Regenerative Resourcing: Sigi, Central Sulawesi, Jurisdictional Investment Outlook 2024



July, 2024





Disclaimer

Regenerative Resourcing: Sigi, Central Sulawesi, Jurisdictional Investment Outlook 2024 is prepared based on observations, discussions, and analysis with related multi-stakeholders. The first edition is a living document, therefore additional content may appear in subsequent editions.

Greeting Remark

Assalamu'alaikum Warahmatullahi Wabarakatuh,

Greetings,

By expressing my gratitude to the presence of God Almighty, I would like to express my highest appreciation to all parties who have worked together in the preparation of this "Regenerative Resources: Sigi, Central Sulawesi, Jurisdictional Investment Outlook 2024" document. This document is prepared as a guide for investors who are interested in participating in sustainable development in Sigi Regency.

The District of Sigi is committed to continuing to carry out development that is not only focused on economic growth, but also pays attention to environmental sustainability. Through a jurisdictional approach, we strive to harmonize nature-based resource production and conservation activities, to achieve optimal and sustainable results. Regional Regulation No 4/2019 on Green Sigi is one of the tangible forms of our commitment to create this balance.

The District of Sigi has abundant natural resources and great economic potential. From forestry, agriculture, plantation, to ecotourism sectors, all of these provide great opportunities for development. The role of the community, especially young people, through Gampiri Interaksi Lestari has shown its success in incubating local micro, small, and medium enterprises (MSMEs), creating innovative products, and expanding market reach. This is clear evidence that sustainable development can go hand in hand with improving people's welfare.

We too recognise that the journey to sustainable development is not easy. Major challenges such as deforestation, climate change, and natural disasters must be addressed with the right policies and multistakeholder cooperation. However, behind this challenge there is a great opportunity to create positive change. Sustainable commodity sectors such as cocoa, coffee, and vanilla offer great potential to be developed, along with efforts to preserve the environment.

The jurisdictional approach is the strategic framework we use to manage sustainability risks. By combining various initiatives and supports from the central and local governments, we are confident that we can achieve balance between economic, social, and environmental goals. Multi-stakeholder collaboration is key to the success of this approach, where each party has an important role in achieving common goals.

We invite investors to participate in the opportunities that exist in Sigi. Sustainable investment not only provides financial benefits, but also has positive impacts on the environment and local communities. With the support of proactive government policies and incentives for the private sector, we are optimistic that Sigi will develop into an attractive and profitable investment destination.

Finally, I hope that this "Regenerative Resources: Sigi, Central Sulawesi, Jurisdictional Investment Outlook 2024" document can be a useful guide for investors in making decisions. We at the Sigi District Government are fully committed to supporting every step taken to achieve sustainable development.

Thank you for your attention and cooperation.

Wassalamu'alaikum Warahmatullahi Wabarakatuh,

Head of the District of Sigi, Central Sulawesi













Tropical Forest Alliance



Lingkar Temu Kabupaten Lestari



Landscape Indonesia





KMP

Gampiri Interaksi Lestari



Gampiri Bumi Lestari





Sigi Hijau







JB Cocoa







Regional Regulation No. 4/2019 on Green Sigi demonstrates a serious commitment to deal with climate change and initiatives in the post-disaster recovery process.

In the spirit of cooperation to realize Nature-Based Development, Green Sigi serves as a guideline for the development of Sigi and increasing investment.



The Sigi district is situated in a fertile area in the heart of Central Sulawesi.

About three quarters of Sigi are forested, which include indigenous forests, restricted production forests, national parks, nature tourism, and forest parks (Taman Hutan Raya, Tahura). The Lore Lindu National Park and Biosphere Reserve, which has been recognized by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) since 1977, also exists in Sigi.



Multi-stakeholder collaboration has been carried out in Sigi to institutionally enhance Green Sigi.

The Multistakeholder Partnership in the Implementation of Green Sigi was formed through District Head Regulation No. 33/2023. The involvement and commitment of the parties to the development of green investment in Sigi further strengthens the development of the jurisdiction with promising short-term and long-term plans.



A 7.4 magnitude earthquake in Central Sulawesi triggered soil liquefaction in Sigi in 2018, causing losses of up to Rp4.29 trillion (about \$300 million).

Losses due to this disaster impacted agricultural cultivation (including about 6,400 ha of rice fields) while 405 people went missing or died. The government and development partners seek assistance for climate adaptation measures to restores the community'seconomy, by using the potential of local natural resources.



Green Sigi is contributing to the Sustainable Development Goals (SDGs)

It contributes especially to goals No. 2, no hunger; No. 8, decent work and economic growth; No. 12 responsible consumption and production; No. 13 addressing climate change; No. 15 terrestrial ecosystems; and No. 17 partnership to achieve the goals.



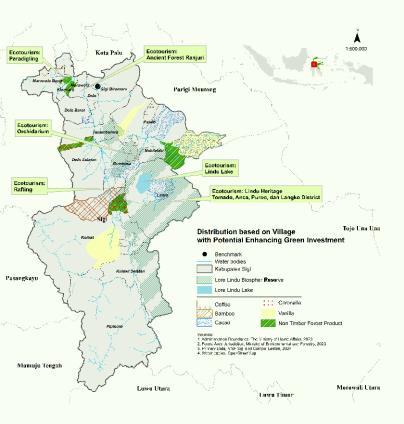
Sigi has been preparing for an increase in green investment for a while, particularly in the context of jurisdictionally sustainable development.

After the establishment of the District of Sigi in 2008, Sigi became one of the founders of the Sustainable Districts Forum (Lingkar Temu Kabupaten Lestari) in 2017 along with 7 other founding districts, collaboration with various stakeholders to support conservation-based development and sustainability by upholding local culture.



Through the Sustainability Festival (Festival Lestari) held in 2023, Sigi managed to obtain green investment commitments worth \$2.7 million.

The Central Sulawesi Provincial Government is committed to encouraging green investment to increase its regional income with nature-based and sustainable innovations, by prioritizing four important pillars including environmental resilience, disaster resistance, food security, and cultural heritage.



*

Sustainable Cocoa

This initiative is based on the substantial contribution made by Sigi to the production of cocoa in Central Sulawesi, supported by the natural geographical conditions of Sigi and the tenacity of local farmers. Today, with the involvement of multiple parties and large companies, cocoa has become one of the leading products that contributes significantly to improving people's welfare.



Sustainable Coffee

This initiative is based on the increase in coffee productivity in Sigi with extraordinary quality and market reach in foreign countries. Coffee products produced in Sigi are arabica and robusta planted in the Lore Lindu Biosphere Reserve, so that their sustainability and quality are maintained.



Sustainable Vanilla

This initiative is based on the fact that this commodity received the nickname "green gold", experiencing its heyday in 1970-2002. In 2019, the district government, through a multi-stakeholder approach and cooperation with the community and partner networks substantially revived this initiative.



Currently, there are seven jurisdictional investment initiatives that are ready to be funded in Sigi. This combination of commodity production through agroforestry, social forestry with non-timber forest products, maximizing commodities with economic value in adaptation and disaster management, as well as the natural beauty and cultural wealth of Sigi with great potential to be developed as ecotourism — is a great investment opportunity in Sigi.



Mitigation of Disasters and Climate Change with Bamboo

This initiative is based on the vulnerability of Sigi to natural disasters and environmental damages. Bamboo is deemed as a solution to prevent landslides in the highlands and floods in riparian areas. Bamboo-based crafts were developed to restore the community's economy, supported by the "one million bamboo" policy from the local government.



Enriching the Land with Citronella

This initiative is based on the damage to the soil structure on several agricultural lands due to natural disasters. Citronella plants have passed a test to restore soil quality with relatively easy and quick maintenance. Citronella produces superior essential oils, and small-scale products such as bar soaps, massage oils, solid perfumes, hydrosols, and scented candles.



Sustainable Non-Timber Forest Products

This initiative is based on opportunities that three quarters of Sigi are forested. With social forestry, non-timber forest products cultivated by residents in the forms of durian and candlenut. Sigi's durian has been sent to various regions in Indonesia.



Discover Sigi through Ecotourism

This initiative is based on natural wealth and cultural heritage that is still strongly upheld by the people in Sigi. Various interesting activities can be carried out in Sigi including gastronomic and cultural experiences, enjoyment of nature in the ancient Ranjuri forest, Orchidarium, Lake Lindu, crafting and paragliding.

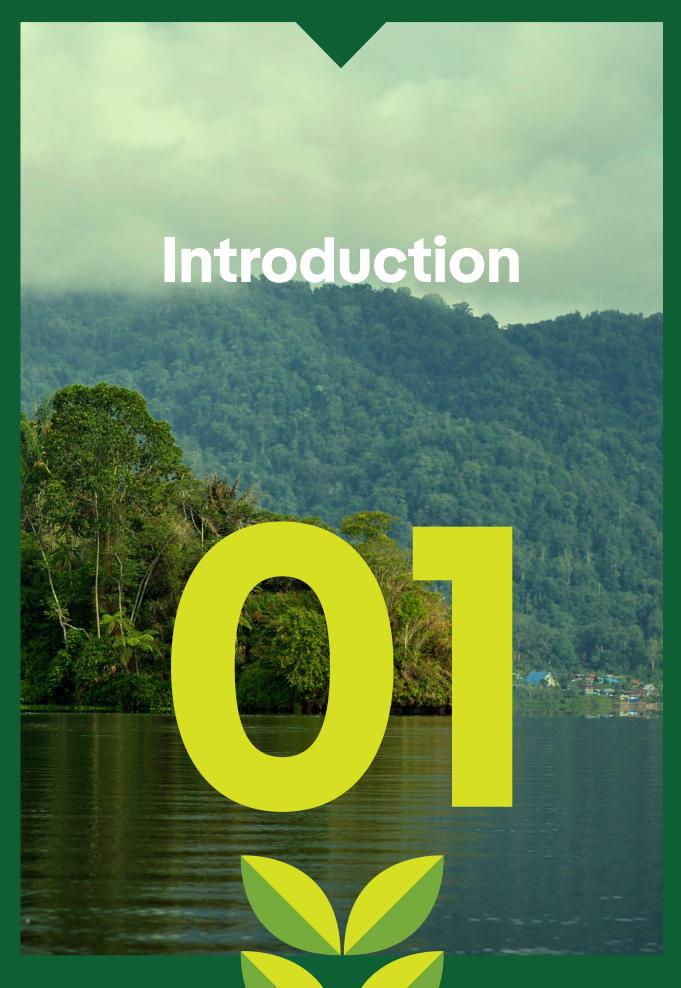
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Table of Contents







1.1 Demand for and Risks of Sustainability

"Humanity has opened the gates of hell by letting climate crisis worsen". The Secretary of the United Nations (UN), Antonio Guterres, was quoted as stating in his speech at the UN climate ambition conference in New York last year.1 Until June 2024, for 12 consecutive months the world's average temperature broke the record as the hottest months ever recorded in history.2 Countries around the world, including Indonesia, adopted the Paris Agreement in 2015, with one of the objectives is to prevent the increase in global temperature at well below 2 degrees Celsius (°C) and strive to keep it at no more than 1.5 °C.3 As the world sharpens its focus on the energy transition, emissions resulting from activities in the agriculture, forestry and other land uses (AFOLU) sectors contribute around a fifth of global greenhouse gas emissions. Forests are also home to 80 percent of land-based biodiversity.4

Efforts to prevent deforestation and forest degradation have been numerous. One of these was the New York Declaration on Forest (NYDF) a decade ago in 2014. Amongst the targets was to put a stop to forest destruction by 2030 and achieve reduction and avoidance of greenhouse gas emissions of up to 7 million tons (megatons) of carbon dioxide equivalent per year (MtCO2e).5 When it was first launched, the NYDF was supported by more than 150 countries, companies, indigenous peoples, and civil society around the world. The support has grown to more than 200 entities. Unfortunately, in its 2020 progress review, for all the indicators available, the world has failed to halve forest loss and its associated greenhouse gas emissions by 2020 and is not on the right trajectory to halt it by 2030.6 Considering that, the NYDF updated its declaration in 2021 and again in 2024.

Milman, O., 2023. "Humanity has 'opened gates to hell' by letting climate crisis worsen, UN secretary warns", The Guardian (20 September 2023).

Shah, S., 2024. "The World Has Seen Record-Breaking Temperatures for 12 Months.
 Experts Warn They Will Be 'Comparatively Cold' to the Future", Time Magazine (5 Juni 2024).

UN (United Nations), 2015. Paris Agreement; RI, 2016. Undang-Undang No. 16/2016 tentang Persetujuan Paris.

FAO (Food and Agriculture Organization) and UNEP (United Nations Environment Program), 2020. The State of the World Forest 2020. Forest, Biodiversity, and People. Food and Agriculture Organization, Rome.

^{5.} NYDF (New York Declaration on Forests) 2014; NYDF 2021; NYDF 2024.

NYDF Assessment Partners, 2020. Progress on the New York Declaration on Forests: Goal I assessment: Striving to end natural forest loss.

The demand for sustainability in world commodity production and supply chains is increasingly strengthening. Commodity

increasingly strengthening. Commodity production provides income at local and national levels, but also imposes social and environmental risks if not managed well. The most well-known and felt is the demand for a commitment to no deforestation, no peat and no exploitation, (NDPE). This demand is usually found more in the context of palm oil production although it applies to many other commodities. "No deforestation" refers to the avoidance of deforestation when developing landfor producing commodities or related activities. "No peat" refers to avoiding unsustainable development on peatlands because of their complex and fragile ecological functions, including serving as substantial carbon stock. Meanwhile, "no exploitation" refers to the avoidance of exploitation of workers, traditional and local communities, or smallholders. In 2020, around 83 percent of palm oil processing capacity in Indonesia and Malaysia had embraced NDPE commitments with implementation reaching 78 percent driven by six large company groups, while 16 of the 21 largest plantations committed to comply with NDPE policies.7 Even though it is very common in the palm oil industry, NDPE is also relevant for other commodities, and success in the palm oil industry will be followed by policies in other commodity industries. Recently, several countries required NDPE in their domestic or regional regulations relating to commodity imports. The European Union, for example, only allows commodities that comply with the NDPE principle in its import regulations, known as the

European Union Deforestation Regulation (EUDR, European Union Regulation No. 1115/2023).

Commodities so regulated by the EUDR are cattle, cocoa, coffee, palm oil, rubber and soybeans.

More responsible commodity production balanced with protection of social and ecological functions will also have a positive impact on Indonesia's environmental targets.

Indonesia has ambitiously committed to addressing the climate crisis. In the Enhanced Nationally Determined Contribution (ENDC) submitted to the United Nations Framework Convention on Climate Change (UNFCCC), Indonesia has committed to reducing total emissions by almost 32 percent (equivalent to a reduction of 0.91 billion tonnes of carbon dioxide equivalent, GtCO2e) on its own, and more than 43 percent (1.24 GtCO2e) with international cooperation by 2030. Indonesia has also committed to achieving net zero emissions of climate crisis-inducing greenhouse gas emissions by 2060 or sooner.8 Indonesia has also submitted its Long-Term Strategy for Low Carbon and Climate Resilience to the UNFCCC which is in line with the target of keeping temperature increases well below 2 degrees Celsius (°C) and preferably no more than 1.5 °C.°

⁷ Proforest, 2020. "Understanding commitments to No Deforestation, No Peat, and No Exploitation (NDPE), InfoNote 04. Proforest, Oxford.

