



**BerAKHLAK**  
Berorientasi Pelayanan Akuntabel Kompeten  
Harmonis Loyal Adaptif Kolaboratif

**#bangga  
melayani  
bangsa**

# Environmental Planning and Strategic Environmental Assessment : Policies and Implementation in Indonesia

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# Environmental Governance For Sustainability

**Integrated Landscape-Seascape Governance and Leadership**

**Integrate Sustainable Development aspects:**  
(**5 P** – **P**lanet/Biosphere, **P**eople (society-social), **P**rosperity (economy), **P**artnership & Landscape Governance (SFM, GEG and Carbon Governance) and **P**eace)

The Development Processes are carried out to achieve the 2045 Golden Indonesia Vision and to **Response Triple planetary crisis, Global Risks, and Megatrend 2045, VUCA** through:

1. Planning [P];
2. Organizing [O];
3. Actuating [A];
4. Controlling [C];

**Sustainable Development**  
[*Green Economy*]

**Environmental Governance Instruments**

i.e. *Environmental Planning, SEA & EIA*

**Strengthening Environment Safeguard**  
in The development & Project planning processes

**The Development Processes**  
(P-O-A-C)

**The State Vision dan Goal of Indonesia INKRII**

- 1) Article 28H verse (1) and Article 33 verses (4) of Indonesian Constitution of 1945:
- 2) Article 3 & 12 of EPMA 32/2009

1. Enhancing the Environmental Governance systems and infrastructures;
2. integrated with other Instruments of Environmental Protection and Management [EPMA] and Instruments of Natural Resources Management [NRM]



**Landscape & Seascape and the socio-ecological conditions**

**Landscape-Seascape Sustainability:**

1. **Sustainability of environmental process, function and productivity** – Good and healthy environment of Atmosphere/air, land, water, marine and biodiversity;
2. **Human well-being** [the safety, quality of life and welfare of the society].

# Strengthening the Infrastructures of Environmental Governance Systems

## A. **REGULATORY FRAMEWORKS**

1. Laws: EPMA 32/2009 & Omnibus Law 06/2023
2. The Government Regulations;
3. The President Regulation;
4. The MOEF Regulations;
5. The MOEF Decree;

F. *MONITORING AND EVALUATION*];

G. *Effective IMPLEMENTATION*];

H. *INNOVATION*];

I. *FINANCIAL MECHANISM*

### Note:

1. **PDLKWS:** Environmental Impact Prevention of Regional and Sectoral Policies;
2. **Ekoregion:** Ecoregion;
3. **D3TLH:** Environmental Carrying Capacity;
4. **RPPLH:** Environmental Protection and Management Plan;
5. **KLHS:** Strategic Environmental Assessment;
6. **IELH:** Environmental Economics Instruments.

## B. **TECHNICAL GUIDELINES.** including Methodologies



## E. **Effective dan Efficient Mechanism of PUBLIC INVOLVMENT**

## C. **INSTITUTIONAL AND HUMAN RESOURCE CAPACITY**

1. Standards of Competency [SKK/SKKNI];
2. Training Curriculum & Syllabus;
3. Training Couse Institutions];
4. Competency Certification Institutions [LSK];
5. Review and Validation/Verification Institutions;
6. Consultants and Their Institutions;
7. Certified Human Resources;
8. *Pool of Experts*;
9. Proffessional association

## D. **DECISION SUPPORT SYSTEMS – [DSS]**

1. Thematic Geospatial Information
2. Information Systems [the Electronic/Digital-Based Goverbment Systems [SPBE]

**Innovation and Integration of Environmental Safeguards Based on The Environmental Protection and Management dan Natural Resources Management Laws and Regulations in Indonesia at the Landscape and Site Levels (EPMA 32/2009 & OL 03/2023)**

**Environmental Economic Instruments (IELH) i.e. NREA/Green GDP, PES, SF**

**Environmental Planning [EP]**

Results of Environmental Inventory

**Environmental Protection dan Management Plan (EPM Plan)**

- a. National;
- b. Provinces
- c. Regencies/Municipalities

**Environmental Assessment [EA]**

**Landscape Level**

**SEA**  
(Strategic Environmental Assessment)

Policy, Programs and Plans (PPPs):  
i.e.  
The Spatial Plans and Development Plans

