

IMPLEMENTATION OF INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK (IGIF) IN INDONESIA: INDONESIA'S FOLU NET SINK 2030 POLICY AS A CLIMATE ACTION STRATEGY TO ACHIEVE NET ZERO EMISSION

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OUTLINE:

O1 Introduction D2 Implementation of IGIF : Operating Plan of the Indonesia's FOLU Net Sink 2030 03

Conclusion



Introduction

O 1 The Important Things to Understand of Utilizing Geospatial Information for Environmental and Forestry Monitoring

"Geospatial data is one of the most promising data sources. It can be applied for monitoring progress in achieving the

SDGs" – R. Avtar



Source : Avtar. R., et al. (2020). Utilizing geospatial information to implement SDGs and monitor their Progress. Journal of Environ Monit Assess (2020) 192:1-21, DOI 10.1007/s10661-019-7996-9





Strategic Pathways of Integrated Geospatial Information Framework

The Framework is anchored by **nine (9) strategic pathways** in three (3) main areas of influence: governance, technology, and people





Operational Plan of the Indonesia's FOLU Net Sink 2030 for Controlling Climate Change



President Joko Widodo COP21/CMP11, Paris-France, 2015



Minister of Environment and Forestry. High-level Signature Ceremony of the Paris Agreement. New York, USA, 2016.







Leadership

Implementation of IGIF : Operating Plan of the Indonesia's FOLU Net Sink 2030

Institutional Value Structures Proposition

STRATEGIC PATHWAY 1: GOVERNANCE AND INSTITUTION Organization of FOLU Net Sink 2030

Governance /

Model

Ministry of Environment and Forestry of Indonesia

Chief Executive

Head of Division 1: Sustainable Forest Management

• Head of Division 2 : Enhancement of Forest Carbon Stock

• Head of Division 3 : Conservation

Head of Division 4 : Peatland Ecosystem Management

• Head of Division 5 : Instruments and Information

Team of Geospatial Information Network







Agency

Geospatial Information Agency

Spatial Planning/National Land

National Research And

Ministry of Agriculture

Peatland and Mangrove

Restoration Agency

Innovation Agency



38 Provincial Governments in Indonesia

Protection and Production Forest Management Unit (KPHP and KPHL) in Indonesia



Conservation Forest Management Unit (KPHK) in Indonesia

Academics



Indonesian Forestry Higher Education Institution Leadership Forum



Legislation Norms, Policies and Guides Implementation and Accountability

STRATEGIC PATHWAY 2 : LEGAL AND POLICY

- 1. Law of the Republic of Indonesia No. 4 of 2011 regarding Geospatial Information
- 2. Government Regulation No. 45 of 2021 regarding Administration of Geospatial Information
- 3. Presidential Regulation of Indonesia No. 98 of 2021 regarding the Implementation of Carbon Economic Value for Achieving Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development
- 4. Minister of Environment and Forestry Regulation No. 24 of 2021 regarding Procedures for Administering Thematic Geospatial Information of MoEF
- 5. Minister of Environment and Forestry Decree No. 168/Menlhk/PKTL/PLA.1/2/2022 regarding Operation Plan Indonesia's FOLU Net Sink 2030
- 6. Guideline for the Use of Indonesia's FOLU Geospatial Data

The country aims to achieve a greenhouse gas emission level of **-140 million tonnes CO2e by 2030**, support net zero emissions in the forestry sector, and to fulfil the NDC which is the nation- specific commitments in support of the global climate change agenda, taking into account Indonesia's more ambitious vision in the LTS-LCCR document.











SUB-NATIONAL

STRATEGIC PATHWAY 3 & 7: FINANCIAL AND PARTNERSHIPS **FOLU Sector GHG Emission Reduction and SIGAP Action Funding Scheme**







STRATEGIC PATHWAY 4 : DATA Geospatial Information of the Indonesia's FOLU Net Sink 2030



a Location Priority Index



Institutional Typology of the Forest Management Unit



Environmental Services Index



Mitigation Actions of Indonesia's FOLU Net Sink 2030

Source : MoEF Decree No. 168/Menlhk/PKTL/PLA.1/2/2022



UN-GGIM

1 (Extremely Low)
2 (Very Low)
3 (Low)
4 (Rather Low)
5 (Moderate)
6 (Rather High)
7 (High)
8 (Very High)
9 (Extremily High)

"The Location Priority Index provide an overview of the condition of the area in relation to level of risk of the area to deforestation and forest fires, and potency of the area in carbon sequestration. The Location Priority Index (risk of deforestation and fire, and potency of carbon uptake) are integrated to define priority of the area for the implementation of mitigation actions"

Phnom Penn

MINISTRY OF ENVIRONMENT AND FORESTRY REPUBLIC INDONESIA

MALAYSIA Kuala Lumpur

Singapore

Environmental Services Index Scale 1:250,000

UN-GGIM

1 (Protectio	on)
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- 2 (Production)
- 3 (Rehabillitation)
- 4 (Rehabilitation Agroforestry)