⁸ RI (Pemerintah Republik Indonesia), 2021. Enhanced Nationally Determined Contribution: Republic of Indonesia. Kementerian Lingkungan Hidup dan Kehutanan, Jakarta.

⁹ RI, 2021. Indonesia Long Term Strategy for Low Carbon and Climate Resilience. Kementerian Linghungan Hidup dan Kehutanan, Jakarta.

The forestry and other land uses (FOLU) sector bears the largest burden for reducing emissions in Indonesia's ENDC. With its own resources, Indonesia in the FOLU sector must reduce emissions by 500 MtCO2e, which is 55 percent of the total emission reduction, which is a reduction of 17.4 percent out of about 32 percent total reduction from business as usual (BAU); and 729 MtCO2e with international cooperation, which is 59 percent or 25.4 percent out of a total of more than 43 percent of BAU in 2030.

Meanwhile, Indonesia is also committed to making the FOLU sector a net sink of emissions by 2030.

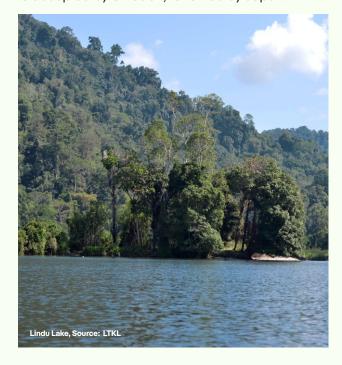
The 2030 FOLU net sink target of -140 million tons of carbon dioxide equivalent (MtCO2e) will be achieved through reducing emissions from deforestation and forest degradation, increasing carbon absorption from natural forests, increasing carbon absorption from land systems, reducing emissions from forest and land fires and peat decomposition, and law enforcement.¹⁰ An operational plan to achieve a net sink in the FOLU sector has been published which shows that FOLU sector emissions will continue to decrease to below zero (-140 MtCO2e) in 2030 and continue to decrease to -304 MtCO2e in 2050.¹¹

1.2 Jurisdiction-Based Landscape Approach (Jurisdictional Approach)

The landscape approach harmonizes land-based resource production and conservation activities, which are often in conflict, to obtain optimum results that preserve the ecological services of nature.

Protecting forests has an important role in the sustainability of commodity production, including food commodities. Protection forests not only provide water and other ecosystem services needed by downstream rice fields and plantations, but also protect the biodiversity needed to stabilize local and global ecosystems as well as absorb and store carbon dioxide, a climate crisis-inducing greenhouse gas.¹² Indonesia occupies the 51st position out of 78 countries for its food sustainability index and is included in the "medium" category (from very

high, high, medium and low). The highest position is occupied by Sweden, followed by Japan.¹³



- 10 Republik Indonesia (RI), 2022. Enhanced Nationally Determined Contribution, Republic of Indonesia (23 September 2022). Kementerian Lingkungan dan Kehutanan, Jakarta.
- 11 KLHK (Kementerian Lingkungan Hidup dan Kehutanan), 2022. Operational Plan: Indonesia's FOLU Net Sink 2030. Kementerian Lingkungan Hidup dan Kehutanan, Jakarta.
- Solheim, Erik. "Forest, food, and finance: How to balance protection and production", The Economist Intelligent Unit. https://foodsustainabilitycms.eiu.com/forests-food-finance-balance-protection-production/ (diakses pada 15 Juni 2024).
- 13 Economist Impact, 2021. Food Sustainability Index. The Economist, London.

A jurisdictional approach is a landscape approach within a whole political jurisdiction or government administrative region.

The landscape approach is a conceptual framework in which stakeholders in a landscape work together to reconcile competing social, economic, and environmental goals. It departs from the more narrowly focused and often unsustainable sectoral approach. A landscape approach aims to realize local needs and actions (i.e. the interests of different stakeholders within the landscape), while considering goals and outcomes that are also important for stakeholders outside the landscape, for example at the national or international level. A landscape approach can be carried out by one or more stakeholders doing it independently, or collectively by several actors in a multi-stakeholder collaborative process. This process is also known as integrated landscape management. 14 Meanwhile, jurisdiction is defined as a landscape bounded by political or administrative boundaries, including countries, states or provinces, and districts or municipalities.15 Often, the terms "landscape approach" and "jurisdictional approach" are used synonymously. However, because the jurisdictional approach uses governmental jurisdictional boundaries, there is an implicit expectation that in the jurisdictional approach the government will take a leadership role. Often, this approach is called a jurisdiction-based landscape approach.

A jurisdictional approach provides a strategic sustainability risk management framework. At

the most basic level, sustainability risks are usually managed at the corporate level through process efficiencies, process flow changes, and end-of-pipe waste management actions such as reducing emissions of greenhouse gases. On top of this, sustainability risks are usually managed along the supply chain, aligned with specific sustainability standards and sustainability certifications. However, as risks expand into the supplier's domain, the need for a landscape approach begins to emerge. A landscape approach or jurisdictional approach provides a more integrated framework.¹⁶



¹⁴ Global Canopy Project, 2015. The Little Sustainable Landscapes Book. Global Canopy Project, Oxford.

¹⁵ Kissinger, G., A. Brasser, and L. Gross, 2013. Reducing Risk: Landscape Approaches to

Sustainable Sourcing. EcoAgriculture Partners atas nama the Landscapes for People, Food, and Nature Initiative, Washington, DC.

¹⁶ ibi

The diagram below shows the increasing strategic value from risk management to a jurisdictional approach.



Risk to sourcing area

Engage in landscape approach and seek multistakeholder collaboration

Risk beyond the farm

Supply chain management, voluntary standards, and certification

Risk at the farm or plant

Farm level or facility and end-of-pipe measures (for example, GHG emission and water use reductions)

Figure 1 | The emerging need to manage risks at the regional scale of supply gives rise to the need for landscape and jurisdictional approaches. Source | modified from Kissinger, et al., 2013.

In summary, a sustainable jurisdictional approach, or a sustainable jurisdiction-based landscape approach, is an approach to regional development that is spatially and ecologically relevant in balancing production and conservation, and is carried out collectively in

multi-stakeholder collaboration through good governance with the leadership of the jurisdictional government, and financed, not only due to the economic benefits, but also the social and environmental ones.

1.3 Jurisdictional Approach Towards Sustainable Development in Indonesia

Indonesia is committed to implementing sustainable development. Since the Sustainable Development Goals were proclaimed globally by the United Nations, Indonesia has adopted them into its national regulations. Presidential Regulation No. 59/2017 on the Implementation of the Achievement of Sustainable Development Goals stipulates that the goal of sustainable development is "to maintain the continuous increase in the economic welfare of the community, maintain the sustainability of the social life of the community, maintain the quality of the environment as well as

inclusive development and implement governance that is able to maintain the improvement in the quality of life from one generation to the next". This regulation was later updated through Presidential Decree no. 111/2022. The attachment to this regulation details the Sustainable Development Goal Indicators. This presidential regulation is used as a guidance for central and regional governments as well as private and community-based organizations. Then, Regulation of the Minister of National Development Planning No. 7/2018 on the Coordination, Planning, Monitoring, Evaluation

¹⁷ Peraturan Presiden No. 59/2017 tentang Pelaksanaan Pencapaian Tujuan Pembangunan Berkelanjutan, Pasal 2(2).

¹⁸ Peraturan Presiden No. 111/2022 tentang Pelaksanaan Pencapaian Tujuan Pembangunan Berkelanjutan

¹⁹ Peraturan Presiden No. 59/2017, op cit., pasal 3.

and Reporting of the Implementation of the Sustainable Development Goals explains the procedures and guidelines for preparing action plans to achieve the Sustainable Development Goals both by ministries and institutions at the national and regional government levels.²⁰



Experience in the implementation of jurisdictional approaches in Indonesia is sufficiently long. Indonesia is the first country in the world to implement Timber Legality Verification System (Sistem Verifikasi Legalitas Kayu, SVLK), where timber products exported from Indonesia is guaranteed to be legal and sustainable.²¹ A jurisdictional approach to achieving sustainability has also been outlined in the 2020-2024 Medium Term Development Plan (Rencana Pembangunan Jangka Menengah

Nasional, RPJMN). The jurisdictional approach is mainly mentioned in the elaboration regarding downstreaming of agricultural and forestry industry focused on derivative of main commodities, where it is said that its development is "strengthened by a jurisdictional approach". In 2021, 47 companies have reported engagement in a landscape or jurisdictional approach, up from 27 companies in 2020. Six companies have reported their contributions in landscape or jurisdictional approach. Meanwhile, five provinces in Indonesia reported that they were aware of, and even implemented, jurisdictional approach.

A jurisdictional approach is in line with the established national legal umbrella and encourages regional development to be competitive. In order to achieve sustainable agriculture, national regulations have accommodated various forms of supports through jurisdictional approaches, although this requires harmonization of various national regulations that still overlap with each other. The principle of a jurisdictional approach emphasizes good governance and multi-stakeholder collaboration in realizing sustainable social, economic and environmental balance. In accordance with this principle, there are four clusters of national regulatory substances that support the realization of a jurisdictional approach, including spatial planning and landuse the environment and sustainable development goals, plantations and farmers and private sector incentives.

²⁰ Peraturan Menteri No. 7/2018 tentang Koordinasi, Perencanaan, Pemantauan, Evaluasi, dan Pelaporan Pelaksanaan Tujuan Pembangunan Berkelanjutan.

²¹ SVLK Indonesia, Sistem Informasi Legalitas dan Kelestarian (SILK). Kementerian Lingkungan Hidup dan Kehutanan, Jakarta.

Lingkungan Hidup dan Kenutanan, Jakarta. https://silk.menlhk.go.id/index.php/info/vsvlk/3#:--:text=Sistem%20Verifikasi%20da n%20Legalitas%20Kayu,beredar%20dan%20diperdagangkan%20di%20Indonesia%2 0, diakses pada 18 Juni 2024.

Perpres No. 18/2020 tentang Rencana Pembangunan Jangka Menengah Nasional (RPJMN) 2020-2024, Lampiran, hal. II-28; Syahrani, G., 2019. Concept Note: Developing Food and Agriculture in RPJMN 2020-2024 with the Jurisdictional Approach for Sustainability. Lingkar Temu Kabupaten Lestari, Jakarta;

²³ CDP, 2022. Pendekatan Lanskap dan Yurisdiksi di Indonesia: Ringkasan Kebijakan (Januari 2022). CDP, Jakarta.

Government regulations at the central level have encouraged the realization of good organizational governance for landscape

planning. Several references to regulations related to organizational governance include Law no. 23/2014 on Regional Government where each region has the authority to foster development, especially in implementing sustainable development in line with national laws and regulations. This effort is supported by several other regulations related to community involvement in the implementation of regional government (Government Regulation No. 45/2017) and is supported by the authority of regional governments to regulate innovation development at the regional level through the formation of innovation teams, funding, monitoring and evaluation, collaboration and network development to increase regional efficiency, effectiveness and competitiveness in facing sustainable development challenges (Government Regulation No. 38/2017). Meanwhile, sustainable landscape governance, is supported by integrated geospatial information in spatial planning, so that spatial management and planning are more structured and sustainable. The implementation of landscape governance is supported by national policies contained in Law no. 26/2007 which is supported by Government Regulation no. 9/2016 through the establishment of coordination channels and acceleration of the preparation of integrated spatial data.

Meanwhile, various regulations emphasize the concept of natural resource management that considers ecosystem sustainability. This is stated in Law No. 41/1999 on Forestry, Government Regulation No. 46/2017 on the Implementation of Environmental Management Based on Economic Instruments, as well as Government Regulation No. 5/2019 on the Moratorium of New Permits and Improving Governance of Primary Forests and Peatlands. Apart from that, Government Regulation No. 59/2017 on National Action Plan

to achieve the Sustainable Development Goals (SDGs) in 2030 was established, while local governments have been given guidelines and reference in overcoming the challenges of adaptation to climate change that involves public participation, cross-party coordination, and collaboration through Regulation of the Minister of Home Affairs No. 7/2018 on Climate Change Adaptation Strategy.

Regulations at the national level also provide support for farmers and their farms. Such support includes the operation of plantations equipped with various community empowerment programs, collaboration, opportunities for innovation, and the use of technology that supports increased productivity, environmental protection, and the welfare of farmers and plantation communities (Law No. 39/2014 on Plantations). Plantation development is also supported by the collection of funds to support the success of plantation programs (Government Regulation No.24/2015 on the Collection of Plantation Funds). In order to maintain plantation lands in a sustainable manner, a moratorium and evaluation of plantation permits has been established (Presidential Instruction No. 8/2018), the issuance of transparent plantation licensing guidelines (Regulation of the Minister of Agriculture No.26/2007 on the Guidelines for Plantation Licensing and Regulations of the Minister of Agriculture No. 29/2018 on the Procedures for Plantation Business Licensing), as well as establishing certification standards and procedures, especially for palm oil commodities (Regulation of the Minister of Agriculture No. 11/2015 on Sustainable Palm Oil).



Regulations at the national level also provide support for sustainable agriculture. Law no. 41/2009 concerning Protection of Sustainable Food Agricultural Land includes regulation of land use, protection, and control, while encouraging farmers to directly participate and collaborate in protecting and managing food agricultural land. To improve the welfare of farmers in the context of sustainable food and agricultural land management, it is necessary to regulate the rights and obligations of farmers, encourage economic empowerment, socially protect farmers, and provide opportunities for cooperation in accordance with the mandate of Law no. 19/2013 on the Protection and Empowerment of Farmers.

The role and participation of the private sector is strategic. The private sector has been given incentives to develop regional potential, especially for competitive and sustainable food and agricultural commodities. This includes

incentives for capital investment that will have implications for fiscal increases in accordance with Government Regulation No. 24/2019 on the Incentives and Facilitation of Investment in the Regions, Government Regulation No. 45/2019 on the Amendments to Government Regulation No. 94/2010 on the Calculation of Taxable Income and Payment of Income Tax in the Current Year, and Regulation of the Minister of Finance No. 128/2019 on Providing Reductions in Gross Income for the Implementation of Work Practices,

Apprenticeships, and/or Competency-Based Human Resources Training and Development. All of these national policies encourage the implementation of a jurisdictional approach in sustainable management of natural resources (commodities) by implementing effective and efficient sustainable development criteria and principles.

In several districts, for superior commodities such as cacao, sustainability at the jurisdictional level has also been regulated with strategic planning. Sustainable cacao farming practices is regulated in the Ministry of Agriculture Strategic Planning 2022-2024, highlighting the potential of the agricultural sector in increasing export ratio, financing access to farmers, and productive superior farming practices in compliance with sustainable cacao principles.²⁴ The District of North Luwu, known as the largest cacao producer in Indonesia, is currently supported by International Center for

Research in Agroforestry (ICRAF) or World Agroforestry to implement the Sustainable Farming in Asian Tropical Landscape (SFITAL) focusing on the development of sustainable cacao commodity.²⁵ The local government has also established the District of Luwu's Sustainable Cacao Roadmap with a commitment to increase the welfare of cacao farmers through sustainable management practices.²⁶ What has been implemented for cacao farming in North Luwu is applicable to other jurisdictions with their own superior commodities.