**The Omnibus Law: 06/2023**

**EIA**  
(Environmental Impact Assessment & Approval) and Permits

Project (Businesses and Activities) i.e. Plantations, Mining, Oil and Gas

**Environmental Audit**

**Site/Project Level**

**“DNA” EPMA = HITS**

Information System to Support (DSS) Integrated Governance System of EPMA

Geospasial Information as References for EPMA

**Environmental Inventory**

- a. National
- b. Islands

**Environmental Carrying Capacity (D3TLH)**

**Environmental Inventory at the Ecoregion Level (c)**

**ECOREGION**

Based on Environmental/ cosystem Services



# Position and Roles of Environmental Governance Instruments For Sustainability:

## Interconnection between the Landscape-seascape Sustainability with Project/Site Sustainability

**Environmental Planning & SEA:  
Environmental & Social Safeguard  
(ESS) for PPP  
(Landscape-seascape Level)**

The EPM Policy Intervention [ESS]

Information  
& Direction

**EIA & Environmental  
Audit: ESS for the  
project and business  
activity [Site Level]**

The EPM Policy Intervention [ESS]

**Landscape-Seascape  
Sustainability:**

- 1. Sustainability of environmental process, function and productivity**  
– Good and healthy environment of Atmosphere/air, land, water, marine and biodiversity;
- 2. Human well-being** [the safety, quality of life and welfare of the society].

**The Development, Spatial and Sectoral Planning:**

1. The Long-terms and Medium-Term Development Plans [RPJP/RPJM];
2. The General dan Detail Spatial Plans;
3. The Sectoral Plans

