

Special Economic Zone Sei Mangkei:

Moving Towards Green Growth



Foreword

Green economic principles are now guiding the global development agenda. Indonesia is committed to fulfill the Paris Agreement and the Sustainable Development Goals (SDGs). They are an essential part in the development of the medium and long-term development plans.

The National Council for Special Economic Zones (DN KEK) recognizes the importance of applying green growth concepts in the development of Indonesia's Special Economic Zones (SEZs).

Green growth is a means to stay competitive in global markets and the SEZ Sei Mangkei Masterplan has incorporated the green industry concept. This is a vital concept that recognizes the fact that to be competitive in global markets, Indonesian industries must meet the principles of a green economy. In other words, industries and firms must ensure that their business practices contribute to green growth.

In collaboration with the Global Green Growth Institute (GGGI), a Green Growth Assessment Study was conducted to evaluate the investment potential for green investment in SEZ Sei Mangkei. Using extended cost benefit analysis (eCBA) this study identifies several investment opportunities in four sectors: renewable energy, waste management, sustainable palm oil and freight logistics.

We endorse the results and the policy recommendations of this study. If policies and incentives can be realized then high quality investment will flow not only to SEZ Sei Mangkei and North Sumatera Province, but will also benefit the whole Indonesian economy.

Dr. Enoh Suharto Pranoto, M.A.
Secretary of The National Council for Special
Economic Zone (SEZ), Coordinating Minister
for Economic Affairs, Republic of Indonesia

- ◆ GGGI conducted a Green Growth Assessment Study for the Special Economic Zone (SEZ) Sei Mangkei in North Sumatra.
- ◆ Using extended Cost Benefit Analysis (eCBA) method, the study identifies policies and investment opportunities to stimulate green growth in four sectors, namely renewable energy, waste management, sustainable palm oil and freight logistics.
- ◆ The results of the study suggest that policy interventions to enable green projects in these four sectors would yield sufficient returns and create USD 870 Million in potential net economic benefits.

Introduction

The Government of Indonesia (GoI) in close collaboration with GGGI strives in developing bankable green infrastructure projects. Indonesia's substantial infrastructure needs will drive investment and growth in the next five years. Specifically, efforts to establish SEZs throughout the country have stepped up to support regional economic growth and industrial development by using local resources. Ambitious plans to develop SEZs across Indonesia highlight the importance of applying green growth principles in these processes to ensure lasting environmental and social impacts.

In supporting the government to attract green investment flows into SEZs, GGGI conducted a green growth assessment study for Sei Mangkei, North Sumatra, to scope out investment opportunities and screen potential projects for further development into eligible bankable green projects using the method of extended Cost Benefit Analysis (eCBA).

THE 5 DESIRED OUTCOMES OF GREEN GROWTH



Greenhouse gas emission reduction



Social, economic and environmental resilience



Sustained economic growth

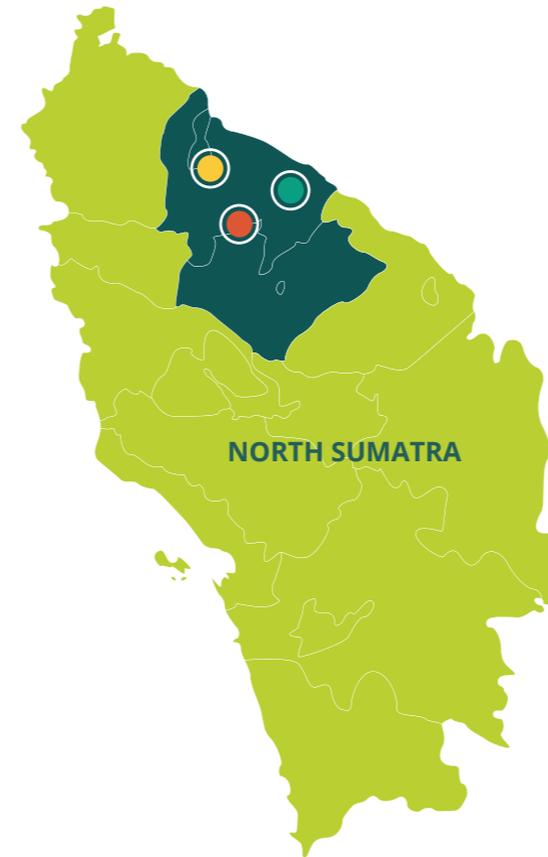


Inclusive and equitable growth



Healthy and productive ecosystems providing services

SEZ Sei Mangkei



The Government of Indonesia (GoI) is committed to develop SEZs to support investment and economic growth. By 2019, the GoI aims to have 25 SEZs across the country, including Sei Mangkei.