- 24 Benita T, Laksemi NPST, Pandiwijaya A, Hendriatna, Widjianto, Johana. 2023. Ringkasan Eksekutif – Peta Jalan Kakao Lestari Kabupaten Luwu Utara. World Agroforestry (ICRAF) Indonesia Program.
- 25 Pemerintah Kabupaten Luwu Utara. https://portal.luwuutarakab.go.id/post/icrafjadikan-luwu-utara-pusat-pembangunan-kakao-berkelanjutan (diakses pada 29 Juni 2024)
- 26 Benita T, Laksemi NPST, Pandiwijaya A, Hendriatna, Widjianto, Johana. 2023. Ringkasan Eksekutif - Peta Jalan Kakao Lestari Kabupaten Luwu Utara. World Agroforestry (ICRAF) Indonesia Program.

1.4 Investment and Blended Financing in Jurisdictional Approach

A jurisdictional approach presents an interesting case for investors. Sustainable investment has matured and is growing rapidly. About \$30.3 trillion has been invested in sustainable assets in 2022. Investors in Europe, Canada, Japan, Australia and New Zealand managed \$21.9 trillion in sustainable assets, 20 percent more than two years prior. Europe leads the way in sustainable investment development, while Japan shows the most impressive growth.²⁷

Financing with a jurisdictional approach is best if it is structured using blended financing

structure. Blended financing is "a strategic public use or philanthropic development model for private parties for additional investment related to SDGs. In blended financing, sources are divided into two, namely low-cost funding such as grant or semi-commercial financing, and fully commercial financing. Grant financing and low-cost semicommercial financing can be obtained from public sector financing, either from the central government, regional governments, or grant or cheap funding sources from abroad, such as bilateral grants (for example, United States Agency for International Development, USAID) or multilateral (for example, the Global Environmental Facility, GEF, or Green Climate Fund, GCF), cheap loans from bilateral and multilateral development banks; or from domestic philanthropy (for example, Philanthropy Indonesia, family foundations, and others) or foreign (such as the Climate and Land Use Alliance, CLUA).



Full commercial financing is usually obtained from domestic and foreign banks, as well as other financing such as venture capital or private equity.²⁸ There are also several types ofinnovative financing that lie between semi-commercial and commercial financing, for example impact financing and bonds. Impact funding may be classed as commercial funding. But because they consider the positive social and environmental impacts of their funding as well as financial returns, the acceptable level of financial returns can be lower. Even though bonds may be classified ascommercial funding, because they are supportedby strong guarantees (including by the state), thereturns can also be less.

²⁷ GSIA (Global Sustainable Investment Alliance), 2022. Global Sustainable Investment Review 2022. Global Sustainable Investment Alliance, Blended Finance Taskforce, 2018. Better Finance, Better World: Consultation Paper

²⁸ of the Blended Finance Taskforce. Blended Finance Task Force, London.

Jurisdictional-based financing investments need to accommodate public sector funding, philanthropy, as well as commercial financing with low and high risk. When combined in the right way, these different sources of financing can support appropriate development for creating enabling conditions as well as reallocation of risks. Usually, mixing several types and sources of funding is carried out by looking at the risk profile

of the portfolio of funded initiatives and the appetite of the financiers. By conducting proper risk assessment, the right mix can be created so that the relatively high-risk appetite of the public and philanthropic sectors can be utilized to attract commercial financing that has relatively lower risk appetite. With the right combination, Sigi can attract more opportunities for initiatives that foster sustainability.



Figure 2 | Comparison of financing risks with typical funding sources for taking on those risks.



Public and philanthropic funding can be utilized well in the early stages, especially at the stage of developing enabling conditions.

Usually, investment in the early stages is used to build readiness and adjust conditions, public and philanthropic financing are more willing to invest than private companies. After that, risk-averse private investors may enter when conditions are more stable.

The structure for channeling financing to the portfolio of initiatives in the field is also strategic. Often, to reach a place where investments are made, a structure is needed that can be used to channel investment funds from the source as effectively as possible. Funds which are usually quite large while still at the source may need to be distributed according to

requirements in the field that may not be that large, and through appropriate distribution channels. In some cases, there is also a need to improve financing possibilities through intermediaries for potential financing recipients that may not necessarily be attractive to traditional banks. Several distribution options have been identified, for example through regional development banks, or national banks with access to remote rural areas such as Bank Rakyat Indonesia (BRI). Apart from that, distribution through cooperatives, village-owned enterprises (Badan Usaha Milik Desa, BUMDes), or farmer groups can also be explored. By having a good distribution structure, channeling of financing from its source to the portfolio of initiatives being funded can take place smoothly and effectively.

A regenerative economy is an economy that grows, develops and increases the assets under management. In a regenerative economy, social and ecological change is no longer separated from the economic system but becomes an integral part of it. The principle of regenerative economics is to focus on people, place, planet, position, peace, diversity, and progress. Putting these principles into action requires identifying and assessing multiple types of capital, with a dynamic systems approach, regenerative design, developing a circular economy, good governance, and interdisciplinary education and advocacy. In this way, a regenerative economy moves away from extractive businesses and opens opportunities to contribute positively to the environment and society. The business world will have the potential to become a climate and economically positive business.29

Through the lens of a regenerative economy, sustainable commodity and ecosystem services open the largest opportunities. The potential for investment funding is in

opportunities that simultaneously provide added value to social and environmental conditions as well as sustainability while providing sufficient returns on investment. Specifically, the added value in social and environmental conditions as well as sustainability in investing in Sigi can be evaluated through the Green Sigi Performance Index indicators (Index Kinerja Sigi Hijau, IKSH) (See Box 2). Another potential investment funding is by monetizing ecosystem services. With quite extensive forest cover, Sigi has the potential to provide quite a lot of forest ecosystem services, for example the development of the tourism sector which takes advantage of the natural beauty of Sigi; water, downstream production from biodiversity resources originating from forests, for example herbal medicine, food crops and their downstream production, medicinal plants and their downstream production, as well as biodiversity credit which is currently popular. The possibility of monetizing the dense forests in Sigi for carbon absorption and storage can of course be explored further. Carbon sequestration and storage is the most widely developed and monetized ecosystem service in the world.

²⁹ Shannon, G., R. Issa, C. Wood, I. Kelman, 2022. "Regenerative economics for planetary health: A scoping review", International Health Trends and Perspectives 2(3), pp. 81-105; BMW Foundation Respond, Circle Economy, Systemiq, 2022. Regenerative Economy: Moveing from Theory to Action. BMW Foundation Respond, Munich.





Sigi is a District in Central Sulawesi, just south of the city of Palu which is the capital of Central Sulawesi Province. The population in Sigi is 266,660 people in 2023, an increase from 263,320 people in the previous year in 2022, showing a population growth rate of 1.76 percent. Gross Regional Domestic Product (GRDP) at current prices in 2023 was Rp11.4 trillion,

an increase of 3.37 percent from the previous year at Rp10.6 trillion, but still lower than the national economic growth. Open unemployment rate is at 2.6 percent, while the number of poor people at 31,470 people is around 12.83 percent of the total population, higher than the national poverty rate. The Human Development Index (HDI) in Sigi is 70.28.³⁰

³⁰ BPS (Badan Pusat Statistik) Kabupaten Sigi, 2024. Kabupaten Sigi Dalam Angka 2024. Badan Pusat Statistik, Jakarta.

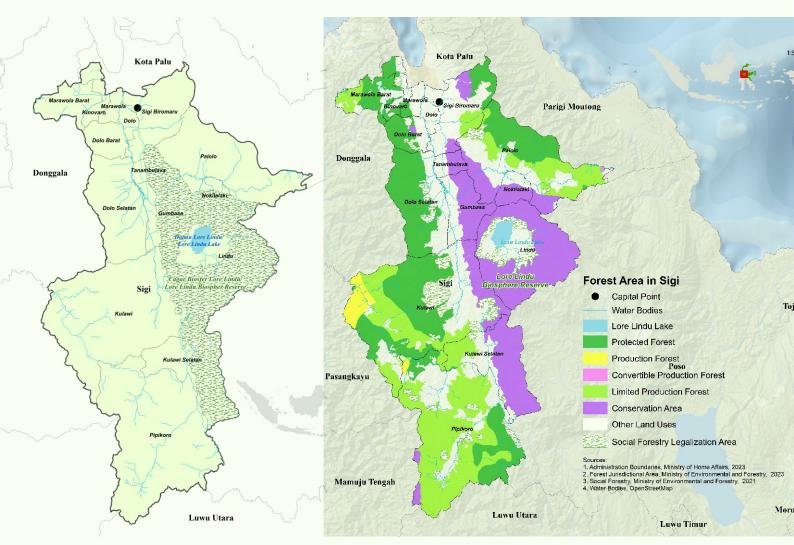


Figure 2 | Left: Map of Sigi Regency; and Right: forest area in Sigi Regency

Spatial Planning Plan in Favor of Social Cohesion and Forest Conservation. The

District Government of Sigi has outlined its spatial and regional planning in the long term through Sigi Regency Regional Regulation No. 1/2021 on the Spatial Plan for the Regional Planning of Sigi Regency for 2021-2041. The purpose of spatial planning in the planning document is to realize the implementation of development that relies on the agriculture, forestry and tourism sectors by considering the carrying capacity of the environment and disasters in a sustainable manner. Specifically, the spatial planning policy

(Article 6 of the Regional Regulation of the District of Sigi No. 1/2021) is focused on the development of agriculture, forestry and tourism that specifically includes (1) the consolidation of protected areas to ensure sustainable development, (2) the development of agricultural commodities and small and medium industries oriented to local resources and market needs, (3) the improvement and development of tourism based on local wisdom managed by and (4) the increasing efforts to preserve and utilize forests that support community social cohesion.

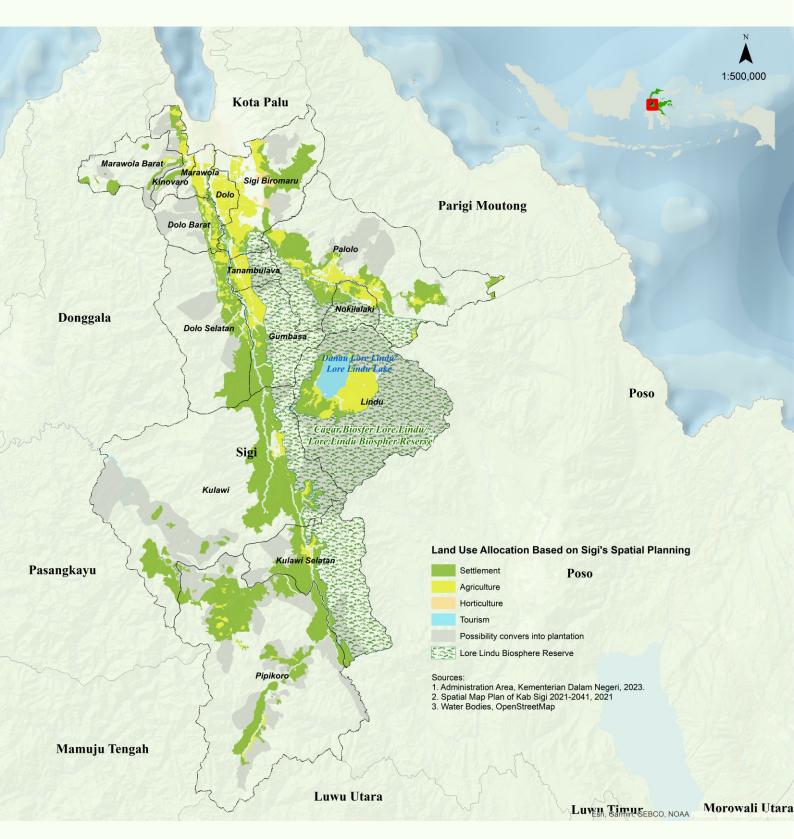


Figure 3 | Spatial Pattern Map of Sigi

Policy	Strategies related to the scope of agriculture, forestry and tourism development	Location Determination
Consolidation of protected areas to ensure sustainable development	1. Maintaining protected forest areas outside of the outline of cultivation areas to avoid changing the functioning of nature, landscapes and natural ecosystems. 2. Limiting the growth of settlements and activities in local protected areas. 3. Rehabilitation of protected areas which function has been changed. 4. Managing the use of space in disaster-prone areas.	 The protection forest area designated as an agricultural area is in the form of a plantation area of 28,004 ha in Dolo, West Dolo, South Dolo, Kinovaro, Kulawi, South Kulawi, West Marawola, Palolo, Pipikoro, and Sigi Biromaru (Article 21, paragraph 2a). Conservation areas, especially national park areas with a proposal to change the designation of forest to non-forest areas (agricultural areas in the form of plantation areas covering an area of 62,705 ha in Gumbasa, Kulawi, South Kulawi, Lindu, Nokilalaki, Palolo, Sigi Biromaru and Tanambulava). Changes to the proposed designation of some areas can be implemented after obtaining approval from the Minister in charge of forestry affairs. Strategic area for the benefit of environmental functions and carrying capacity in the area around Lore Lindu National Park (Article 37 paragraph 4).
Development of agricultural commodities and small and medium industries oriented to local resources and market needs.	 Developing an integrated (upstream to downstream) agricultural and plantation system in the implementation of agribusiness, agro-industry and agro-tourism activities. Developing a network system of farm roads connected to agricultural land, agricultural product processing sites, and marketing sites. Maintain and improve technical irrigation, semi-technical irrigation, simple irrigation, and village irrigation to support the development of wetland cultivation and agriculture activities. Establishing and improving the protection of sustainable food farmland. Establishing and building small and mediumsized industries. Developing agricultural and plantation processing industry supported by industrial facilities and infrastructure inside and outside the small and medium industrial centers. Improving regional strategic infrastructure that supports the growth of the industry including the accessibility of raw material sources and logistics 	1. Support primary and secondary irrigation infrastructure in • Gumbasa Irrigation Area (national) • Wuno Irrigation Area (province) 2. The 115,018.66 ha of agricultural area (Article 26) established in: • Food crop areas in all districts; • Horticulture areas in all districts; • Plantation areas in all districts; • Specially designated 27,577 ha of sustainable food crops area (Kawasan Pertanian Pangan Berkelanjutan, KP2B) in all districts, except Marowala Barat. 3. Strategic areas that support economic growth from agricultural sector and establishing Sausu-Manggalapi-Palolo agrotourism area.