**Ecoregion: Landscape-Seascape Sustainability**

**The Project/Business  
activity**

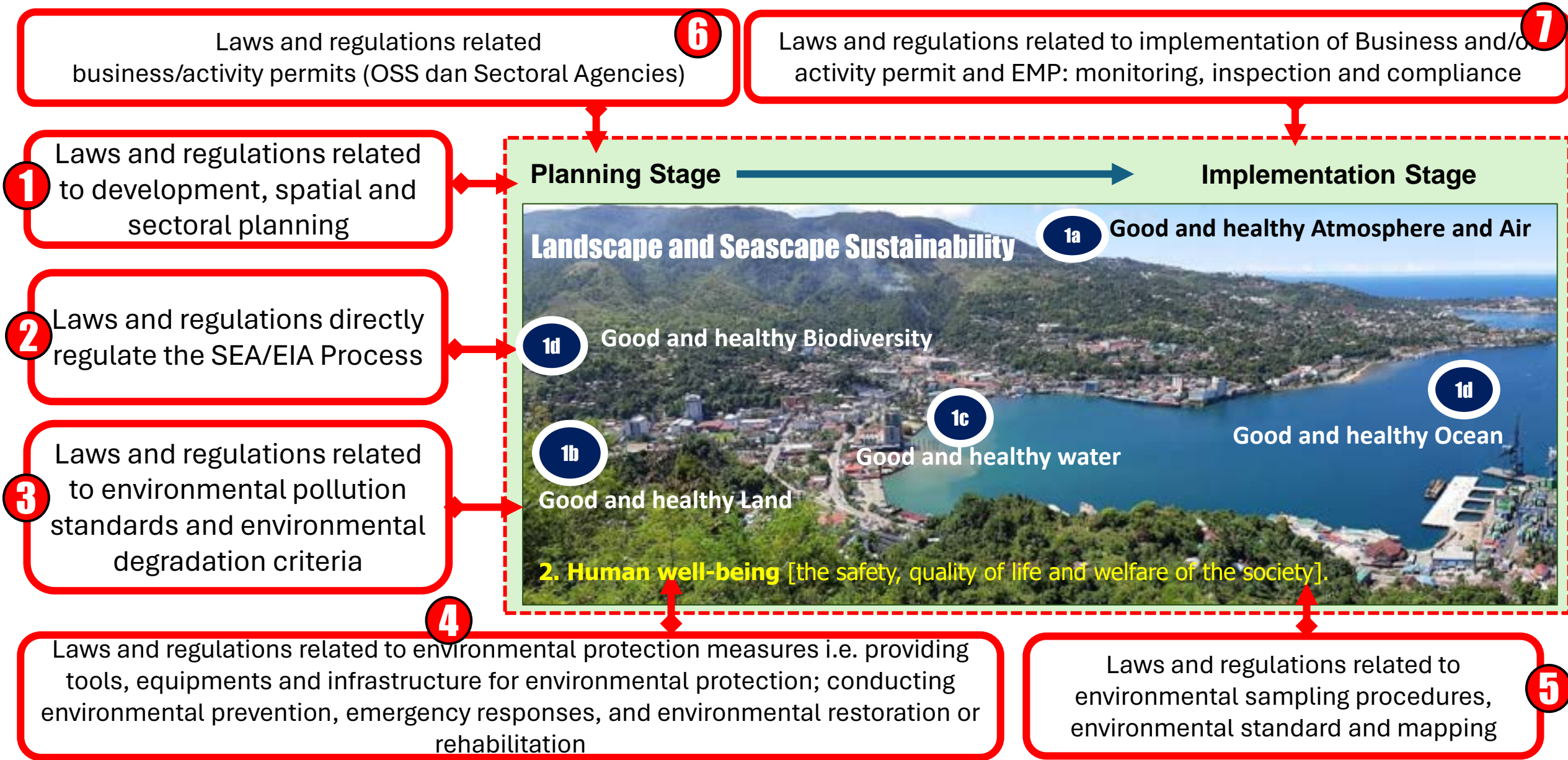
**Project Sustainability**

**The Environmental State Indicators:  
The Environmental Services and  
Environmental Carrying Capacity  
[D3TLH]**

**The Environmental State Indicators:**

- Environmental Pollution standards and Environmental Quality Index: Air, Water, and Marine;
- Environmental Degradation Standards i.e. Mangrove, Coral Reefs, sea grasses, arable land, peat, and land degradation due to forest and land fire;

# Innovation and Integration of Government Policies Related to ESS-Framework: Interconnection of the Landscape-Seascape Sustainability and Project Sustainability





# Environmental Protection and Management Plan for Sustainability: Good and Healthy Environment for All

The National Environmental Protection and Management Plan for Sustainability [2025-2055]: **Environmental Safeguard and Instruments for strengthening *SUSTAINABILITY of the implementation Process for The Long-term Development Plan [RPJPN 2025-2045]***



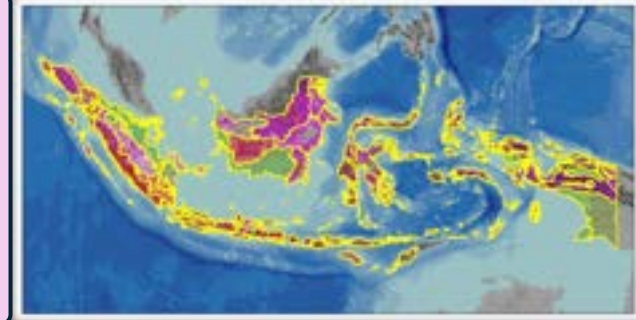
Direktorat Perencanaan Dengan Lingkungan Kehutanan Wilayah dan Sektor  
Direktorat Jenderal Planologi Kehutanan dan Tata Lingkungan  
Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia

