80-85 dolphins** Maintained population of dolphins.

ECONOMY

- **Rp2.3 million/month** Resident's income from homestays.
- **Rp2 million/month** Average Tourism Group (Pokdarwis) income.

Outcome

- **539 people** Increased awareness of endemic animal conservation (dolphin/pesut).

- **50 youths** Involved in Pokdarwis activities.
- **1 Pokdarwis** Pela Village Established partnerships with National and International Institutions.

WELLBEING

Mangroves in Kampung Baru

In Kampung Baru sub-district, Penajam, North Penajam Paser Regency, East Kalimantan, PHKT DOBS, has reforested 1-hectare area of mangrove by planting and replanting mangroves. The program involves several strategic stakeholders, such as North Penajam Paser government and the community, including tourism awareness group (pokdarwis) and community leaders from Kampung Baru sub-district. The collaboration aims to create a sustainable system and process of mangrove management and conservation.

This is manifested in the Mangrove Edutourism Strengthening Program in Kampung Baru, Penajam, due to Kampung Baru is a coastal area that is prone to abrasion, in collaboration with several

SOCIAL



environmental conservation foundations. The program has managed to plant mangroves in an area of 54 ha of *Avicennia* spp, *Rhizophora* spp. Currently, a Tourism Awareness Group (Pokdarwis) has been formed to manage mangroves in the



Kampung Baru mangrove forest area which has been designated as the Penajam Mangrove Edutourism Area. The program has also managed to inspire the formation of the Women's Business Group (KUW) Bina Bersama. From training on mangrove processing, facilitation of licensing and marketing, as well as stimulant support provided by PHKT DOBS, KUW Bina Bersama has now produced processed mangrove products in the form of syrup, flour, snacks such as cimi-cimi, cactus, beruas, bangkau, and brownies. A credit union Kelompok Simpan Pinjam (KSP) Kreatif has also been established. The development of the program so that it could lead to the formation of the KUW Bina Bersama and KSP Kreatif shows that the program has had a positive impact on efforts to preserve the environment and the economy of the surrounding community.

The community's awareness of mangrove preservation in Kampung Baru was initiated by Mrs Rukiah. Since the past few years, Mrs Rukiah invited the youth and people who care about the environment to spend their spare time by planting 33,000 mangrove tree seedlings in the village. She also monitored the condition of the mangroves and replanted seedlings to replace the damaged ones. Thanks to her dedication, in 2020 Mrs Rukiah became the nominee for Kalpataru winner from the Indonesian Ministry of Environment and Forestry.

Together with women business group KUW Bina Bersama, the focus now on maintaining mangroves and also carries out initiative of mangrove processing into other useful products. By PHKT DOBS, the mangrove ecosystem that has been built will be developed into ecotourism to improve the residents' economy and maintain the sustainability of environmental management.

Begawi Village

PHM CPU Field also integrates environmental management and community empowerment in a program called Kampung Begawi (Bekantan or proboscis monkey, Mangrove, Widyawisata or edutourism), Anggana District, Kutai Kertanegara Regency. The program is a synergy for proboscis monkey conservation, management of mangrove areas, and development of edutourism as part of the *Bumi Pesisir Lestari* program. Widyawisata is driven by efforts to maintain and protect mangrove areas in the Kutai Lama Village and Handil Terusan, Anggana District, which are the habitat for proboscis monkeys, an endemic animal native to Kalimantan.



The Kampung Begawi program is a response to the declining quality of the proboscis monkey's natural habitat, especially those outside the conservation area. The area previously changed its land function from forest to residential areas, agriculture, swallow cultivation, and aquaculture ponds. Conservation of proboscis monkeys is followed by planting of mangrove type *Sonneratia alba* which is the main food source for proboscis monkeys in Mahakam. In addition, the program also synergizes with social aspects by involving local governments, educational institutions, and the community.