Phnom Penh

MINISTRY OF ENVIRONMENT AND FORESTRY REPUBLIC INDONESIA

MALAYSIA Kuala 'Lumpur

Singapore

- 5 (Conversion Zone)
- 6 (Other Landuse)

"The Environmental Services Index is developed based on the presence of high conservation values (HCV), forest quality (carbon stocks and crown density) and role of the area in providing environmental services. The Environmental Services Index will define the direction in optimizing the utilization of forest"















STRATEGIC PATHWAY 5: INNOVATION Geospatial Information System (SIGAP) MoEF

https://sigap.menlhk.go.id



SIGAP is developed by MoEF for comprehensive geospatial data management and analysis. This system utilizes cutting-edge technology to collect, process, and visualize spatial data related to Indonesia's natural resources, including forests, land cover, biodiversity, and environment



SIGAP maintains **99 Thematic Geospatial** Information from **35 Geospatial Data**

Producers, 25 of which include to the one map policy.



SIGAP earned the Bhumandala Award from the Geospatial Information Agency for being one of the best National Geospatial Information Networks in 2022 and 2023. In 2021, SIGAP was awarded BIG TOP Ministry/Agency Geospatial Data Sharing. SIGAP was also awarded the 1st Winner of One Map Policy Competition : One Map Policy for Better Governance in 2024



Sigap steps forward to bring convenience, accessibility, and ease.

NEWS DATE MANAGEMENT

SIGAP KLHK is formed by the Directorate of Inventory and Monitoring of Forest Resources (IPSDH) as the Geospatial Data Custadian and is also supported by other directorates as the Geospatial Data Producer.

😫 SIGAP KLHK





SIGAP as a Control and Evaluation Tool of Indonesia's FOLU Net Sink 2030



SIGAP provides an interactive map menu that can be accessed openly for users to view Indonesia's FOLU Net Sink 2030 Map SIGAP provides a Management of Thematic Geospatial Information Menu to Download Indonesia's FOLU Net Sink 2030 Map Directly

Yan ROLE WALIDATA





STRATEGIC PATHWAY 6: STANDARDS The Standards of Indonesia's FOLU Net Sink 2030





Minister of Environment and Forestry Decree No.398/2024

- a. Geospatial Data Attribute
- b. Topology Rules
- c. Quality Data Management

Minister of Environment and Forestry Decree No.399/2024 a. Access Authority Classification

- b. Map Layout
- c. Data Sharing Procedure

Indonesian National Standard (SNI)

- 3
- a. SNI 7717:2020 (Geospatial Information Specifications Mangrove Scale 1:25,000 and 1:50,000)
- b. SNI 9012:2021 (Geospatial Information Specifications Watershed Boundaries Scale 1:50,000)
- c. SNI 9108:2022 (Geospatial Information Specifications Lake Catchment Area)







STRATEGIC PATHWAY 8 : CAPACITY AND EDUCATION Spatial Analysis Training of Indonesia's FOLU Net Sink 2030



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(BPKHTL) to understand and synchronize data between Action Plan of Indonesia's FOLU

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Net Sink 2030 document and Action Plan in Province Level

Spatial analysis

Forestry Management

and Environmental

Governance Unit

training for 22





MoEF has also collaborate with Centre for Climate Risk and Opportunity Management in Southeast Asia Pacific (CCROM SEAP) IPB University to held Spatial Analysis Training of Indonesia's FOLU Net Sink 2030 for Forest Management Unit (KPH) in 5 provinces in 2022 and 2 provinces in 2023.





STRATEGIC PATHWAY 9: COMMUNICATION AND ENGAGEMENT Publication of Indonesia's FOLU Net Sink 2030







- 1. Indonesia's FOLU Net Sink 2030 is a structured, systematic and massive national collaboration in accelerating the achievement of Nationally Determined Contribution (NDC) targets based on Sustainable Forest Management (SFM), Environmental Governance (EG) and Carbon Governance (CG).
- 2. Strong Commitment and Global Leadership : The "FOLU Net Sink 2030 Policy" underscores Indonesia's dedication to address climate change through strategic forest management and sustainable land use.
- **3.** Alignment with IGIF: The policy is well-aligned with the "Strategic Pathways of the Integrated Geospatial Information Framework" (IGIF), ensuring a comprehensive approach encompassing governance, data quality, financial strategies, capacity building, and partnerships.
- 4. Emphasizing education and capacity building, the policy includes comprehensive training programs for forest management units, ensuring stakeholders are equipped with the necessary skills and knowledge for effective implementation, while simultaneously promoting the integration of innovative technologies such as remote sensing and GIS to enhance the accuracy and efficiency of forest resource monitoring and management.





Thank You,

Drs. Alue Dohong, M.Sc., Ph.D.

Vice Minister of Environment and Forestry of Indonesia

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