LAMPIRAN I

## MATERI TEKNIS RENCANA PERLINDUNGAN DAN PENGELOLAAN LINGKUNGAN HIDUP NASIONAL

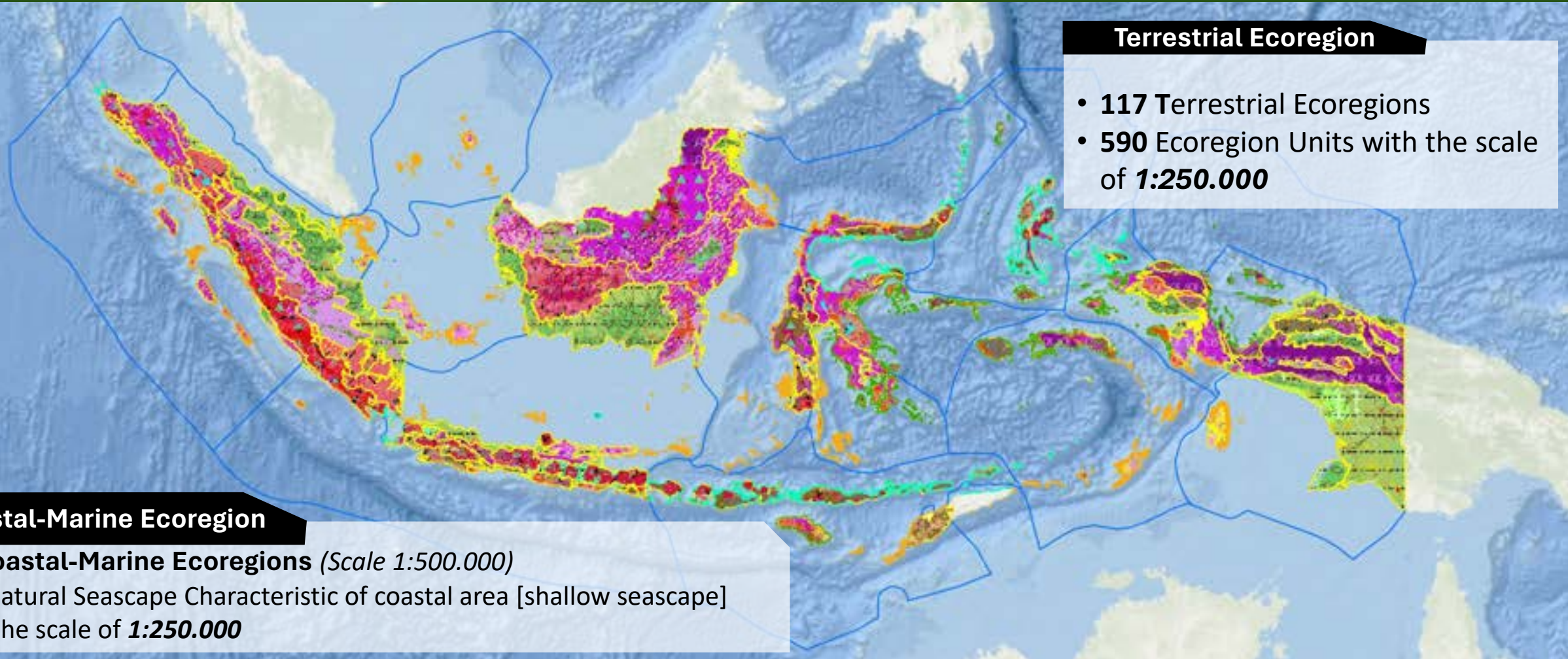
TAHUN 2025-2055

1. Contains information on **the ECOREGION CHARACTERISTICS [ KBA/KVA]** on each island and archipelago with various information including **areas with high environmental services and Environmental Carrying Capacity [D3TLH]**



2. Providing Environmental Protection and Management **[EPM] DIRECTIONS**, based on the Ecoregions Characteristics [KBA/KVA] on Each Island and Archipelago, Related to:
  - a. **NATURAL RESOURCES MANAGEMENT** Directions.
  - b. Directions for Protection of **ENVIRONMENTAL FUNCTION AND QUALITY**.
  - c. Directions for **MITIGATION AND CLIMATE CHANGE ADAPTATION**.
3. With **IMPLEMENTATION STRATEGIES**:
  - a. Governance Transformation.
  - b. Socio-economic and cultural transformation through the development of a new economic model based on Environmental Services with green investment and financing schemes;
  - c. Technological Innovation.

# The Ecoregion of Indonesia: Basis for Environmental Protection and Management [EPM] in Indonesia: From Environmental Planning to Environmental Laws Enforcement