Policy	Strategies related to the scope of agriculture, forestry and tourism development	Location Determination
Improvement and development of tourism based on local wisdom managed by the community	 Developing limited and controlled tourism activities in conservation areas in accordance with the carrying capacity and involving local communities. Developing natural tourism such as waterfall tourism, hot spring tourism, animal captivity/protection tourism, peak tourism with location exoticism as tourist attraction. Maintaining and developing the sustainability of the area and/or cultural heritage objects, as well as other areas that have high historical and aesthetic values as historical and cultural tourism attractions. Maintaining and developing local community cultural festivals as cultural tourism attractions. Developing artificial tourism to provide different attractions as alternative destinations in supporting the superior tourism sector 	Development of tourism potential is spread throughout the subdistrict areas in Sigi (Article 30 paragraph 3).
Increasing efforts to preserve forests and use forests that support social and economic activities of the community	 Improving coordination and implementation of forest and land rehabilitation. Increasing community participation in the protection and conservation of forest resources. Organizing guidance and compliance of forest product industry permits. 	Potential expansion of agricultural areas from forest areas: Limited production areas. There is a proposal to change the designation to agricultural in the form of plantation areas covering an area of 24,833 ha in Kulawi, South Kulawi, West Marawola, Palolo, Pipikoro and Sigi Biromaru (Article 25 paragraph 5a); Fixed production forest areas. There is a proposal to change the designation to agricultural areas covering an area of 984 ha in Kulawi and Pipikoro Districts (Article 25 paragraph 6); and Convertible production forest areas. There is a proposal to convert into agricultural land in the form of 8,466 ha plantations in Kulawi, South Kulawi and Pipikoro Districts.

Sigi is a lush district. About three quarters of Sigi is a forest area that includes customary forests, limited production forests, national parks, nature park, and forest park. Sigi is a part of the Lore Lindu National Park. This 229,000 ha national park, which lies at the center of the biosphere reserve, is a rainforest mountain in Sulawesi with high biodiversity, including 77 endemic bird species, and historical sites such as megalithic remains. The customary forest in Sigi is managed directly by the indigenous communities and is the largest in Central Sulawesi.

The customary forest covers five subdistricts, most (81 percent) of the villages in Sigi are within the forest area. With its great natural wealth, Sigi is facing the threat of logging and poaching. Sigi is also vulnerable to natural disasters (such as floods, landslides, earthquakes, etc). Since 2010, Sigi has experienced at least 75 natural disasters. The history of these disasters is immortalized through local culture, for example village names, regional songs, and others.

BOX 1

Lore Lindu: A Tourism Potential In The Making



In 1977 Lore Lindu National Park (229,000 ha) was recognized as a biosphere reserve by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The Lore Lindu Biosphere Reserve is a living laboratory that represents a balanced relationship between humans and nature in supporting sustainable development. Lore Lindu Biosphere Reserve combines natural, social, economic and educational science that supports improving human quality, protecting natural ecosystems and is managed with an innovative approach that supports sustainable and environmentally friendly development.

The Lore Lindu Biosphere Reserve area is divided into three zones, as follows.

- Core Area: An area determined for long term or permanently covering 215,687.4 ha within the administrative area of the Districts of Sigi and Poso.
- 2. Buffer Area: An area adjacent to the core area as a space for socially sustainable development and production approaches to be carried out and covers an area of 503,738 ha covering the Districts of Sigi, Poso, and Parigi-Moutong.
- Transition Area: An area adjacent to the buffer area where the space for a sustainable economic approach is implemented, and it includes the City of Palu.

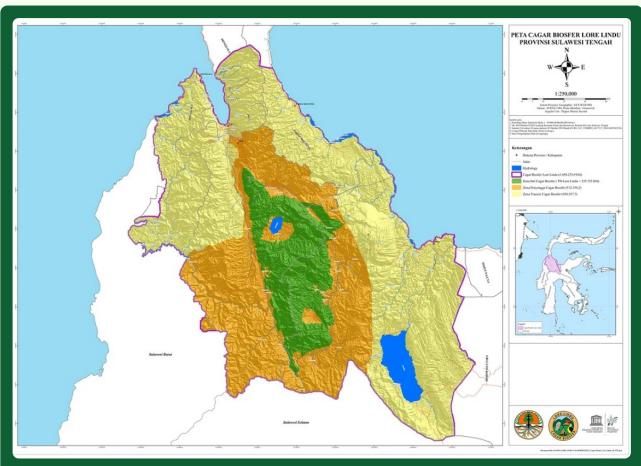


Figure 4 | Map of the Lore Lindu Biosphere Reserve Area

Lore Lindu Biosphere Reserve Potential

The Lore Lindu Biosphere Reserve area is managed by the Lore Lindu National Park Center, Directorate General of Natural Resources and Ecosystem Conservation (Direktorat Jenderal Konservasi Sumber Daya Alam dan Ekosistem, KSDAE), of the Ministry of Environment and Forestry. Apart from the high diversity of flora and fauna, this area is also a megalithic heritage area and to this day the indigenous traditions of the Central Sulawesi tribe called Dero are still developing. Until now, there are still indigenous tribes that inhabit this area, including Kaili Ledo, Kaili Ija, Kaili Ado, Kaili Moma, Kaili Tohulu, Kaili Da'a, Kulawi, Behoa, Pakurehua and Bada who still preserve the Rego dance as their traditional dance.

Several tourist destinations in the core area of the Lore Lindu Biosphere Reserve include:

 Lake Lindu: boat trips, wildlife observation, and cultural attractions;

- Saluki Valley: selective captivity of Maleo birds;
- Kulawi and Gimpu: camping, wildlife watching, and cultural attractions;
- Mount Nokilalaki, Mount Rorekatimbu: hiking, tourist attractions, and sporting events (Lore Lindu Biosphere Reserve transition area);
- International and national sports competitions include international cycling competition (Tour De Central Celebes/TDCC), Lake Poso Festival, Lindu Festival and Paragliding Matanimali;
- · Wild orchid breeding, Sigi Regency;
- Kamarora Waterfall Tour;
- · Kadidia Hot Spring Tour;
- Tambing Kalimpa'a Lake: as a camping destination, bird watching and visiting wild orchid breeding;
- Napu, Besoa, and Bada Valleys: megalithic heritage destinations, cultural attractions, wildlife (tertiary birds) observation.

2.1 Sigi's Commitment to Sustainable Jurisdictional Development

Sigi is one of nine members of the Sustainable **Districts Forum (Lingkar Temu Kabupaten** Lestari, LTKL). LTKL is an association of districts that has declared itself and is committed to becoming sustainable districts based on mutually agreed indicators. LTKL is part of the Indonesian Association of District Governments (Asosiasi Pemerintah Kabupaten Seluruh Indonesia. APKASI), as a caucus to realize the vision of a sustainable economy that protects the environment and improves community welfare through multi-party cooperation.31 LTKL has a vision of (1) 50 percent of forests, peatlands, and important ecosystems being protected, and one million families in LTKL member districts being prosperous; (2) multi-stakeholder sustainable development cooperation network is formed; and (3) a "recipe" for sustainable development is compiled and can be replicated by all Regencies in Indonesia.32

The integrated planning strategy between the Regional Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Daerah, RPJMD) and the Sustainable Investment General Plan (RUPM) is prepared in line with sustainable Jurisdictional

Development. Following the vision of the 2005-2025 Regional Long-Term Development Plan of the District of Sigi that is "agriculture based on natural resources conservation and culture", the 2021-2026 RPJMD of the District of Sigi is focused on "agribusiness-based competitive sigi regency" with the mission of developing a competitive people-based economy, bureaucratic and governance reform, and continuing sustainable development based on disaster mitigation. This is

in line with the 2017-2025 General Plan for Regional Investment which has a mission to (1) develop and increase investment in agriculture and tourism in a sustainable manner based on regional leading commodities; (2) develop investment activities that are environmentally friendly and care for local wisdom based on the people's economy, (3) realize good governance, the rule of law, and human rights to encourage sustainable investment improvement, (4) build and improve the provision of quality infrastructure to support investment activities optimally and sustainably, (5) develop regional policies that are promotive, protective, stimulative, and facilitative so that they can encourage and develop investment in the region. This capital strengthens Sigi's commitment to sustainable Jurisdiction Development in synergy with its regulations.

Regional Regulation (Peraturan Daerah, Perda) No. 4/2019 on Green Sigi shows Sigi's strong commitment to sustainable jurisdictional development. Green Sigi prioritizes harmony in the designation and use of space; implementation and arrangement of Green Sigi with the establishment of green open space, development of green open space, greeneries, ecosystem restoration, sustainable agriculture, network of environmental management systems, climate change mitigation and adaptation, and addressing areas prone to agrarian conflict; strategies and policies for the development of certain areas that have the function of protection, nature conservation, and biodiversity that can improve people's welfare; the responsibility of the regional government and the community to jointly plan and implement the Green Sigi; incentives

^{31 &}quot;Definisi". Lingkar Temu Kabupaten Lestari, Jakarta, https://kabupatenlestari.org/tentang-ltkl/apa-itu-ltkl/definisi/, (diakses pada 10 Juni 2024).

^{32 &}quot;Visi Kabupaten Lestari", Lingkar Temu Kabupaten Lestari, Jakarta, https://kabupatenlestari.org/tentang-ltkl/apa-itu-ltkl/visi-kabupaten-lestari/, (diakses pada 10 Juni 2024).

and disincentives will be given if there are achievements or preventions taken regarding environmental protection; as well as provisions prohibiting anyone from polluting and/or destroying the environment. This is an important modality for the implementation of sustainable jurisdictional development.

Regulation of the Head of District No. 33/2023 on Multistakeholder Partnerships in the Implementation of Sigi Hijau established the Sigi Hijau Multistakeholder Forum. The implementation of Sigi Hijau strategies and policies is carried out by increasing the participation of the community and parties in the structuring of Sigi Hijau, This participation is in the form of a multi-stakeholder partnership of Sigi

Hijau which was formed with the objective of supporting the acceleration of the achievement of sustainable and inclusive Sigi Hijau development goals as well as systematically and comprehensive to realize a prosperous society. In its implementation, four Working Groups were formed including Secretariat, Data & Research, Innovation, and Advocacy with 16 Development Partners based in Central Sulawesi that are committed to working together in the implementation of Sigi Hijau investment. Gampiri Interaksi was established that carries out incubation and production functions. The organization is playing an important role in the development of sustainable businesses in accordance with the principles of Sigi Hijau.



BOX 2 Gampiri Interaksi Lestari: Sigi Sustainable Business Incubator



Gampiri Interaksi Lestari is a local incubation center in Sigi. Gampiri provides a collaborative space for the youth to contribute to Sigi's sustainable business development. The formation of Gampiri Interaksi Lestari since 2023 as a forum to develop the region through the concept of mutual cooperation in forming the best young generation who are creative, innovative and productive to support the realization of Green Sigi's vision and mission.

Since its founding in 2023, it has been actively carrying out several programs, one of which is the GIAT Program (Gampiri Sustainable Business Incubation). This program provides effective and maximum assistance to sustainable businesses through assistance with business strategy and management, expanding networks and measuring economic, social and environmental impacts connected to the Sigi Regency Green Sigi Program.

The achievements of Gampiri Sustainable Interaction in 2023 include the following:

- Incubated 19 sustainable businesses in Sigi Regency for 8 leading Lestari commodities;
- Created 13 derivative innovative products in the food sector;
- Post incubation sales achievement of more than 50 percent;
- Several products resulting from the incubation program entered the wider market, including being marketed at the Jazz Festival in Prambanan, and spiced soy sauce products being a collaboration product at Cork n Screw.

In 2024, the formation of Gampiri Inkubasi Lestari was promulgated in Regent Decree No.500.3.8-147 of 2024 with a validity period of 1 year. This year, an incubation program was carried out by Gampiri Interaksi Lestari in collaboration with the Sigi Regency Cooperatives Service through the Distribution of Fund to Increase the Capacity for Cooperatives and Small Business (PK2UMK) program of the Ministry of Cooperatives with a total budget of IDR 424,499,950. This program consists of pre-incubation, incubation and post-incubation based on the Sustainable Investment Guide with a total of 25 tenants/MSMEs, being incubated. Program implementation will begin in April-October 2024. In accordance with the Regent's Decree, the establishment of Gampiri Inkubasi Lestari as a business incubation institution aims to:

- Organize incubation of new business;
- Facilitate legal and licensing services;
- Increase the productivity of MSMEs by fostering creative, innovative and productive entrepreneurial motivation;
- Optimizing the strengthening of human resources for business actors in driving the economy by utilizing science and technology.

In order to support the regent's decision, the manager of the Sustainable Interaction Development Business Incubator has been appointed in Institutional Decree No. 01/GIL/SG/2024. The management of the institution consists of directors, managers, determining 4 areas (program areas, funding, network and collaboration development, and product commercial areas) and tenant assistants.



Lindu Lake Scenery from Tomado Village. Source: LTKL

To increase its competitiveness, Sigi implements the Regional Competitiveness Framework (Kerangka Daya Saing Daerah,

KDSD). There are five KDSD aspects that have been stated in the Green Sigi document, namely (1) aspects of planning and goal setting by building strong plans to achieve Sustainable Development - planning comes from the Regional Government with the support of Green Sigi Multi-stakeholders and local communities; (2) aspects of economic resilience by strengthening local resources, stabilizing community land ownership, maintaining sustainable supply chains, currently being developed by the Green Sigi Multi-stakeholder Institution to map investment opportunities that maximize local forest product resources in accordance with the characteristics of Sigi that is 70 percent forested areas; (3) aspects of social resilience involving the community from planning to monitoring the transparent development process— every development process involves the role of local communities so that the community can be adaptive and independent; (4) aspects of environmental and natural resource management with environmental and natural resource

33 Lingkar Temu Kabupaten Lestari, 2019. Sustainable District Association – Regional Competitive Framework. management carried out in a sustainable manner, using renewable energy and involving local communities fairly — supported by development partners who maximize the potential of regional commodities with farming schools; and (5) the incentive aspect as a system established by the regional government as a form of appreciation for environmental preservation — is also contained in the Green Sigi document to maximize sustainable implementation by increasing community involvement.³³

This commitment can be strengthened by

increasing capacity. Several things have been identified as a need to strengthen capacity in Sigi. The agrarian reform and the allocation of land as objects of agrarian reform (Tanah Obyek Reforma Agraria, TORA) processes, as well as mapping the potential for Biodiversity Park development have been identified as one of the capacity improvements needed in Sigi. In addition, strengthening the capacity of the secretariat which facilitates the daily activities of the Green Sigi Multi-stakeholder Forum as well as activating meetings and collaborative synergies on

Multistakeholder Governance have also been identified as a need to strengthen the multistakeholder process in Sigi. To develop the capacity for implementing incubation at Gampiri Interaksi, needs have been identified such as mapping Sigi's strategic commodities, such as cocoa, vanilla, coffee, and so on, as well as mapping ecotourism potential and developing human resources. Apart from that, the need for restorative economic development on TORA land and social forestry as well as the preparation of landscape and commodity-based portfolios has also been identified. To attract further sustainable jurisdictional investment to Sigi, the need for mapping and capacity development planning for the Sigi Regency Government is still considered a necessity.

Sigi Regent Regulation No. 1/2023 concerning Procedures for Allocating, Distributing and Channeling of Village Fund Allocations to Each Village as well as Procedures for Allocating and Distributing of the Proceeds of Regional Taxes and Regional Retributions to Villages for the 2023 Fiscal Year regulates the distribution of budgets to villages. The distribution of the budget to villages is regulated based on the calculation of three types of village fund allocation factors, namely basic allocation, formula allocation and performance allocation. The basic allocation is 80 percent of the total village fund ceiling divided by 176 villages in Sigi. The formula allocation is 17 percent divided based on several factors, including population size, poverty rate, area size and geographic hardship index. Meanwhile, the performance allocation is the remaining 3 percent and is calculated based on the Green Sigi Performance Index (Indeks Kinerja Sigi Hijau, IKSH), namely budget policies for strengthening food security, budget policies for environmental management, growth in social welfare, economic growth and growth inecological resilience.³⁴ The procedure for allocating village fund budgets by considering environmental and ecological performance is an innovative way to provide incentives to villages in Sigi to protect the ecological functions of these villages.