The main driver of the Kampung Begawi program is the Jahetan Layar tourism awareness group (pokdarwis). This group cooperates with cultural artisans SME

consisting of housewives, members of the Seraong Naga Lestari artisan group, as well as several Forest Farmers Groups (KTH) fostered by KPHP Delta Mahakam. The group is the spearhead of the program as a community that interacts directly with endemic animals in Kalimantan. Currently, the main part of the program is building the capacity of Pokdarwis, KTH, artisan group and BUMDes in Kutai Lama Village, including training and mentoring to enable them to manage the tourism area independently and increase tourist attraction. Going forward, Kampung Begawi is also preparing for the next steps, namely identifying the potential of animals and natural habitats, determining the location to become a nature monitoring area, forming and mentoring local groups, developing supporting infrastructure, and establishing an independent and sustainable proboscis monkey edutourism area.





Masyarakat Peduli Alam Puntang (Melintang)

The environmental program called *Masyarakat Peduli Alam Puntang* or *Melintang* has been carried out by PEP Subang Field, since 2017 in Campakamulya Village, Cimaung District, Bandung Regency. The Melintang program is a form of conservation-based community empowerment. This program aims to improve the welfare of the people living around Mount Puntang as well as to preserve the forest and the existence of the endangered Javan Gibbon.

Javan Gibbon (*Hylobates moloch*) is a type of primate with an estimated population of around 2,000-4,000 in the world. The Javan Gibbon is also included in the IUCN red list with the status of Endangered. Distribution of Javan Gibbon is now limited to western Java, making it the rarest gibbon species in the world.

The Melintang program is run by PEP Subang Field in collaboration with the Owa Jawa Foundation and the Ministry of Environment and Forestry, through holistic conservation activities covering education, community empowerment and assistance.



Communities whose previous livelihood was hunting and encroaching the forest were persuaded to change. PEP Subang Field introduced them to coffee and edutourism business activities to improve the community's economy.

During 2017-2019, PEP Subang Field has provided around 20,000 trees for the community to plant. PEP Subang Field also provided facilities and infrastructure for coffee cultivation, processing machines, and institutional revitalization, to be able to process their own coffee and market it. They even processed coffee to the green bean stage to increase the selling price.



NATURE

- **30 individuals** of Javan Gibbon were released into the wild on Mount Puntang
- **3.80 ha** of organic coffee application land
- **LMDH members** guard the forest in the Malabar mountains area

ECONOMY

- **Bandung Coffee Farmers Corporation shareholder** (PT Java Preanger Lestari Mandiri)
- Additional income **Rp659** thousand per member per month

Outcome

- **80% of LMDH** members involve former hunters and forest encroachers
- **60%** of cooperative members involve dropout groups

- **204** direct beneficiary group members
- Bukit Amanah Puntang Cooperative Group Institutional, Herbanik, and Puntang Wangi Baristas
- **Greenbean sales** to Banten and Bogor

WELLBEING

SOCIAL

After release, the Owa Jawa (Javan Gibbon) will continue to be observed for one year. The presence of the Javan Gibbon is an indicator of good forest quality and plays an important role in improving the quality of environmental ecosystems.





Preserving Orang Utans and Ulin

Orang Utans are the only great apes that live arboreal in the tropical rain forests of Kalimantan and Sumatra. Orang Utans as frugivores, spend most of their time looking for fruit as their main food (frugivores), thus they heavily rely on the existence of the forest.

The protection and preservation of Orang Utans and their natural habitat is part of Orang Utan Protection program by PHSS Mutiara Field as part of Zone 9, Kalimantan Region, in collaboration with the BOSF Foundation, especially at the East Kalimantan Orang Utan reintroduction center in Samboja Lestari.