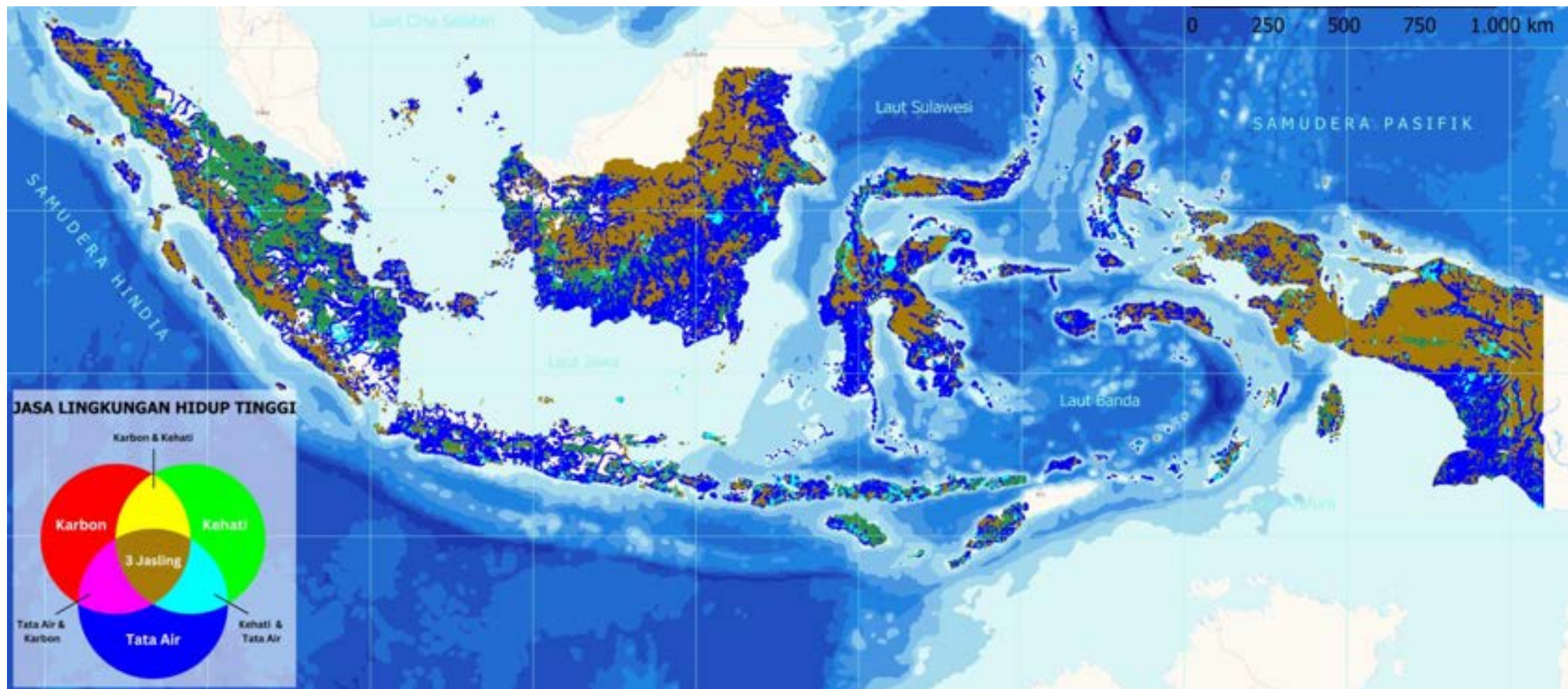


## The Indonesian Ecoregion Geospatial Information:

- contains **data and information** on the characteristics of natural resources, ecosystems, geographical conditions, local community culture and local wisdom;
- can be utilized **to facilitate the integration of environmental, social and economic aspects** in an effort to achieve sustainability, decisions on the EIA, business permits and sustainable investment, as well as the development of environmental and forestry Standards



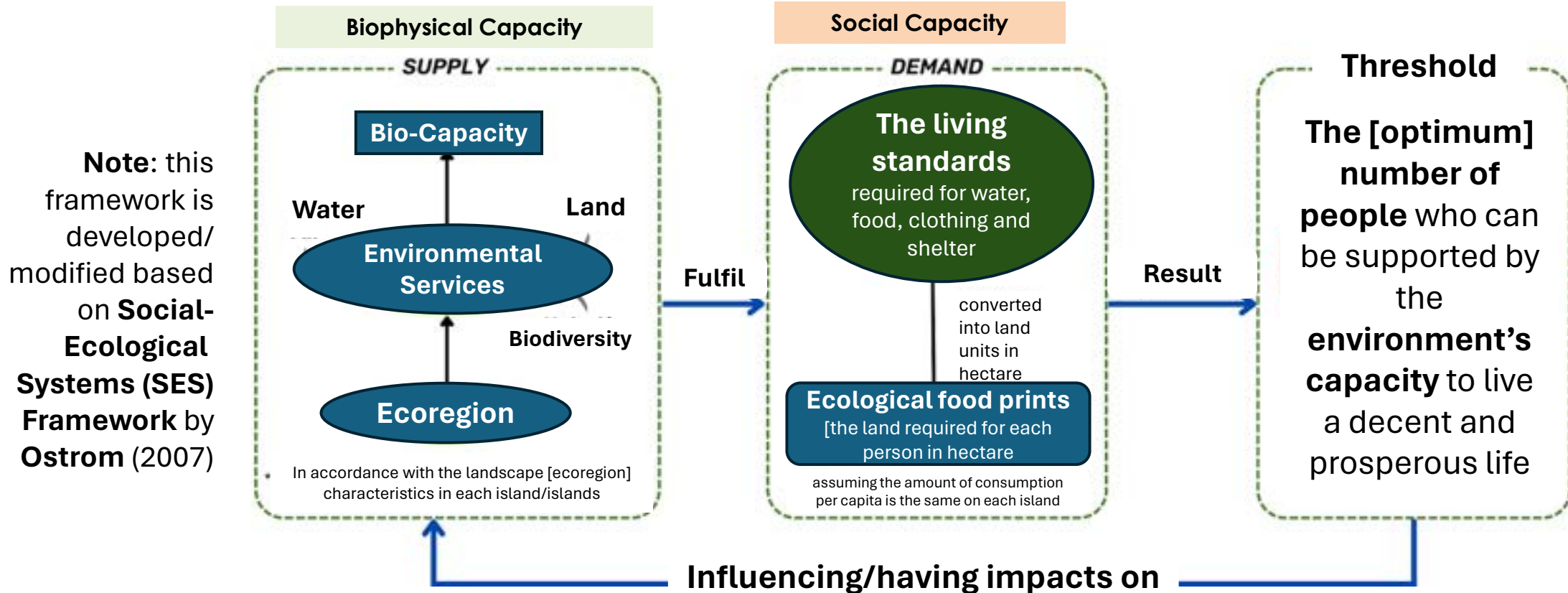
# Thematic Geospatial Information on Environmental Services Related to Water, Biodiversity and Carbon of Indonesia with a scale of 1:250,000