BOX 3

Green Sigi Performance Index

In providing village fund allocations for performance allocation, the role of each village in realizing Green Sigi is required which is calculated based on the success of the Green Sigi Performance Index, as follows.

- Budget policy to strengthen food security
- Environmental management budget policy
- · Growth in social welfare
- Growth in economic security
- Growth of ecological resilience

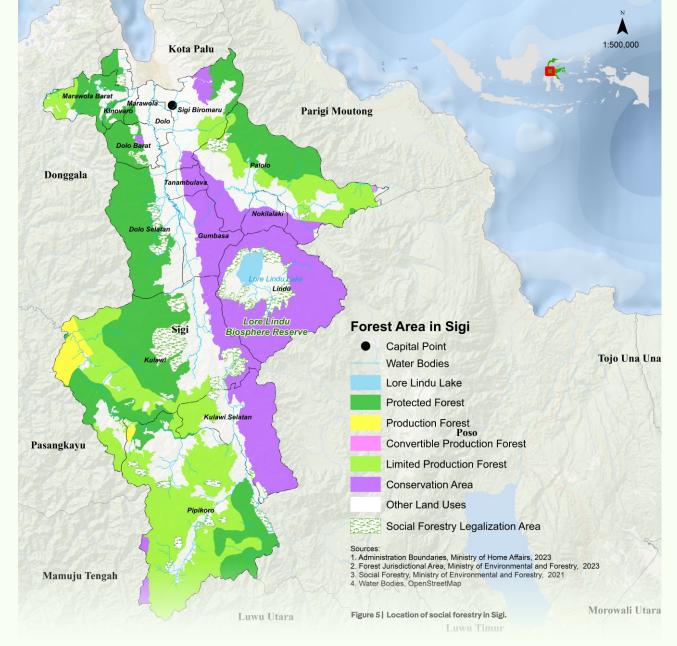
³⁴ Peraturan Bupati Sigi No. 1/2023 tentang Tata Cara Pengalokasian, Pembagian, dan Penyaluran Alokasi Dana Desa kepada Setiap Desa serta Tata Cara Pengalokasian dan Penyaluran Bagian Hasil Pajak Daerah dan Retribusi Daerah kepada Desa Tahun Anggaran 2023, pasal 6.



Lore Lindu is a natural site of high value in Sigi, and to protect it, Sigi Regency is developing a Road Map to the Lore Lindu Restorative

Economic Area. An ideal restorative economic zone has three main pillars, namely (1) nature-based downstream activities with high added value in accordance with natural regeneration process; (2) improving the quality of life and resilience of local communities through engagement with value chains; and (3) protecting and, if necessary, restoring biodiversity and carrying capacity to improve the quality of natural production. The Lore Lindu Biosphere Reserve is an area suitable for developing a restorative economic zone.

Products such as cocoa, coffee, coconut, bamboo, vanilla, citronella are potential nature-based commodities. With development capital based on nature conservation, local wisdom of indigenous communities, megalithic cultural heritage, and community resilience to disasters, it will support high value for community welfare and nature preservation in the Lore Lindu Restorative Economic Area. In its implementation, a participatory process that involves synergy between government, society and the private sector is fundamental. This spirit of mutual cooperation is the beginning of the success of the Lore Lindu Restorative Economic Zone.³⁵



The legality of social forestry in Sigi has been confirmed as Forest Area Utilization by Local

Communities. The locations of social forestry areas in Sigi in 2021 are spread over 26,694 ha consisting of 22 Minister of Environment and Forestry Decrees for Farmer Groups and Village Forest Management Institutions.³⁶ Applications for social forestry are still ongoing in Sigi and will likely continue to increase. In 2024, Walhi will submit a proposal for social forestry covering an area of 424 ha in Pulu Village. It is hoped that the legality of social forestry will encourage the community to gain access to forest area management and strengthen the institutional capacity of community groups in encouraging efforts to improve the economy in accordance with the potential of natural forest resources by maximizing local wisdom.³⁷

Dihitung berdasarkan Data Spasial Perhutanan Sosial Kementerian Lingkungan

Hidup dan Kehutanan, 2021.

commodities developed can be supported through agroforestry. With the regional characteristics of Sigi with three-quarters of it forested, the use of agroforestry and part only support supports and part only support supports.

In maintaining the conservation function, the

with three-quarters of it forested, the use of agroforestry can not only support sustainable, environmentally friendly agriculture, but can also reduce environmental impacts. Agroforestry is mixed cropping system combining herbaceous plants and shrubs, trees, and sometimes livestock. In Sigi, Agri-silviculture (a combination of forestry-agricultural components) can be implemented because several commodities such as cocoa, coffee, and vanilla also need canopy from other trees for protection from the direct heat of the sun. Economically, agroforestry can support a stable food supply with various types of plants in one area.³⁸

³⁷ WALHI Sulawesi Tengah. 2024. https://walhisulteng.org/walhi-sulteng-ajukan-perhutanan-sosial-di-desa-panjoka/ (Diakses pada 19 Juni 2024)

³⁸ Fitriani, T. 2024. Meningkatkan Pertanian Berkelanjutan dengan Sistem Wanatani https://greennetwork.id/ikhtisar/meningkatkan-pertanian-berkelanjutan-dengansistem-wanatani/ (Diakses pada 19 Juni 2024)



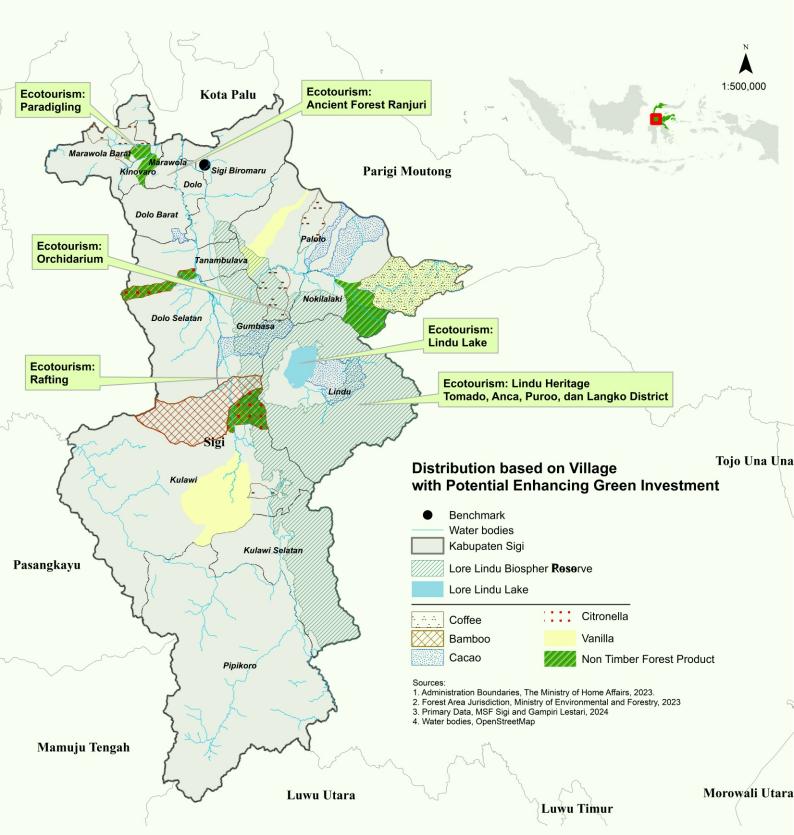


Figure 6 | Investment opportunities in sustainable commodities in Sigi.

Sigi is blessed with rich natural resources, so the best strategy to attract investment is to optimize nature-based development.

Currently, there are seven jurisdictional investment initiatives that are ready to be funded in Sigi. They are also listed in the Flagship Program and the Cross-Sectoral Special Program of Sigi's RPJMD. This initiative includes supporting three main commodities including coffee, cocoa, and vanilla. In addition, as an effort to mitigate disasters and to improve the economy of the affected communities, the district government and its partners are currently working together to develop the One Million Bamboo Program through the Cross-Sectoral Special Program. Additionally, production of essential oil will be fostered, taking advantage of ample source of citronella. Sigi Regency is also known for its natural beauty. For example, the Lore Lindu Biosphere Reserve and various natural tourism (ecotourism) that can be bettermarketed to attract investment and tourists to visit Sigi.39

Sigi Regency has a strong commitment and foundation and is showing a good start to implement nature-based regenerative

economy. Through the Sustainability Festival (Festival Lestari) on June 23-25,2023 (which has been held five times throughout Indonesia by LTKL), Sigi presents a national scale Business and Economic Forum for Nature-Based Innovation. In its efforts to push the target for economic growth of more than 10 percent per year, the Central Sulawesi Provincial Government is pushing for a management model for the Lore Lindu Biosphere Reserve that is based on restorative economics. Central Sulawesi Province has become one of the highest investment realizations in Indonesia, and in

the future, Central Sulawesi is committed to increasing the portion of green investment so that economic growth is of higher quality, has environmental resilience, is disaster resistant and has high food security based on its cultural heritage.40 Carbon insetting (offsetting of an entity's carbon emissions internally with carbon emission reduction, absorption, or avoidance initiative) has also gained interest from the Indonesian Chamber of Commerce and Industry.41 The Business and Investment Forum for Nature-Based Innovation in Sigi succeeded in attracting investment commitments of \$22.7 million (around Rp340.5 billion), of which \$20 million will be channeled tovarious parties across the region, and \$2.7 million specifically for businesses in Sigi.42

Sustainable jurisdictional investment is an important element for investment planning in

Sigi. Through the Sustainable Festival, the Sigi Regency Government and the Central Sulawesi Provincial Government show their commitment to encourage green investments in their effort to increase regional income. The expected innovations are nature-based and sustainable, such as a restorative economic-based management model in the Lore Lindu Biosphere Reserve by prioritizing four important pillars, namely environmental resilience, disaster resilience, food security and cultural heritage.

Investment Contact

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39 LTKL (Lingkar Temu Kabupaten Lestari), 2023. Booklet Festival Lestari 5 Kabupaten Sigi.

40 Pratama, R.A., 2023. Sigi Raih Komitmen Investasi Hijau US\$2,65 juta di Festival Lestari, Katadata (25 Juni 2023) https://katadata.co.id/ekonomi-hijau/investasihijau/649758cb13ala/sigi-raih-komitmen-investasi-hijau-us-2-65-juta-di-festivallestari (Diakses pada 5 Juni 2024).

41 Carla, G., 2023. "Lewat Festival Lestari, Pemkab Sigi dan Pemprov Sulteng Dorong

42 Investasi Hijau", Bisnis Indonesia (24 Juni 2023).
Deny, S., 2023. "Diguyur Investasi Rp 340 Miliar, Kabupaten Sigi Sulteng Hidupkan Potensi Bioekonomi di Indonesia", Liputan 6 (5 Juli 2023).



3.1 Sustainable Cocoa

In 2020, Central Sulawesi ranks as the leading area for cocoa production in Sulawesi, contributing 127,300 tons annually. One of the districts that contributes to cocoa production is Sigi. Geographically, the natural conditions and the tenacity of cocoa farmers in the area are supportive for cocoa cultivation. Cultivation of cocoa in Sigi covers an area of 27,855 ha, the largest of which are in the villages of Omu Village in the Subdistrict of Gumbasa. The development of cocoa in Sigi Regency complies with the principles of organic farming.

Cocoa, as one of the leading products in Sigi has contributed to encouraging the improvement of community welfare. It is fully supported by

various multi-stakeholder collaborative efforts. A business ecosystem has been formed that is supported by the commodity supply chain, including farmers, incubation institutions, traders/collectors, off takers, supporting partners, and the government. Each party has a strategic role in expanding cocoa development in Sigi. Several large international companies serve as off takers of cocoa from Sigi, including JB Cocoa, Olam Food Ingredients (OFI Indonesia), Mondelez and Mars. According to Cocoa Sustainability Partnership, these companies also assist farmers to increase cocoa productivity, increase the capacity of farmers' human resources to increase the quality of cacao and aid in cocoa seed certification.





Project Location

Spread over an area of 27,000 ha in Omu village in Gumbasa Subdistrict, Olu in Lindu Subdistrict, Lembantongoa, Sejahtera, Berdikari, Karunia, Bahagia Villages in Palolo Subdistrict, and Bobo Village in Dolo Barat Subdistrict.



Major Institutions

Sigi Regency Food Crops, Horticulture and Plantation Office



Partner Institutions

Karsa, Cocoa Sustainability Partnership, PisAgro, Gampiri Interaksi Lestasi/ Gampiri Bumi Lestari, GIZ, OFI Indonesia, JB Cocoa, Katalys Agridesa.



Objective

- * Developing cocoa cultivation ecosystem from upstream to downstream.
- * Strengthening the capacity of cocoa farmers.
- Improving plantation management, implementing sustainability standards, increasing productivity, improving supply chains, which contribute to increasing farmers' incomes.



Government Assistance

- * Plant rejuvenation with steps in the form of aiding for superior plant seeds, assistance with production facilities such as fertilizers, agricultural machinery/technology.
- Access to financing for coffee and cocoa farmers to support agricultural operations through the zero percent community business credits (Kredit Usaha Rakyat, KUR) program.
 Farmers only pay the principal of the loan, the local government bears the interest on the loan.
- * Data collection of 500 cocoa STDB targets 2025, to ensure cocoa outside the region. Multicommodity in one location.

Contribution of Sustainable Cocoa to Green Sigi and SDGs

Article 14 (1). Implementation of sustainable agriculture is carried out through the development of organic farming systems and opening market access for organic agricultural products. Cocoa development in the Lore Lindu area also carries the principles of organic cocoa development.

Article 16 (1,2). To reduce and overcome the impacts of climate change, the District Government of Sigi prepares a Regional Action Plan for Climate Change Mitigation and Adaptation. Reducing the risks and impacts of climate change is carried out through activities to increase the use of new and renewable energy sources, reducing deforestation and land degradation. Cocoa farming is implemented using

sustainable organic farming methods in accordance with the principles of reducing deforestation and land degradation.

Article 19. Maintaining the function of ecosystems to support human life, reducing land degradation and deforestation, and developing the use of natural resources with environmentally friendly technology.

Article 21. Growing the number and businesses of communities around green areas, increasing the potential for regional income from sustainable use of natural resources and increasing community income from sustainable management of natural resources.

02 ZERO HUNGER



08



12
RESPONSIBLE
CONSUMPTION AND
PRODUCTION



13 CLIMATE ACTION



15 LIFE ON LAND



17
PARTNERSHIPS
FOR THE GOALS



Investment Development Plan



Development Plan

- Construction and maintenance of main and entry gardens, shortage of 2 ha planting material
- Cocoa training center for millennial farmers
- * Cocoa fermentation
- Pilot project in one of the potential villages, cocoa downstream in Omu village



Investment Needs

US\$1,000,000 for maintenance of main and entry gardens.