Sei Mangkei is an SEZ located in Simalungun District, North Sumatra Province that covers 1,984 ha. It was established under Government Regulation No. 29/2012. Major activities are planned for the SEZ Sei Mangkei in the form of palm oil and rubber downstream industry, along with supporting activities such as utilities, logistics, and various other industries, as well as tourism. The SEZ Sei Mangkei is expected to produce fatty acids, fatty alcohol, surfactants, biodiesel, and biogas.

According to the SEZ Sei Mangkei Masterplan (2011), the SEZ is founded on the principles of using regional core products (i.e., palm oil, rubber, timber), building green industry, and developing a palm oil cluster with downstream processing. Currently, PT Perkebunan Nusantara III (Persero) ("PTPN III"), one of the Indonesian State-Owned Plantation Enterprises in agroindustry, is the managing and developing agent of SEZ Sei Mangkei.

SEI MANGKEI MAP AND ITS ACTIVITIES AND PRODUCTS



PALM OIL



RUBBER



TIMBER

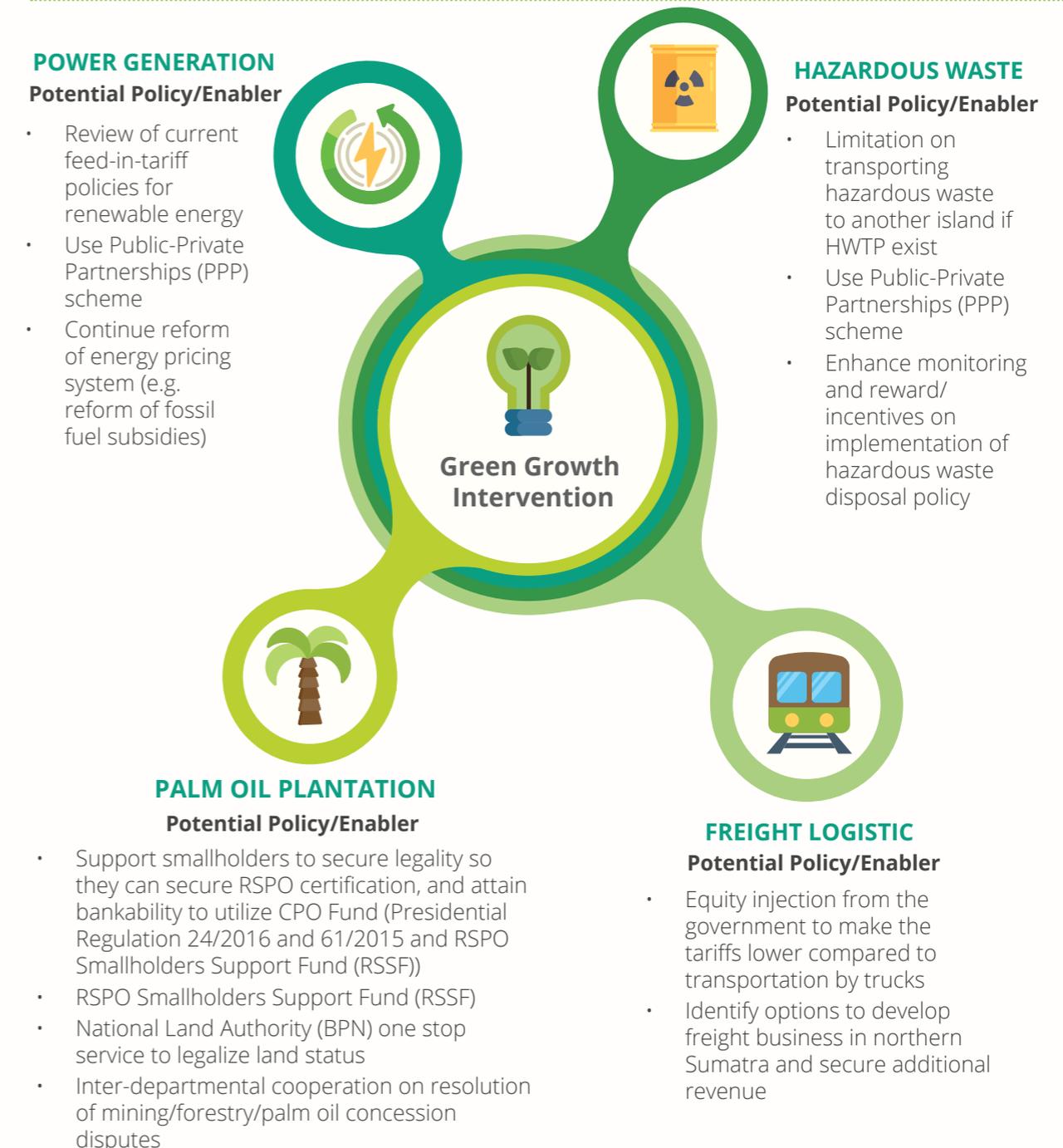
The government's lead agency for coordinating the development of special economic zones, the National Council for Special Economic Zones (DN KEK), collaborates with GGGI to develop bankable green infrastructure projects in SEZs, especially in relation to renewable electricity generation, land use/forestry sector and basic infrastructure (such as waste and water management). There are significant opportunities to re-design existing projects within operating SEZs to generate better green growth outcomes and influence the overall design of SEZs in the earliest planning stage.