- 1. Current Status:** Thematic Geospatial Information on **Environmental Services** Related to **Water, Biodiversity and Carbon** of Indonesia has been compiled with a **scale of 1:250,000**.
- 2. This Indicative high Environmental Services Geospatial Information** describes areas that function as **life support systems** and **reserves of natural resources** in realizing **sustainability**

# The Environmental Carrying Capacity [D3TLH] METHODOLOGY for Water, Arable Land [Food] And Biodiversity

“The number of populations living in prosperity independently and sustainably (**Social Capacity**) supported by environmental carrying capacity in ecoregional units (**Biophysical Capacity**)”



1. **The Environmental Carrying Capacity [D3TLH] concept** consists of the environmental services related **water provision and regulation, food provision and biodiversity** [supporting]
2. D3TLH aims to maintain a balance between the provision of the living environment and the basic needs of human life
3. Availability of biodiversity resources is part of environmental carrying capacity related to Land while maintaining protected forests and conservation forests according to its provisions.
4. Biodiversity is a barrier to determining the environmental carrying capacity of land to fulfil basic human needs.



# Environmental Carrying Capacity



## Sumatera Island

- Penduduk Pulau Sumatera Tahun 2022 : ±59,98 juta jiwa
- Jumlah penduduk yang mampu didukung : ±196 juta jiwa

## Kalimantan Island

- Penduduk Pulau Kalimantan Tahun 2022 : ±17,03 juta jiwa
- Jumlah penduduk yang mampu didukung : ±129 juta jiwa

## Sulawesi Island

- Penduduk Pulau Sulawesi Tahun 2022 : ±20,33 juta jiwa
- Jumlah penduduk yang mampu didukung : ±59,67 juta jiwa

## Maluku Islands

- Penduduk Kepulauan Maluku Tahun 2022 : ±3,21 juta jiwa
- Jumlah penduduk yang mampu didukung : ±18,59 juta jiwa

The islands of Sumatra, Kalimantan and Sulawesi are far from the threshold

Based on **Environmental Carrying Capacity** at the National Level, the **population** that can be sustainably supported for basic needs is **559.43 million people**

Environmental Carrying Capacity of Java Island is **overshot**

## Java Island

- Penduduk Pulau Jawa Tahun 2022 : ±154 juta jiwa
- Jumlah penduduk yang mampu didukung : ±109 juta jiwa

## Bali and Nusa Tenggara Islands

- Penduduk Kepulauan Bali dan Nusa Tahun 2022 : ±5,33 juta jiwa
- Jumlah penduduk yang mampu didukung : ±25 juta jiwa

## Papua Island

- Penduduk Pulau Papua Tahun 2022 : ±5,58 juta jiwa
- Jumlah penduduk yang mampu didukung : ±17,24 juta jiwa

Regarding D3TLH, The islands of Papua, Bali and Nusa Tenggara Islands and the Maluku Islands are already approaching the threshold.

The status has not been overshoot, indicating that currently the island/archipelago is still able to fulfil the basic needs of its population independently

**Environmental Carrying Capacity of is overshoot:** The island/archipelago has reached the status of being unable to fulfil the basic needs of its population independently

**The National Environmental Carrying Capacity (D3TLH) Threshold**

# Environmental Pollution Standards



Improving the existing environmental pollution standards and developing new environmental pollution standards such as environmental pollution standards as the basis for environmental monitoring and compliances