US\$500,000 with downstream in Omu village



Contact

- Sigi Regency Food Crops, Horticulture and Plantation Office | Dodi +62 813-5441-6389
- * Gampiri Bumi Lestari | Moh Ryan +62 822-6110-9843 mohryangui@gmail.com

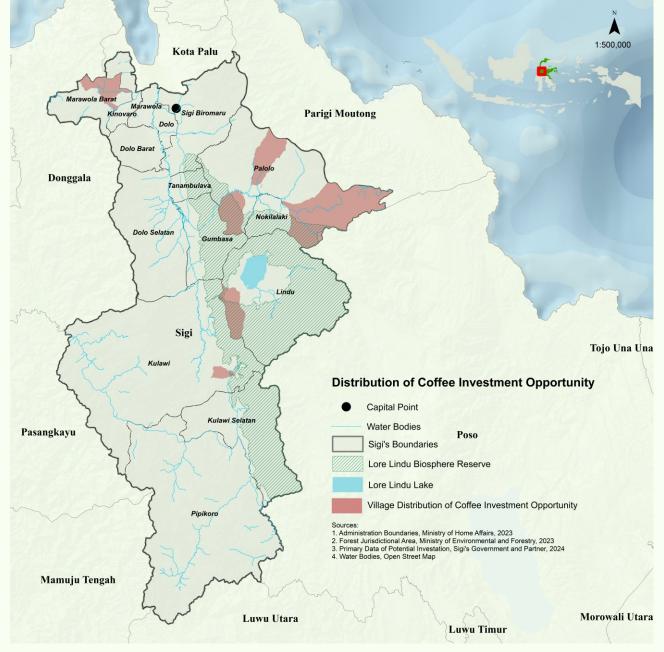


Figure 8 | Areas in Sigi for the development of sustainable coffee

3.2 Sustainable Coffee

Coffee is a leading commodity in Sigi that encourages regional competitiveness and accelerates community welfare development.

Coffee varieties produced in Sigi are arabica and robusta, both of which are grown in the Lore Lindu Biosphere Reserve. Programmatic efforts that have been carried out by the District Government of Sigi to improve the quality of coffee production and expand the reach of product marketing include providing assistance for quality coffee seeds to farmers, mapping agricultural commodities including coffee, and developing

export marketing activities. In addition, in 2024 the District Government of Sigi has been coordinating with the Ministry of Law and Human Rights to register Dompu Sigi Coffee products as a Geographical Indication, so that it will provide legal protection to coffee farmers for their products. The development of Sigi coffee is expected to improve the welfare of farmers in the future through increasing competitiveness, increasing coffee productivity and expanding the marketing reach of Sigi coffee both locally, nationally and internationally.





Project Location

Spread over 25,000 ha of land in the Subdistrict of Palolo in Lembantongoa, Tongoa, Berdikari, Sintuvu, Rejeki Village; in the Subdistrict of West Marawola in Dombu and Lewara Villages; in the Subdistrict of Lindu in Puroo Village; and in the Subdistrict of South Kulawi in Polerowa and Makuhi Villages.



Main Institution

Java Kirana, Sigi Regency Food Crops, Horticulture and Plantation Office.



Partner Institution

Gampiri Interaksi Lestasi/Gampiri Bumi Lestari.



Objective

Strengthening the role of local communities in improving the regional economy and preserving natural resources, introducing restorative economy of the agroforestry sector in the Lore Lindu Nature Reserve to enhance sustainable coffee value chains.



Project Target

Centralizing post-harvest, commercial services, logistics, and trading activities with current target of 7,500-10,000 tons of coffee, assuming that I ha of coffee plantations produces an average of 200-300 kg of coffee.



Target Stakeholders

Indigenous and local communities, coffee farming families, and coffee off-takers in urban areas.

Currently, there are 9,065 coffee farmers.



Current Achievements

Kamanuru Coffee from Dombu Marawola and Kulawi Coffee from Kulawi are also produced which have been successfully exported to Japan, Dubai and Canada. Especially in Sigi, they produce original fermented coffee called Toratima from Pipikoro as a premium artisanal coffee.



Government Assistance

26,000 coffee bean stalks to farmers, supporting equipment for coffee production, and facilitation of mapping potential land for coffee commodities.

Contribution of Sustainable Coffee to Green Sigi and SDGs

Article 14. Management of coffee commodities uses an organic farming system which can open market access for organic agricultural products.

Article 19. Maintaining the function of the Lore Lindu Biosphere Reserve ecosystem as a support for human life due to the development of agroforestry land without clearing forests.

Article 21. Coffee farmers come from local areas around the cultivation areas, and as such their incomes can increase based on sustainable use of natural resources.

02 ZERO HUNGER 08
DECENT WORK AND ECONOMIC GROWTH

RESPONSIBLE CONSUMPTION AND PRODUCTION

12

13 CLIMATE ACTION

15 LIFE ON LAND

1

17
PARTNERSHIPS
FOR THE GOALS



Investment Development Plan



Development Plan

- * Registration of Geographical Indication for arabica coffee.
- Post-Harvest Centralization (Mini processing and drying facility).
- * Agroforestry extension school.
- * Working Capital (warehouse, data management application, coffee seed house, increasing production quality) to reach production target of 150,000-250,000 tons.



Investment needs

US\$ 1,500,000 in 5 year time



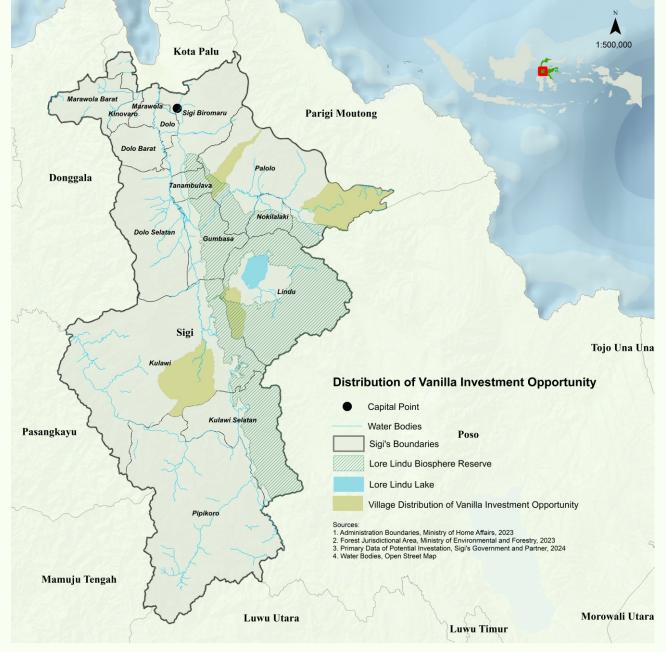
Contact

- * Java Kirana | Noverian, +62 813-1848-0101, noverian@javakirana.io
- * Gampiri | Moh Ryan Gui, +62 822-6110-9843, mohryangui@gmail.com



Partner Plan

Conservana, Tanah Air Lestasi



 $\textbf{Figure 9} \ | \ \mathsf{Areas in Sigi} \ \mathsf{for the \ development \ of \ sustainable \ vanilla}$

3.3 Sustainable Vanilla

Vanilla from Sigi received the nickname "green gold," which experienced its heyday in 1970-2002, but after that it dimmed due to fraud in the sales of vanilla products, causing a sharp decline in selling prices. In 2019, the District Government of Sigi revived the cultivation of vanilla. The district government massively revived vanilla cultivation through approaches to farmers, establishing vanilla farmer cooperatives, and actively conducting multi-stakeholder networks to develop vanilla development opportunities. The District Government has a three to four years

target to produce organic vanilla commodities with high quality in accordance with international vanilla commodity standards. Vanilla is a superior commodity that has been developed by prioritizing ecological threshold, protecting Lore Lindu conservation area function through restorative economy and commodity cultivation with agroforestry systems in both social forestry areas and other land use areas. In 2022, a total 376.6 hectares of land are being cultivated for 131,642 vanilla trees, with 39,422.6 kg vanilla beans potential production.



Project Location

In the Subdistrict of Palolo in Bobo, Bunga, and Lembantongoa Villages; in Subdistrict of Lindu in Puroo Village; and in South Kulawi District in Lonca, and Winatu Villages.



Main Institution

Conservana and Sigi Regency Food Crops, Horticulture and Plantation Office.



Partner Institution

Gampiri Lestasi Interaction/Gampiri Bumi Lestari, Simpotove Cooperative, The Ministry of National Planning/Bappenas.



Objective

Vanilla commodities find buyers at competitive prices and encourage increased welfare of vanilla farmers.



Project Target

Market access and downstream vanilla commodities.



Target Stakeholders

Vanilla farmers under the auspices of a cooperative.



Current Achievements

From 2020 to 2023, 3.5 tons of vanilla have been purchased in Sigi.



Government Assistance

- Simpotove Farmer Cooperative located in Bobo Village, Subdistrict of Palolo.
- Support for access to capital for farmers who grow vanilla, through the KUR program.
- Grant of vanilla seeds from the Food Crops, Horticulture and Plantation Service, the District Government of Sigi.
- Facilitating consultant from Bappenas to support local farmers.



2024

Contribution of Sustainable Vanilla for Green Sigi Policy and SDGs

Article 14. (1) Implementation of sustainable agriculture is carried out through the development of organic farming systems and opening market access for organic agricultural products. Vanilla development in the Lore Lindu area also carries the principles of organic vanilla development.

Article 16. (1,2) To reduce and overcome the impacts of climate change, the District Government of Sigi prepares a Regional Action Plan for Climate Change Mitigation and Adaptation. Reducing the risks and impacts of climate change is carried out through activities to increase the use of new and renewable energy sources, reducing deforestation and land degradation. Vanilla is implemented using

sustainable organic farming methods in accordance with the principles of reducing deforestation and land degradation.

Article 19. Maintaining the function of ecosystems to support human life, reducing land degradation and deforestation, and developing the use of natural resources with environmentally friendly technology.

Article 21. Growing the number of community businesses around the green areas, increasing the potential for regional income from sustainable use of natural resources and increasing community income from sustainable management of natural resources.

02









13 CLIMATE ACTION



15 LIFE ON LAND



17 **PARTNERSHIPS**



Investment Development Plan



Development Plan

Management of TORA land covering an area

- Phase I: creating a 30 ha non-timber commodity demonstration plot (as a pilot for farmers in Sigi), estimated time is 1-2 years.
- Phase II: building a joint production house (accommodating various commodities) will also provide technical assistance for commodity processing.
- Phase III: building a trading hub.



Partner Plan

Simpotove Cooperatives, Local Cooperatives, Gampiri Bumi Lestari, Java Kirana



Investment Needs

US\$ 5,500,000 until 2028 with a multicommodity agroforestry system



Contacts

- Conservana | Eka Maulana | eka.putra@conservana.com | +62 812-9090-8420
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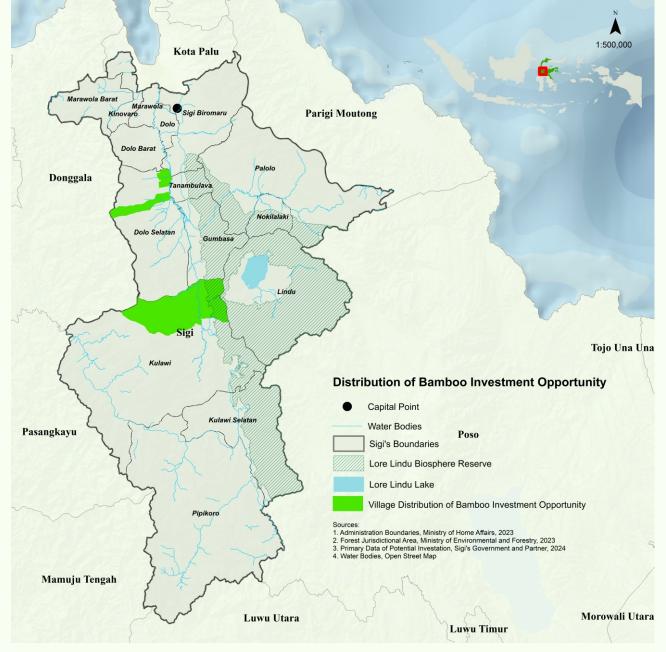


Figure 10 | Areas in Sigi for the development of bamboo cultivation

3.4 Climate Change and Disaster Mitigation with Bamboo

Climate change can worsen environmental damages, and environmental-based action is needed to protect, sustainably manage, and restore ecosystems. Community capacity in mitigation and adaptation is very important for preparedness and minimizing the impacts felt by local communities. In Central Sulawesi, the trend of increasing annual rainfall is around 4.68-52.40 mm per year and Sigi is one of the areas with the

highest trend. Sigi was hit by floods several times with settlements quite close to each other. Mercy Corps Indonesia is present through the Managing Risk through Economic Development (MRED) program to strengthen disaster-prone social capital that has economic value. Planting bamboo in highland and riparian areas can help mitigate these risks.



Project Location

The Subdistrict of South Dolo in Bangga, Walatana, Pulu, Poi, Balongga, Sambo, Wisolo Villages and in the Subdistrict of Kulawi in Nago and Salua Village.

Main Institution

Mercy Corps Indonesia, Karsa Institute, Sigi Environmental Agency, Palu Poso Watershed Management Agency (Badan Pengelolaan Daerah Aliran Sungai, BPDAS).

Partner Institution

Disaster Preparedness Group, Solidarity for Victims of Human Rights Violations in Central Sulawesi (SKP-HAM Sulteng), The Disaster Risk Reduction Forum (Forum Pengurangan Resiko Bencana, FPRB), Village ownedenterprise (BUMDes).

Objectives

To strengthen the role of local communities in adapting to disasters and to help develop the economy of vulnerable and disaster-affected communities.

Project Target

1 year target: establishment of 1 bamboo craftsman center in Kulawi, and increasing the number of bamboo craftsmen.

Target Stakeholders

Communities affected, especially women, bamboo craftsmen.

Current Achievements

One of the efforts that has been made is the construction of three-story bamboo gabions in Pulu and Sambo Villages, South Dolo District. Bamboo gabions were used to withstand the overflow of the Palu and Pema Rivers and were built on the banks of the Sambo River. Production currently reaches 75-100 bamboo per village per year.

Government Assistance

Through Sigi Cross-Sectoral Special Program 2021-2026 on the RPJMD, the government created the "Sigi with one million bamboo" policy since it has high economic value and can help mitigate natural disasters in Sigi.

Contribution of Bamboo Development to Green sigi Policy and SDGs

Article 16. Reducing the risks and impacts of climate change by using environmentally friendly bamboo and preparing for disasters, especially floods on riverbanks.

Article 19. Maintaining the function of the ecosystem to support human life due to the use of bamboo from

the natural surroundings with environmentally friendly technology.

Article 21. The development of the number and businesses of communities around green areas, which increases the potential for regional income from sustainable use of natural resources.