Several facilities have been built during the program in East Kalimantan, such as a new artificial island for Orang Utans, normalization of trenches, water reservoirs, as well as repair and opening of alternative road access, at the Orang Utan Rehabilitation Center in Samboja Lestari. The implementation of the program to improve the infrastructure of the Orang Utan reintroduction and training center is part of maintaining the functions and benefits of this conservation facility. The reintroducing or releasing Orang Utans back into the wild is expected to have a

positive impact on the ecosystem. The program has also been providing heavy equipment and the construction of facilities at the Orang Utan Rehabilitation Center in Samboja Lestari for 5 years.

In addition, PHSS Mutiara Field also carries out a Planting and Maintenance program for 600 ironwood tree seedlings (*Eusideroxylon swageri*) in Samboja Lestari covering an area of 1 ha. The ironwood tree is an endemic tree species to Kalimantan classified as Vulnerable (Endangered) based on IUCN version 2.3. This tree has a significant influence on the existence of Orang Utans, because it is one of the habitats for Orang Utans, while its young leaves and seeds are also natural food for Orang Utans. Orang Utan activities can also help the natural dispersal of ulin tree seeds.

The planting and maintenance program is expected to have a direct positive impact on the Orang Utan population in the Samboja Lestari area as well as improve the economy of the community in the surrounding areas through community empowerment programs in ironwood (ulin) tree nursery and maintenance activities, which can also indirectly impact the existence of tropical forests in East Kalimantan.



Elephant Friendly Agroforestry

Pertamina Hulu Rokan (PHR) WK Rokan in collaboration with the Rimba Satwa Foundation (RSF) runs an elephant-friendly agroforestry system in Bengkalis, Riau. This program, which is supported by SKK Migas and the University of Riau, is an effort to mitigate human-elephant conflict as well as an effort to allow elephants and humans to coexist.

Elephant-friendly agroforestry is carried out by selecting plant species that are not a source of food for elephants. It aims to minimize the level of damage to crops caused by elephants while economic activities and people's food security remain sustained. Elephant-friendly agroforestry can also support elephant-human coexistence in accordance with the direction of the Ministry of Environment and Forestry (KLHK).

This program started in 2020 with the use of technology through the installation of 3 GPS Collar units, SMART - RBM based area and animal patrols, and population monitoring using camera traps. In the following year, the technology was used to strengthen community development synergies by implementing efforts to restore the Sumatran elephant habitat in the Balai Raja elephant population pocket.

“Synergy to Protect Sumatran Elephants.”
The Sumatran elephant is one of the protected animals in Indonesia with a threatened status on the International Union for Conservation of Nature (IUCN) in 2012. Currently, there are 8 elephant population pockets left from 13 elephant population pockets in Riau.



The Area Patrol carried out by the community also managed to record 352 human-elephant conflicts, collecting data and destroying 193 threats in the form of snares, treating one female elephant as a snare victim, and finding the birth of a wild elephant calf in the Giam Siak Kecil population pockets.

This program will continue with the replacement of GPS collars for elephants, increasing the number of personnel involved in the SMART Patrol, expanding nursery areas to support the availability of superior and sufficient forest plant seedlings. The program will also expand the area of agroforestry to restore elephant habitat.

21 ha area planted by 5,000 forest plant seedlings (durian, jengkol, bitter bean, gaharu, robusta coffee) at the elephant crossing 14 people involved in planting

Year 2020

Application of Technology for Sumatran Elephant Conservation

Year 2021

Application of Technology for Strengthening Synergy in Community Development



Dersik (Kersik Tourism Village)

PHKT DOBU which is a companion in Kersik Village, Marangkayu District, Kutai Kartanegara Regency, East Kalimantan Province in the Climate Village Program (ProKlim). PHKT DOBU carried out various activities, including planting 18,000 mangrove seedlings and installing 1,000 low-threshold breakwaters as an effort to deal with abrasion, as well as waste management through the Kersik Berseri Waste Bank.