# Environmental Degradation Criteria

## 1 Criteria for Ecosystem Degradation

f Peat Swamp Degradation

a Land/Soil Degradation for Biomass Production

d Mangrove Degradation

e Sea Grass Degradation

c Environmental Degradation as result of land and forest fire

g Karst Degradation

h Criteria for other ecosystem degradation

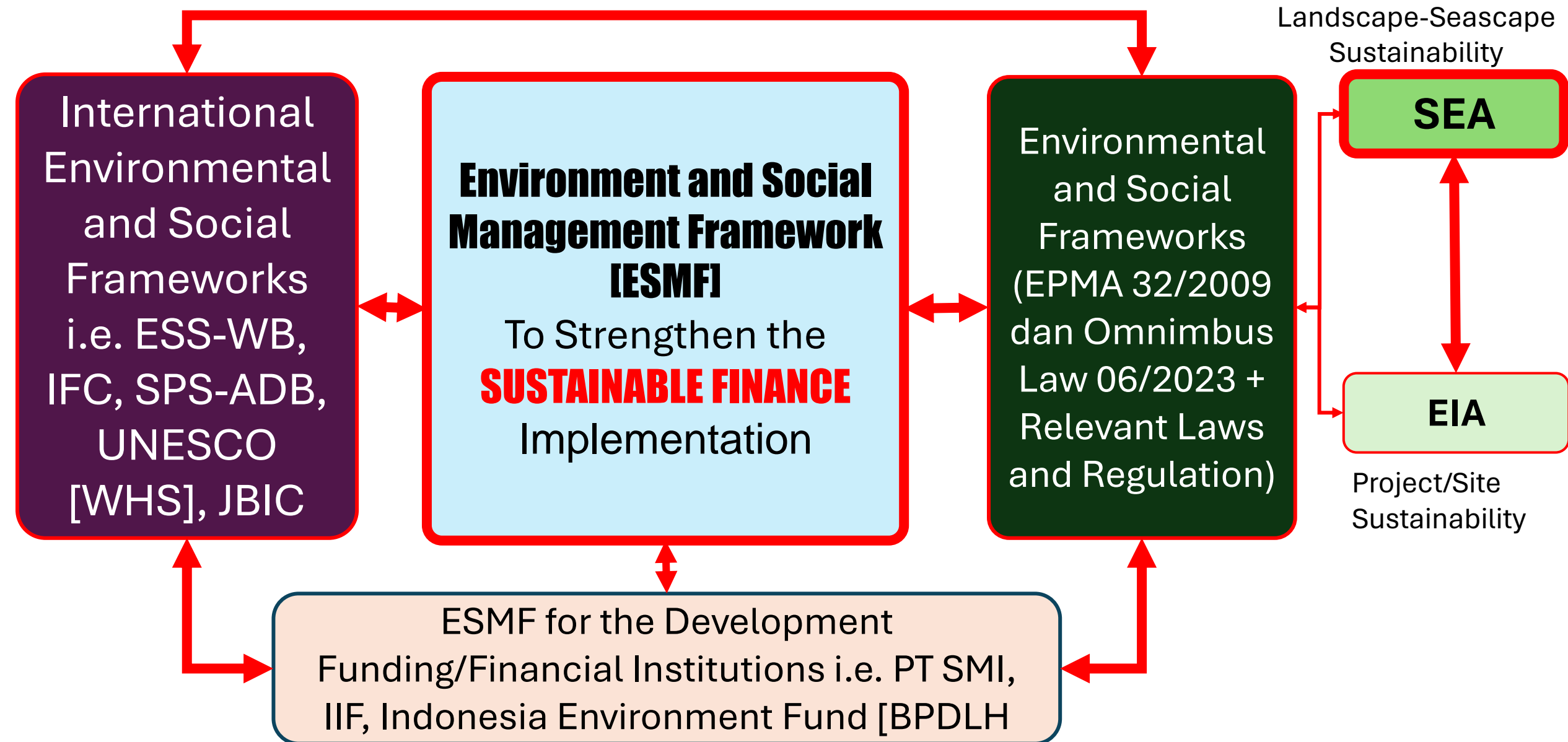
## 2 Criteria for Environmental Degradation as result of climate change

- Increase in Temperature;
- SLR
- Storms
- Drought

b Coral Reef Degradation

Improving the existing Environmental Degradation Criteria and developing new Environmental Degradation Criteria as the basis for environmental monitoring and compliances