eCBA Results for Sei Mangkei

Project Aspect	Business as Usual	Green Growth Intervention	Benefits to Society
 <p>Power Generation</p>	Build a 250 MW Gas Power Plant and 1.68-2 MW Biogas Power Plant.	Potential 64 MW of the proposed 250 MW gas-fired power plant capacity could be replaced with solar PV capacity.	<ul style="list-style-type: none"> Bring power to the SEZ faster Boost the SEZ's image as a Green Zone Reduce CO2 emissions
 <p>Hazardous waste</p>	No Hazardous Waste Treatment Plant (HWTP) around Sei Mangkei and Kuala Tanjung.	Build a 100,000 tons/year HWTP near the SEZ.	<ul style="list-style-type: none"> Save trucking and shipping costs Reduce associated GHG emissions Generate a useful by-product (incinerator bottom ash for construction materials) Avoid environmental damage of waste dumping.
 <p>Palm Oil Plantation</p>	Under BAU 60% of current corporate plantations are projected to implement Best Management Practices (BMP) by obtaining Sustainable Palm Oil (RSPO) certification.	Implementation of BMP and mandatory RSPO certifications for all supplying plantations to the SEZ.	<ul style="list-style-type: none"> Possibility of achieving a small premium on the sales price An estimated 20,000 – 30,000 ha of forest may be saved Increase economic value of ecosystem services (carbon storage, water and soil regulation, preserving biodiversity around Lake Toba) and sustainable timber production
 <p>Freight Logistics</p>	All tenants in Sei Mangkei transport their products using road transportation (freight truck).	Transport half the freight from the SEZ to Kuala Tanjung Port using the railway currently under construction.	<ul style="list-style-type: none"> Reduce air pollution and Green House Gas (GHG) emissions Save significant truck vehicle operating costs

Key Policies Needed to Enable Green Investment:

The Green Growth interventions require positive enablers to make the project bankable. GGGI identifies potential policies that are needed to improve the bankability of the project and practicality of the interventions.



Key Success Factors

To Improve The Attractiveness of Sei Mangkei SEZ

Key Success Factors 1

Professional and Commercial Management

Recommendations:

- Forming a Joint Venture (JV) with a strategic partner with proven experience in the real estate and infrastructure sector to develop SEZ Sei Mangkei
- Ensure consistency in regulations enforcement

Key Success Factors 3

Data Analysis for Decision-Making

Recommendations:

- Perform market research to understand the potential market and its needs
- Developing key performance indicators for measuring the performance of each SEZ

Key Success Factors 5

Optimal Asset Resource Utilization

Recommendations:

- Provide high-quality and integrated infrastructure to improve the connectivity and access to market
- Divert unprocessed commodities (such as CPO) to Sei Mangkei for further processing/value-added where economic case exists