The beginning of the planting of mangrove seedlings in Kersik Village has been carried out since 2019 by the Kutai Kartanegara Regency Government in collaboration with KNPI. Then in 2020, PHKT in collaboration with the Friends of Mangrove Community planted 8,000 mangrove seedlings, followed by 10,000 mangrove seedlings planted around Biru Kersik Beach in 2021. The Friends of Mangrove Community, which PHKT collaborated with, also involved members of the Saka Bahari Scouts. These students have been educated to care about and support climate change control, they also support environmental conservation at Biru Kersik Beach. To date, 18,000 mangrove seedlings have been planted, maintenance and care are carried out regularly by the Friends of Mangrove groups and supported by the Indonesian Navy.

Another activity that supports ProKlim is waste management through the Waste Bank. This activity involves the Kersik Berseri Waste Bank Group, Youth Organizations, Tourism Awareness Group (Pokdarwis), supported by the community. PHKT provides training to groups starting from the management and organization of the Waste Bank, socialization of waste sorting, making recycled crafts from non-organic waste, and utilizing organic waste such as composting and making used cooking oil into soap, candles, and so on.

Next is the installation of a low threshold breakwater (Pegar). Pegar is a method of handling abrasion by utilizing geobags filled with sand and then arranged along the shoreline which serves to restore land that has been eroded by sea water. Biru Kersik Beach experienced severe abrasion that took up 80% of the shoreline, so the installation of 1,000 geobags is expected to be able to overcome the abrasion that occurred there.

Currently, Kersik Village, which is assisted by PHKT, has won the ProKlim award. Through this award, PHKT has shown a commitment to care for the environment, especially climate change in coastal areas.



Preserving the Earth, Maintaining Beautiful Environment



Environmental management allows people and nature to take care of each other. Preserved nature is not only important for human existence, but also for the flora and fauna. At PHE Subholding Upstream, environmental management programs are integrated with the empowerment that provides sustainable economic benefits so that both humans and nature can co-exist.



Climate Village Program

PHE Subholding Upstream supports climate change impact control and mitigation efforts. Pertamina has carried out various programs, including carbon sequestration through mangrove conservation as well as environmental and biodiversity conservation initiatives, both in coastal, marine, and land areas.

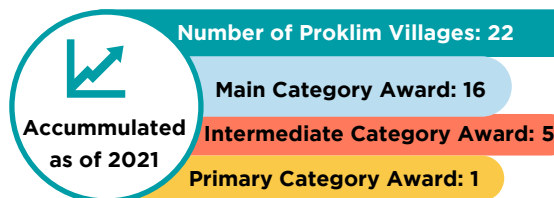


In collaboration with the Environment Agency (DLH), PHE Subholding Upstream provides assistance and support for villages around the operating area to achieve Climate Village Program (ProKlim) title. A number of working areas in Subholding Upstream was named as ProKlim Supporter from the local Environment Agency for carrying out its commitment.

Through ProKlim, PHE Subholding Upstream continues the effort to meet the requirements of the Regulation of the Minister of Environment and Forestry, including adaptation and mitigation efforts.



PROKLIM DEVELOPMENT



No.	ProKlim Village	ProKlim Category	Working Area
1.	Palmasari Hamlet, Pematang Tinggi Village, Kerumutan District, Pelalawan Regency, Riau	Main ProKlim Trophy	PHE Kampar
2.	Sawit Mukti Hamlet, Pematang Tinggi Village, Kerumutan District, Pelalawan Regency, Riau, fostered by PHE Kampar	Main ProKlim Certificate	PHE Kampar
3.	Talang Akar Village, Talang Ubi District, Penukal Abab Lematang Ilir Regency, South Sumatra Province	Main ProKlim Certificate	PEP Pendopo Field
4.	Spantan Jaya Village, Penukal District, Penukal Abab Lematang Ilir Regency, South Sumatra Province	Main ProKlim Certificate	PEP Adera Field
5.	Sukajaya Village, Cilamaya Kulon District, Karawang Regency, West Java	Main ProKlim Certificate	PHE ONWJ
6.	Labuhan Village, Sepulu District, Bangkalan Regency	Main ProKlim Certificate	PHE WMO
7.	Karya Mulia Village, Rambang Dangku District, Muara Enim Regency	Main ProKlim Certificate	PEP Limau Field
8.	Muara Kembang Village, Muara Jawa District, Kutai Kartanegara Regency	Intermediate ProKlim	PHM
9.	Sepatin Village, Anggana District, Kutai Kartanegara Regency	Intermediate ProKlim	PHM
10.	Tani Baru Village, Anggana District, Kutai Kartanegara Regency	Intermediate ProKlim	PHM
11.	Kersik Village, Marangkayu District, Kutai Kartanegara Regency	Primary ProKlim	PHKT DOBU