05
GENDER EQUALITY

08
DECENT WORK AND ECONOMIC GROWTH

RESPONSIBLE CONSUMPTION AND PRODUCTION

 $C \mathcal{O}$

12

13 CLIMATE ACTION

LIFE ON LAND

15

17
PARTNERSHIPS
FOR THE GOALS



5

Investment Development Plan



Development Plan

Five year target: Thirteen villages mitigated from floods and landslides, increased ready-to-process bamboo materials, and bamboo agroforestry. The scope of the plan includes the following:

- Increasing the cultivation of bamboo in vulnerable areas;
- Increasing the capacity of the community to process bamboo to be economically valuable commodity;
- * Opening access to market.



Partner Plan

Yayasan Bambu Lestari as a partner of Mercy Corps Indonesia



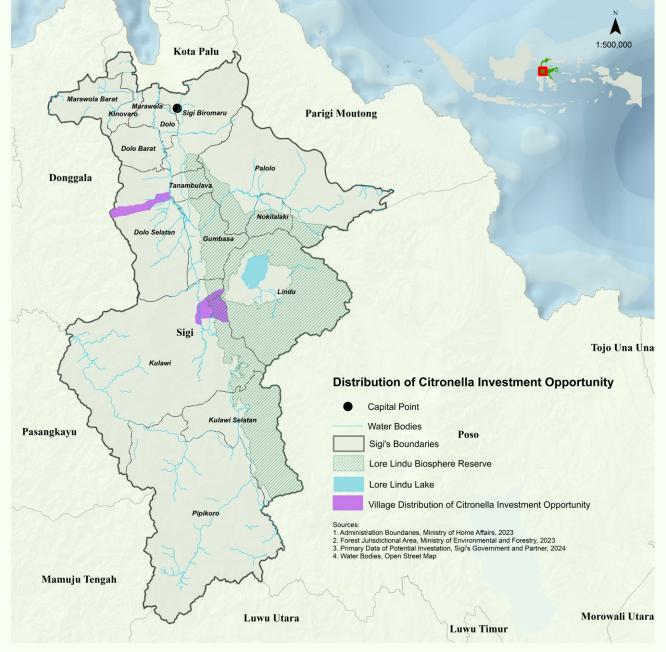
Investment needs

US\$ 4,350,000



Contact

- * Sigi Environmental Regency | Afit Lamakarate, +62 813-5448-8664
- * Disaster Preparedness Group and Bamboo craftsmen | Jamil, +62 822-3250-5364
- * Mercy Corps Indonesia | Irwan, +62 852-6881-8441



 $\textbf{Figure 11} \, | \, \text{Areas in Sigi for the development of citronella} \\$

3.5 Revitalizing Land with Citronella

Natural disasters not only cause infrastructure losses, they can also weaken the community's economy. For example, the floods that hit several subdistricts in Sigi damaged residents' agricultural land. Floods covered the agricultural area with sand sediment and rendering land not productive. With the support of Mercy Corps Indonesia through the Managing Risk through Economy Development (MRED) program, A Nexus approach is carried out to identify plants

that have the highest potential for the community. Citronella plants were tested in sediment-covered fields and as such are relatively easy to maintain. The planting and processing process is supported by Mercy Corps Indonesia, producing essentialoil from distilled citronella. Additionally, on a smallscale, bar soap, massage oil, solid perfume, hydrosol, and scented candles can be produced using citronella as raw material.





Subdistrict of South Dolo District in Pulu Village and in Subdistrict of Kulawi in Namo Village.

Main Institution

Mercy Corps Indonesia

Partner Institution

BUMDes Tantanga Reme Todea Pulu Village.

Objectives

To strengthen the role of local communities in adapting to disasters and to help develop the economy of vulnerable and disaster-affected communities.

Project Target

In 2025, (I) encourage BUMDes and the community to increase the area of citronella plantations on land affected by flooding, (2) assist BUMDes in increasing the productivity of citronella production into essential oil, (3) Develop market, and (4) collaborate with village governments.

Target Stakeholders

Farmers who own land in landslide-prone areas, BUMDes Pulu Village

Current Achievements

Cultivating 35,000 citronella seeds planted on 3 ha of land. Facilitate the construction of distillation equipment with a capacity of 200 kg and facilitate training in developing the citronella business. In a period of 10 months (December 2021 – October 2022), 2.56 tons of citronella were harvested which produced 15 liters of essential oil.

Government Assistance

Assistance from the Department of Industry, regarding Business Registration Number (Nomor Induk Berusaha, NIB) permits. Use of village funds for BUMDes capital participation and moving houses, essential oil distillation houses to locations with affordable access.

Contribution of Citronella Development to Green Sigi Policy and SDGs

Article 16. Reducing the risks and impacts of climate change by using agricultural land that has been sedimented due to flooding, re-cultivated with citronella.

Article 21. The development of the number of community businesses around green areas, and as such increases the potential to increase regional income from sustainable use of natural resources.

Article 19. Maintaining the function of the ecosystem as a support for human life due to the

use of land with environmentally friendly citronella.

02

08 **DECENT WORK AND ECONOMIC GROWTH**

12 RESPONSIBLE NSUMPTION AND PRODUCTION

13 CLIMATE ACTION

15 LIFE ON LAND

17 PARTNERSHIPS



Investment Development Plan



Development Plan

- Increase the land area for citronella cultivation on land at risk of sedimentation, sandy and minimally irrigated.
- Resilience design collaboration for the development and certification of citronella oil with universities.
- Business Development.
- Production house from BUMDes.



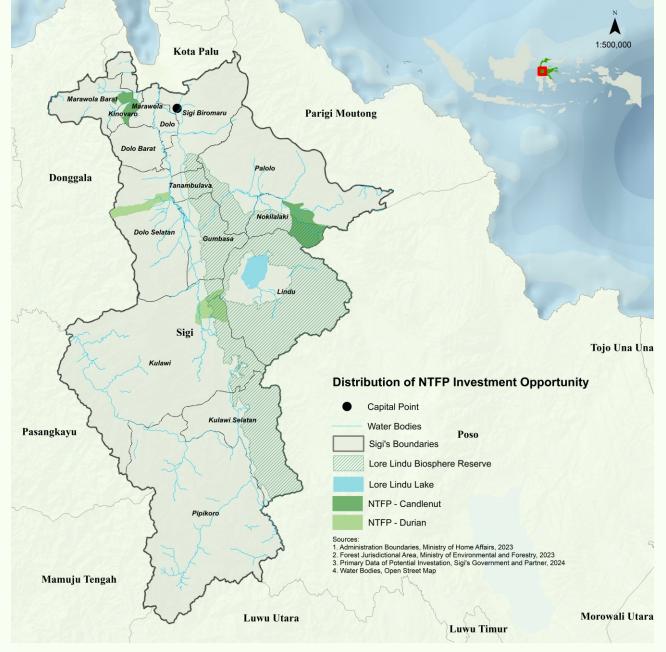
Investments need

USD\$200,000 for business development for each 3 ha.



Contact

- Head Village of Pulu | Ilham, +62 822-9672-7775
- BUMDes Tantanga Reme Todea | Dila, +62 852-5566-8474
- Mercy Corps Indonesia | Irwan, +62 852-6881-8441



 $\textbf{Figure 12} \ | \ \mathsf{Areas} \ \mathsf{in} \ \mathsf{Sigi} \ \mathsf{for} \ \mathsf{the} \ \mathsf{development} \ \mathsf{of} \ \mathsf{non-timber} \ \mathsf{forest} \ \mathsf{products}$

3.6 Non-Timber Forest Products

Non-timber forest products that are the focus of the development of priority commodities in Sigi are durian and candlenut, especially those planted in customary forests through agroforestry. Candlenut has also been developed as a priority product of several villages that produce candlenuts, including Uwemanje Village. In addition to being marketed in the form of candlenut seeds that are marketed locally in Sigi, in several other places in Central Sulawesi, and in several locations in Java and Kalimantan, they are also used as mixed raw materials in producing Sigi's typical spice soy sauce, one of which is the spice powder "Banggele Sigi",

which has been marketed offline and online. Durian is mainly found in the Subdistricts of Parigi Moutong and Poso in Central Kalimantan, while Sigi and other districts still serve as buffers. Typical durians from Sigi are different from durians from other regions. They have a small size but thick flesh and are held as sacred by the Kaili people. In addition to these two priority commodities, The District Government of Sigi through the Plantation Office is currently actively encouraging the development of other non-timber forest products such as avocados, longan, and rattan.





Project Location

Candlenut: Subdistrict of Kinovaro in Uwemanje Village and Subdistrict of West Marowola in Wayu and Matantimali Villages, the city of Sigi, and the Subdistrict of Palolo in Tongoa Village.
Durian: Subdistrict South Dolo in Pulu Village and Subdistrict Namu in Kulawi Village.



Main Institution

Karsa Institute, HKM Segimpo (Candlenut)



Partner Institution

GIZ (durian)



Objectives

The development of non-timber forest products originates from social forestry in Sigi that has been approved by the Ministry of Forestry and Environment for conservation and economic improvement functions aimed at local or indigenous communities.



Project Target

- * Area management
- * Business management
- * Institutional management
- * Administrative education related to commodity production



Target Stakeholders

Communities around the forest and indigenous communities



Current Achievements

Durian: The main gatherer of durian is from a Surabayan company and has been exported abroad around Southeast Asia.



Government Assistance

- * Forest Program 3 (Village Nursery) partners with institutions such as BPDAS for land conservation, Lore Lindu National Park, and Social Foresty and Environmental Partnership Agency (Badan Perhutanan Sosial dan Kemitraan Lingkungan, BPSKL) to strengthen the community's economy.
- Procurement of the right type of durian seeds and good quality. Training in making durian grafting seeds (superior seeds).
- BPDAS provides financing for forest and land rehabilitation using the state budget (Anggaran Pendapatan dan Belanja Negara, APBN) financing scheme. Facilitate community groups to provide seeds with 200 million per group.

Contribution of Non-timber Forest Product to Green Sigi Policy and SDGs

Article 14 (1). The implementation of sustainable agriculture is carried out through the development of organic farming systems and opening market access for organic agricultural products.

Candlenuts and durians are developed organically.

Article 16 (1,2). To reduce and overcome the impact of climate change, the District Government of Sigi has prepared a Regional Action Plan for Climate Change Mitigation and Adaptation. Reducing therisk and impact of climate change is carried outthrough activities to increase the use of new andrenewable energy sources, reduce deforestationand land degradation. Candlenut and durian farmingis applied with sustainable organic farming methods

in accordance with the principles of reducing deforestation and land degradation.

Article 19. The maintenance of ecosystem functions as a support for human life, reduction of land degradation and deforestation, and development of the use of natural resources with environmentally friendly technology.

Article 21. The development of the number of community businesses around the green area, increasing the potential for regional income from the sustainable use of natural resources and increasing the income of the community from sustainable management of natural resources

02 ZERO HUNGEF 08
DECENT WORK AND ECONOMIC GROWTH



RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



15 LIFE ON LAND



17 PARTNERSHIPS



FOR THE GOALS

Investment Development Plan



Development Plan

- * Increase land availability by restoring forests and land.
- * Identify potential locations for the development.
- Providing higher quality seeds for NTFP products.
- * A more certain and sustainable market with policy and infrastructure support.



Partner Plan

GIZ, Livelihoods Funds.



Investments need

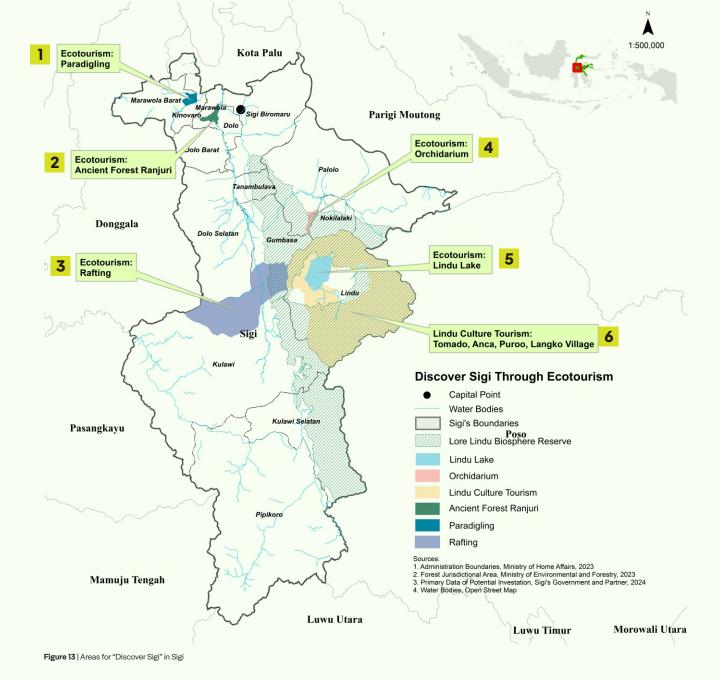
US\$ 1.2 million in the first 3 years for planning

US\$ 600,000 over the next 5 years for maintenance, monitoring, strengthening capacity and farmer institutions.



Contact

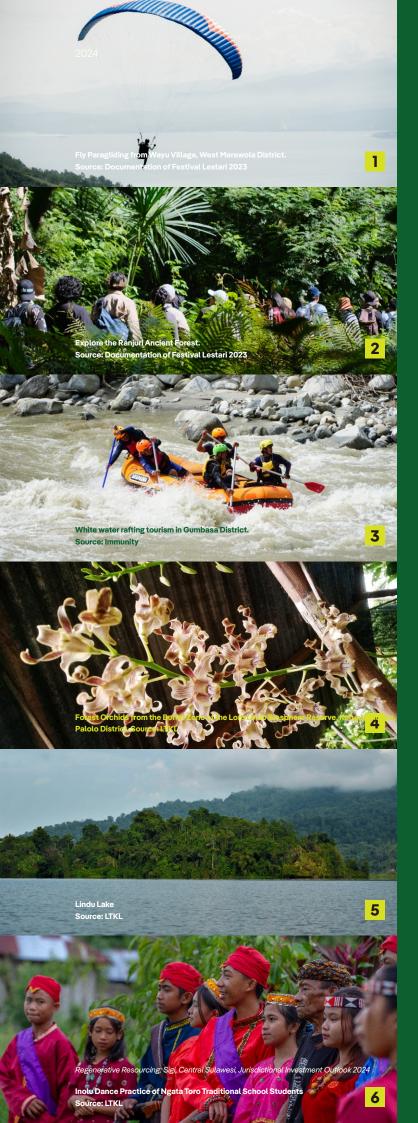
Karsa Institute | Edy, official@karsainstitute.org +62 852-4127-6576



3.7 Discover Sigi Through Ecotourism

Sigi has natural wealth supported by cultural treasures that are still highly respected by the local community. The indigenous people of Sigi have two principles as the source of life: Hintuvu (relationship between humans) and Katuvua (relationship between human and nature). These principles are represented by 'Taiganja', a symbol that embodies the philosophy of strength, courage, fertility, prosperity, peace, and honor. With these principles, the government together with partner and communities collaborate to conserve nature and the local cultures through ecotourism which ensures local community involvement and brings socio-economic benefits. Sigi ecotourism has been developed with tourism principle to conserve nature and increase the welfare of local community.

At Discover Sigi, there are 2 main activities that tourists can do. First, Gastronomy and Culture, namely learning about Sigi's diverse culture, socializing with the traditions and the lives of the indigenous people, and exploring traditional cuisine rich in authentic spices from the district. Second, experiencies close to nature, enjoying the beauty and tranquility of Lake Lore Lindu, paragliding, visiting the endemic forest orchids indigenous of Sigi in the Orchidarium, the Lore Lindu Biosphere Reserve, and forest healing by exploring the ancient forest of Ranjuri.