Key Success Factors 7

Other Supporting Policies and Investments

Recommendations:

- Invest in education for industrial training
- Build hospital/health care to handle industrial accidents

Key Success Factors 2

Planning and Communication

Recommendations:

- Improve the current master plan by considering a strong vision to differentiate from other industrial estates and integration with regional development plan
- Develop a marketing and branding strategy focused on the unique selling points of SEZ Sei Mangkei

Key Success Factors 4

Collaborations and Partnerships

Recommendations:

- Identify projects related to SEZ Sei Mangkei development that could be implemented through a PPP scheme and propose them to become national priority projects
- Encourage tenants in SEZ Sei Mangkei to develop local businesses and activities

Key Success Factors 6

Managing Emissions and Pollution

Recommendations:

- Mandate energy efficiency
- Provide more quantitative Strategic Environmental Assessment (SEA) data/baseline which can be used for environment carrying capacity assessment

Gol-GGGI Green Growth Program

Government of Indonesia (GoI) and Global Green Growth Institute (GGGI) have developed a program that is aligned and wholly supportive of achieving Indonesia's existing vision for economic development planning.

The aim is to show, using real examples of Indonesia's development and investment plans at national, provincial and district levels, how economic growth can be maintained while reducing poverty and social inequality, maximizing the value of ecosystem services, reducing GHG emissions, and making communities, economies, and the environment resilient to economic and climate shocks.

The joint GoI and GGGI goal is:

"To promote green growth in Indonesia that recognizes the value of natural capital, improves resilience, builds local economies and is inclusive and equitable."

The specific objectives to achieve this goal are:

- To ensure the green growth vision matches or exceeds existing development targets;
- To track the green growth priorities of Indonesia by providing relevant targets and indicators;
- To evaluate the implications of the country's current development path against green growth targets and indicators and assessing projects and potential policy and investment interventions against this baseline;
- To identify the key sectors and high green growth potential projects and investment interventions that will help deliver green growth development;
- To harness private sector engagement and investment in support of delivering green growth opportunities in Indonesia;
- To undertake economic modeling to analyze each project showing their financial returns and identifying any gaps in the incremental spend required to secure green projects.

- Increasing economic value of ecosystem services will help preserve biodiversity around Lake Toba



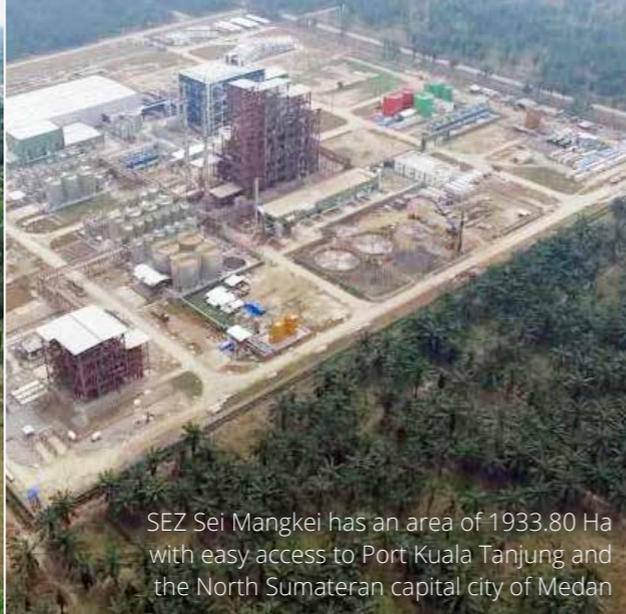
SEZ Sei Mangkei development and management office in Simalungun

SEZ Sei Mangkei is divided into 3 zones: industrial, logistic and tourism zones



The industrial zone focuses on palm oil and rubber processing

The SEZ will be developed as a satellite city supporting logistical and tourism activities



SEZ Sei Mangkei has an area of 1933.80 Ha with easy access to Port Kuala Tanjung and the North Sumateran capital city of Medan



For more information, contact:

Green Growth Secretariat
Gedung Wisma Bakrie 2, 5th Floor
Jl. H.R. Rasuna Said, Kav. B-2
Kelurahan Karet, Setiabudi
Jakarta 12920-Indonesia

www.gggi.org

 Global Green Growth Institute Indonesia

 @GGGIIndonesia



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