PEP Pendopo Field Supports Talang Akar Village to Implement ProKlim

In 2021 Talang Akar fostered village received the Main ProKlim 2021 title from the Indonesian Ministry of Environment and Forestry

PT PEP Pendopo Field, which is part of Zone 4 Sumatra Region, becomes a supporter of the climate village program (ProKlim) in Talang Akar Village, Talang Ubi District, Penukal Abab Lematang Ilir (PALI) Regency. ProKlim assistance mentoring activities were carried out together with the Environment Agency of Penukal Abab Lematang Ilir Regency.

Pendopo Field's activities to support the ProKlim in Talang Akar Village, include planting 320 trees, the Talang Akar Sejahtera waste bank program with innovations in making paving blocks from plastic waste, making biopore infiltration holes, and rainwater storage, as well as the implementation of integrated health service (posyandu). In addition, Pendopo Field also organizes training and supports organic farming programs, making compost and liquid fertilizer (MOL), as well as using straw as compost material.

The community is also supported to develop environmentally friendly and sustainable healthy farming systems on the yards and idle land. The land is used to grow vegetables so that it can meet the community's needs for food.

ProKlim Village

Palma Sari and Sawit Mukti, two hamlets in PHE Kampar fostered village, Pematang Tinggi, Pelalawan Regency, Riau, received ProKlim title from the Ministry of Environment and Forestry. The two hamlets carry out a program called K3, i.e., Kebun (garden), Kolam (pond), and Kandang (cage), which promote the use of their house surroundings. Through the Kebun program, residents use their yards to grow vegetables, fruits, secondary crops, and family medicinal plants.

In the Kolam program, residents use the land around their homes to build ponds with tarpaulin media to meet their needs of fish. Meanwhile, in the Kandang program, they residents develop livestock activities, such as chickens, ducks, goats, and/or cows. The K3 program is expected to help preserve the environment, meet food needs, and improve the people's economy.

In addition to the K3 program, PHE Kampar also carries out supporting programs, such as drought, flood, and landslide control programs through the creation and utilization of biopore holes, programs for using new and renewable energy, energy conservation and saving, waste, solid and liquid waste management using methane gas, methane or biogas, establishment of a waste bank and the utilization of plastic waste into goods of economic value, as well as other environmental-based programs including the stimulant of 5,500 fish seeds.



This award shows PHE Kampar's commitment to environmental conservation, through community-based climate change control with efforts to reduce the impact of global warming.

In 2021, Palmasari Hamlet won the Main ProKlim Trophy, and Sawit Mukti Hamlet also received the Main ProKlim title from the Indonesian Ministry of Environment and Forestry.

Caring about Climate Change

PEP Adera Field, which is part of Upstream Subholding, Region 1, Zone 4, also participates in national programs organized by the Ministry of Environment and Forestry. In 2021, PEP Adera Field become the advisor for Spantan Jaya Village, Penukal District, Penukal Abab Lematang Ilir Regency, South Sumatra Province. The activities that have been carried out including adaptation and climate mitigation efforts as well as strengthening community institutions.