Project Location

Ranjuri Ancient Forest: Beka Village; Endemic Flora of Forest Orchids: Karunia Village; Paragliding: Wayu Village; Traditional tourism: Tomado Village, Anca Village, Puroo Village, Langko Village; Rafting: Salua Village, Tuwa Village.



Main Institution

Sigi Tourism Agency, Gampiri



Partner Institution

Pemuda Pemerhati Ranjuri, Lindu Traditional Institution, Tourism Awareness Group, Orchid Cultivation Group, Village Government



Objectives

Maximizing opportunities for natural beauty and cultural richness in Sigi Regency to improve the economy of local and traditional communities



Project Target

To increase the number of tourists to Sigi Regency by maintaining the ecological value of the area and the richness of local culture



Target Stakeholders

Domestic and foreign tourists



Current Achievements

- Culinary exposure and ecotourism in the Ubud Food Festival in partnership with The Dharmawangsa Hotel and Javara Indonesia.
- * Hosting international paragliding championships in 2016.
- Indonesian Tourism Village Award (Karunia Village, big 100; Mataue Village, big 500; and Wayu Village, big 500).
- Winner of the 2024 Central Sulawesi Tourism Ambassador (Male and Female).
- Climate Village Program Award (Karunia and Beka Villages).
- Winner of the Nature Conservation Award in the category of Assisted Community Groups of the Ecosystem Natural Resources Conservation Agency (KSDAE) in the framework of National Nature Conservation Day 2023.



Government Assistance

- Reconstructed the main access to the paragliding site connecting Kinovaro and West Marowala. A 10 km length of road was reconstructed to shorten the travel time and widened up to 4.5 meters, reducing turns and ramps.
- Reconstructed the main access to Lindu on Sadaunta Street in Namo, Lindu, 17 km road segment through JICAfunded project under the Ministry of Public Works and Housing.
- Renovated 13 homestays and its facilities in Tomado Village, Subdistrict of Lindu by the District Government of Sigi Government's Tourism Office.

Contribution of Ecotourism to Green Sigi Policy and SDGs

Article 9. The development of green open spaces (ruang terbuka hijau, RTH) pays attention to fulfill intellectual, social, economic, and cultural needs. In this case, the development of cultural tourism pays attention to green open spaces to socialize and has an impact on the growth of new business spaces for the surrounding community and indigenous peoples. Physical factors are also advantageous to maintain the green open space, with steep topographic shape that has great potential for the development of paragliding.

Article 10. The district government can prioritize the development of arboretum in green areas/botanical collection gardens, in accordance with the function

of the Orchidarium in Karunia Village as a place to collect endemic orchid for educational purpose.

Article 19. The maintenance of the function of the ecosystem as a support for human life is due to the use of natural resources for natural tourism which also functions to maintain conservation values such as tourism in the ancient forest of Ranjuri.

Article 21. The development of the number of community businesses around the green area that increases the potential for regional income from the use of natural resources both in the form of natural tourism and cultural tourism in a sustainable manner.

08
DECENT WORK AND ECONOMIC GROWTH

13 CLIMATE ACTION



15 LIFE ON LAND



17
PARTNERSHIPS
FOR THE GOALS



Investment Development Plan



Development Plan

- * Complementary infrastructure at each location: road access, toilets, discussion arena, lunch, homestay, shelter, electricity and clean water.
- * Research and development for each investment opportunity so that it can be developed further.
- * MSME gallery in each cultural village.
- * Capacity development of Pokdarwis and Managers.



Partner Plan

Gampiri



Investments need

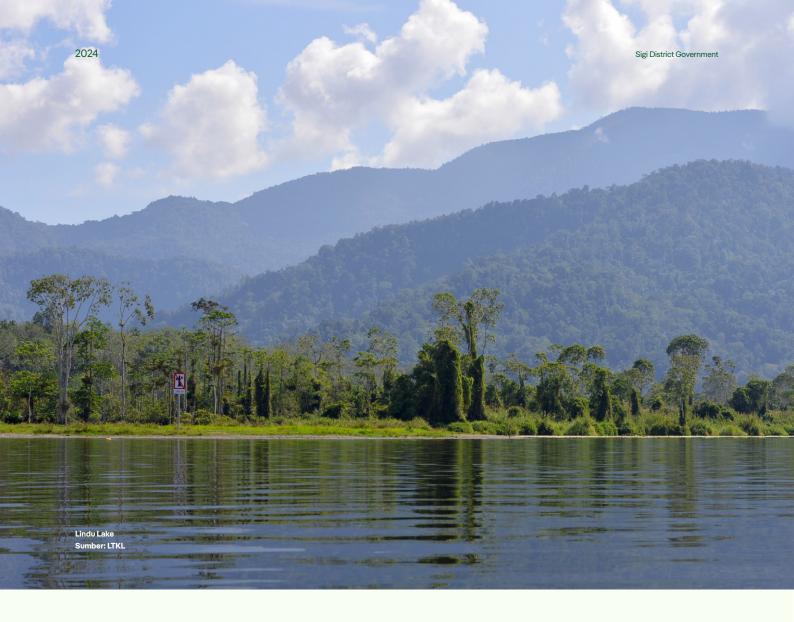
USD\$200,000



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The seven potential investment initiatives contribute to the Green Sigi Performance Index (Indeks Kinerja Sigi Hijau, IKSH), directly or indirectly. The contribution relates to the role of seven potential investment initiatives compiled in this Sigi, Central Sulawesi, Jurisdictional Investment Outlook 2024. They include Sustainable Cocoa, Sustainable Coffee, Sustainable Vanilla, Disaster Mitigation and Climate Change with Bamboo, Revitalizing Land with Citronella, Sustainable Non-Timber Forest

Products, and Discover Sigi with Ecotourism.

They are evaluated based on the indices in the Green Sigi Performance Index, namely strengthening food security, environmental management, social welfare, economic resilience, and ecological resilience. Each of these investment initiatives can be in the form of plans to be developed or ongoing programs, in the form of direct and indirect contributions to the Sigi Hijau Performance Index.

Sigi Hijau Performance Index	Sustainable Cocoa	Sustainable Coffee	Sustainable Vanilla
1. Budget policy to strengthen food security	Indirect contributions: Organic cocoa development supports local food diversification	Indirect contributions: The development of organic coffee supports the diversification of local food	Indirect contributions: Planting using an agroforestry system for sustainable food, vanilla can be grown on various commodity lands
2. Environmental management budget policy	Direct contribution: Allocating financing for the management of cocoa plantations to remain fertile and not degraded Sustainable cocoa plantation practices through agroforestry systems or good agricultural practices	Direct contribution: Mapping potential locations for coffee development with considerations to soil and hydrological functions Sustainable coffee plantation practices through agroforestry systems or good agricultural practices	Direct contribution: TORA land management for the development of vanilla commodities with agroforestry systems that maintain environmental quality and biodiversity
3. Growth of social welfare	Direct contribution: Capacity building of cocoa farmers with agroforestry schools on a regular basis together with other commodities Training center for millennials to help develop local wisdom in Sigi Assistance and incubation of sustainable businesses for downstream nature-based derivative products to MSMEs	Direct contribution: Capacity building of coffee farmers by mapping the distribution of coffee farmers and agroforestry schools on a regular basis Assistance and incubation of sustainable businesses for downstream derivative products with post-harvest centralization plans	Direct contribution: Mapping vanilla farmers, developing local cooperatives. Training and assistance for vanilla farmers, especially for the sorting process or quality control and quality assurance.

Disaster Mitigation and Climate Change with Bamboo

Enriching the land with Citronella

Sustainable Non-Timber Forest Products

Discover Sigi through Ecotourism

Indirect contributions:

The policy of one million bamboo is expected to increase the food security of local communities because of its economic value

Direct contribution:

Planting citronella on land damaged by floods can revive soil functions for people to replant food crops

Direct contribution:

Sustainable Non-Timber
Forest Products can be an
alternative food source for
the community and support
local food security

Indirect contributions:

Preservation of local food in ecotourism package products

Ecotourism increases people's income which can be used to ensure food security through the purchase of local food.

Direct contribution:

The policy of one million bamboos is also expected to help maximize disaster mitigation management in the highlands and river borders

Direct contribution:

Citronella can restore soil function from sand sedimentation due to floods and landslides

TORA land management for the development of citronella commodities with a agroforestry system that maintains environmental quality and biodiversity

Direct contribution:

Management and utilization of Non-Timber Forest Products to maintain ecosystem balance and reduce land degradation and deforestation

Direct contribution:

Ecotourism encourages environmental conservation through conservation practices and environmental education for visitors and the community

Direct contribution:

Forming a bamboo agroforestry village for the expansion of bamboo products by strengthening the institution of BUMDes and bamboo craftsmen

Direct contribution:

Increasing the capacity of local communities about citronella opportunities for social welfare, with the participation of the community and institutions can maximize the downstream of lemongrass from Sigi Regency

Direct contribution:

Increase community involvement in sustainable forest management.

Direct contribution:

Ecotourism programs involve local communities in management and operations, improving their skills and providing direct benefits to social welfare.

Sigi Hijau Performance Index	Sustainable Cocoa	Sustainable Coffee	Sustainable Vanilla
4. Growth in economic resilience	Direct contribution: Cocoa development from upstream to downstream, farmer capacity development including financial literacy, plant rejuvenation, and access to zero percent KUR financing.	Direct contribution: The post-harvest centralization plan is expected for farmers to get the maximum profit possible with products that are ready to be marketed with high quality Improving coffee production and quality, rejuvenating coffee plants, and opening market access Providing incentives to coffee farmers with coffee beans and processing support equipment	Direct contribution: Development of quality vanilla commodities as a superior product. Maintaining a sustainable vanilla supply chain from upstream to downstream, to ensure buyer availability
5. Growth of ecological resilience	Direct contribution: Sustainable and organic cocoa farming to reduce deforestation and land degradation	Direct contribution: Coffee farming is carried out without deforestation and land degradation, supported by multi-commodity agroforestry to maximize conservation functions	Direct contribution: By planting a agroforestry system, it can function to protect forest ecosystems and biodiversity.

Disaster Mitigation and Climate Change with Bamboo

Enriching the land with Citronella

Sustainable Non-Timber Forest Products

Discover Sigi through Ecotourism

Direct contribution:

Providing training to increase the value of bamboo products by becoming ready-to-process materials, household furniture, and high-value environmentally friendly buildings

Bamboo production and processing for the craft industry and sustainable construction

Direct contribution:

Assisting BUMDes in marketing citronella derivative products including essential oils, soaps, and aromatherapy candles in ecommerce, and helping to find a permanent market

Direct contribution:

The development of derivative products from non-timber forest products such as candlenuts, durian, and rattan provide income diversification for the community and improves the local economy

Direct contribution:

The development of ecotourism based on nature and local culture provides new economic opportunities, increases regional income, and local communities

Direct contribution:

Bamboo planting is expected to support land conservation and erosion prevention

Direct contribution:

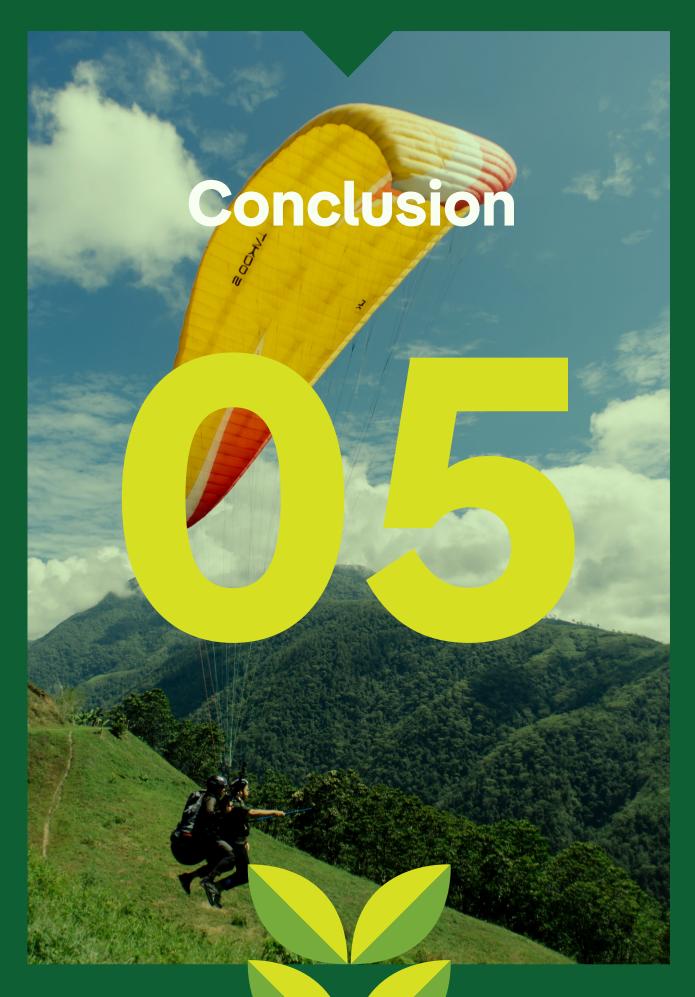
The development of citronella comes from the soil affected by the disaster, so that it can restore the soil ecosystem and contribute to ecological resilience

Direct contribution:

The use of non-timber forest products encourages forest conservation by providing economic value to forests without having to clear land (deforestation)

Direct contribution:

Sustainable ecotourism
helps conserve nature,
conserve biodiversity, and
educate tourists about the
importance of environmental
protection and preservation



Sigi Regency is ready to expand the reach of investment in sustainable, jurisdictional investment. This readiness is shown, first, through the Regulation of the District of Sigi No. 4/2019 on Green Sigi and the Regulation of the Head of the District of Sigi No. 33/2023 on Multistakeholder Partnerships in the Implementation of Green Sigi. Second, Sigi has a successful track record, for example investment commitments obtained at the

Several priority commodities in Sigi are widely sought after in national and international markets, with attractive

Sustainability Festival (Festival Lestari).

prices. Priority commodities such as cocoa, coffee, and vanilla show good potential to be further developed. In addition, building on disaster mitigation efforts, the production of bamboo and essential oils from citronella can be developed in Sigi, contributing not only to the production of commodities but also to resilience against disasters and climate change. Optimizing the condition of the forest area, non-timber forest products

are certainly an attractive investment.
Supported by the natural beauty and cultural diversity of Sigi, opportunities for ecotourism development are also attractive for the government and green investors.

The investment potential in this jurisdictional initiative will contribute greatly to the achievement of sustainable development as envisioned by the Sigi Hijau, as demonstrated by their respective roles in the achievement of the Green Sigi Performance Index. All initiatives will contribute to the implementation of the Green Sigi, marked by the implementation and plans that are expected to achieve the targets of the Green Sigi Performance Index. Enabling conditions to invite jurisdictional investment are in place to implement the initiatives, so that they can be carried out sustainably in accordance with the Green Sigi plan, and eventually the local communities will receive the greatest benefits from the economy and the

environment.