Other activities carried out by PEP Adera Field are community empowerment through healthy agricultural activities by utilizing maja fruit waste and banana corms for organic fertilizers to be applied to cultivation activities that are being developed by the community such as the cultivation of family medicinal plants, rice and organic vegetables. In addition, the community of Spantan Jaya Village through the PKK group also participated in creating innovations in making anti-convulsant bracelets and processing family medicinal plants into herbal drinks.

In addition, PEP Adera Field cooperates with Spantan Jaya Village Government to activate the village disaster preparedness post by installing information boards for danger warning signs and evacuation routes in the event of a natural disaster.

In 2021, Spantan Village won the Main ProKlim title from the Indonesian Ministry of Environment and Forestry.

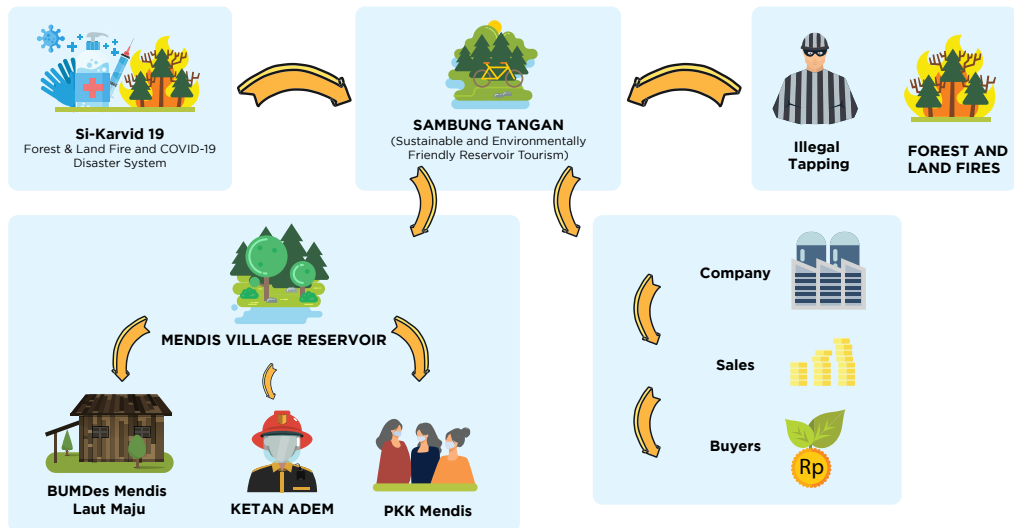
Adaptation and mitigation efforts that are carried out, namely:

- Construction of a rainwater harvesting dam;
- Tree planting and nursery in the area around the riverbanks;
- Construction of dams to harvest rainwater;
- Installation of warning sign information boards;
- Construction of sewers and infiltration wells;
- The innovation of utilizing the reservoir into a tourist spot called Water Rumbai.

Desa Cinta Bumi Tanggap Api

PHE Jambi Merang’s concerns for the environment and community are realized among other through a program called the *Desa Cinta Bumi Tanggap Api* in Banyuasin area. The program began in 2017 with the use of the reservoir as a retention pond and reforestation of the reservoir area in 2017. In 2018, there were many developments such as the revitalization of reservoirs and reforestation of the area, the opening of tourism and water rides, and the involvement of KETAN ADEM as the rescue team. In 2019, the reservoir was optimized for additional water rides and a children’s pool, and then the provision of supporting health protocol facilities in the reservoir area in 2020.

In 2021, integrated social innovations were implemented with the following concepts:



This innovation that was made to address the problems faced by villagers such as the poor reception of signal, the demand for sanitizer products, and the weakening economy due to the closure of the reservoir area during the COVID-19 pandemic. To survive during the pandemic, the fostered groups have been making natural sanitizer products, carrying out vaccinations, and supporting teaching

and learning activities through SeLeRa. Through an integrated communication system using HT, residents can report early detection of pipe leaks and prevent environmental pollution. The sanitizer products are made from natural ingredients and are safe to use.



The tourism reservoir has re-opened and remains safe because of implementing health protocols. Currently, Musi Banyuasin innovation village is the only village that uses the reservoirs productively. Thanks to this innovation, vulnerable groups have access to affordable tourism, new job creation and MSME emergence, as well as community groups are actively involved for shared wellbeing.

Several derivative programs from the *Desa Cinta Bumi Tanggap Api* program have been replicated elsewhere. It is a pride when the program is run successfully and has sustainable impact. The form of this replication is the plastic free school program called the *Sekolah Cinta*

Bumi Bebas Plastik of SDN 2 Sukajaya (Adiwiyata School) which is a replication of the *Sekolah Cinta Bumi* of SDN Mendis and Repair (*Regu Peduli Air*) which is a replication of KETAN ADEM.

The program has had a significant impact on the people of Banyuasin and has a community satisfaction index value (IKM) of 3.77 (conversion IKM 94.17%) or is in the 'Very Good' category. In addition, the SROI measurement showed that the program has had 19 economic, social, and environmental impacts, with the largest outcome on the environmental aspect (75%) because it is an environmental mitigation program to prevent forest and land fires. SROI measurement results 1:7.41.

NATURE

- **8,000 ha** of land protected from fire
- **16,000 m³** revitalization of reservoirs and green belt
- **2 ha** area is utilized as agricultural land
- **0.18 ton CO₂eq/year** carbon sequestration from family medicinal plant cultivation

ECONOMY

- **Rp80** million from horticultural agriculture
- **Rp67.9** million from reservoir tourism
- **Rp4.8** million processed family medicinal plants

Outcome

- **30 people** received emergency response training
- MOU on Institutional Strengthening Synergy (**KETAN ADEM, BUMDes, COVID-19 Bank, Posyandu, PKK, KWT, Preparedness Forum**)

- Synergy of **3** community groups
- **20** people joined BUMDes
- **Mewah Women Farmer Group** was formed
- **16 people** joined

WELLBEING

SOCIAL



Melintang Program

Javan Gibbon (*Hylobates moloch*) is a type of primate with an estimated population of around 2,000 up to 4,000 individuals in the world. The Javan Gibbon is also included in the IUCN red list with the status of Endangered. The distribution of the Javan Gibbon is now limited to western Java, making it the rarest gibbon species in the world.

The Melintang program is run in collaboration with the Ministry of Environment and Forestry and the Owa Jawa Foundation. Subang Field carries out holistic conservation activities covering education, community empowerment and assistance. Communities whose previous livelihood was hunting and encroaching the forest were persuaded to change. PEP Subang Field introduced coffee and edutourism business activities to improve the community's economy.

During 2017-2019, PEP Subang Field has provided around 20,000 Puntang coffee seeds for the community to plant. The Company also provided facilities and infrastructure for coffee cultivation, coffee processing machines and institutional revitalization, to be able to process their own coffee and market it. They even processed coffee to the green bean stage to increase the selling price.

Until 2021, PEP Subang Field has released thirty individual Javan Gibbons in the Mount Puntang area. After release, the Javan Gibbon will continue to be observed for one year. The presence of the Javan Gibbon is an indicator of good forest quality and plays an important role in improving the quality of environmental ecosystems.





Closing

We have come to the last part of this book, but our eagerness to inspire and share goodness will continue.

PHE Subholding Upstream will continue to build alliance with the community, support them to become independent, maintain their health, preserve flora and fauna diversity, and boost innovation and creativity. We want to share positive values that can be continuously replicated by the community and the impact can be felt today and even in the future.

Let us join hands together and continue to spread goodness and inspire for a better future.

Puntang Coffee Group of
LMDH Amanah fostered by
PEP Subang Field, Zone 7,
Java Region







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