# Environmental and Social Safeguard Framework : International and Country Safeguard Systems [CSS]



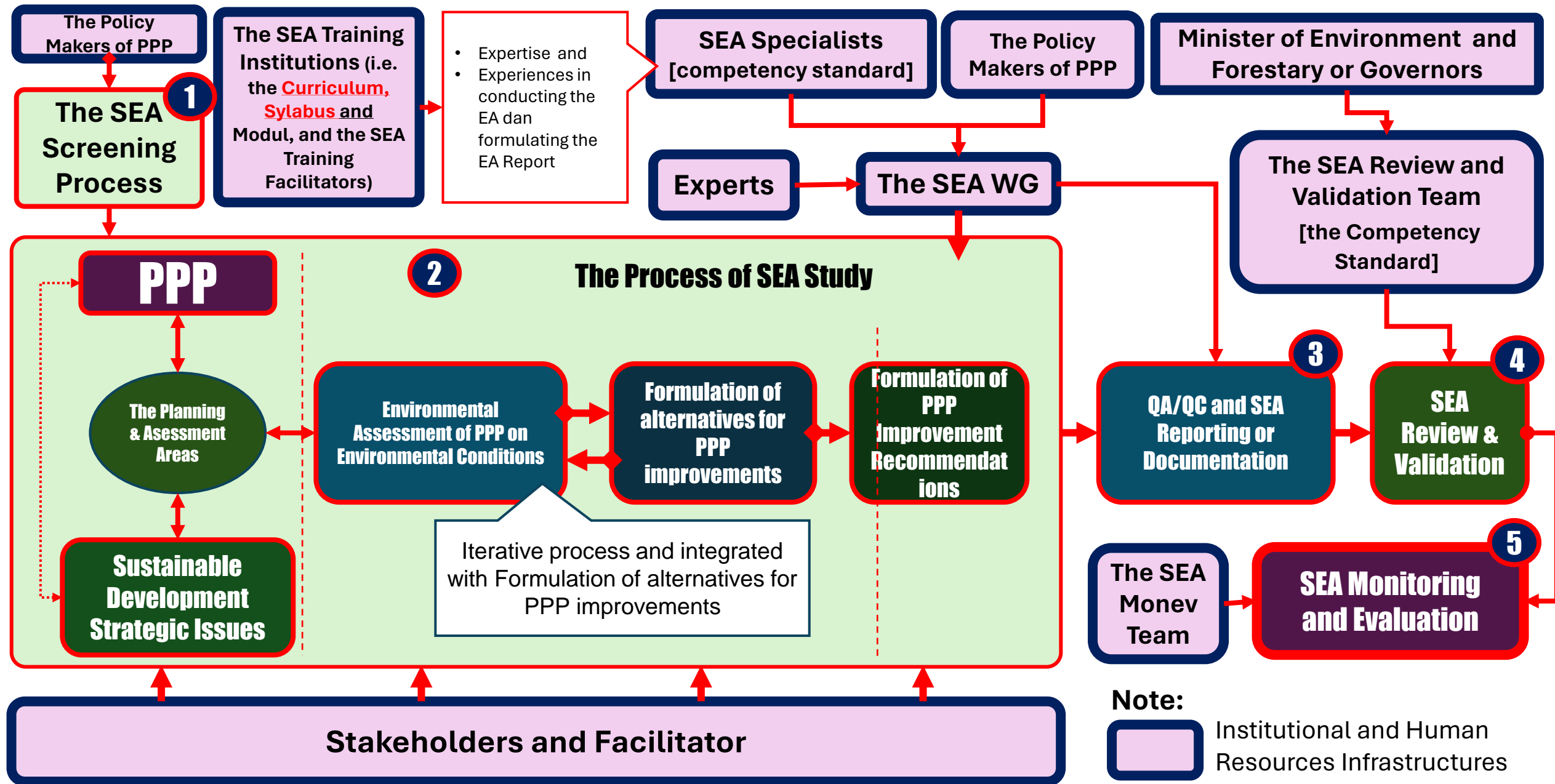


# Kajian Lingkungan Hidup Berdasarkan ESS 1 World Bank

1. **Environmental and Social Impact Assessment (ESIA);**
2. **Environmental and Social Audit;**
3. **Hazard or Risk Assessment;**
4. **Cumulative Impact Assessment;**
5. **Social and Conflict Analysis;**
6. **Environmental and Social Management Plan (ESMP);**
7. **Environmental and Social Management Framework (ESMF);**

8. **Regional ESIA:** examines environmental and social risks and impacts, and issues associated with a particular strategy, policy, plan, or program, or with a series of projects, for a particular region (e.g., an urban area, a watershed, or a coastal zone);
9. **Sectoral ESIA;**
10. **Strategic Environmental and Social Assessment (SESA):** a systematic examination of environmental and social risks and impacts, and issues associated with a policy, plan, or program, typically at the national level but also in smaller areas. The examination of environmental and social risks and impacts will include consideration of the full range of environmental and social risks and impacts incorporated in ESS1 through 10.

# The SEA Process, Institutions and Human Resources Involved





# The Process of Strategic Environmental Assessment (SEA) Based on The GR 46/2016

## Environmental Assessment of the PPPs implementation on Environmental Conditions

## Alternatives

## Recommendations

Content Materials of Policies, Plans and Programs (PPPs) have potential environmental impacts and risks

**PPP**

(Article 10 GR 46/2016)

Jurisdictional Boundary

**The Planning & Assessment Areas**

Ecological-Social Boundary

**Sustainable Development Strategic Issues (Environmental Conditions)**

(Article 8-9 GR 46/2016)

Formulated based on Priority by considering:

1. **Environmental Baseline/Setting**;
2. The importance of the potential impact and risks;
3. Linkages between the strategic issues (D-P-S-I-R);
4. Linkage with PPP content materials;
5. Environmental Protection and Management Plan
6. Other relevant SEA

Scopes, methods, techniques and depth of analysis based on 5 Aspects

Analysis: INTERACTIONS between PPP Content Materials and SD Strategic Issues

**Environmental Assessment of PPP on Environmental Conditions**

(Article 11-13 GR 46/2016)

The Environmental Assessment takes into account:

1. **Laws and Regulations**;
2. Guidelines, reference and standards and best practice;
3. Research Results;
4. Agreement between experts

**The Integrated Environmental Assessment related to relevant analysis as follows:**

1. Efficiency of natural resource utilization;
2. **Environmental impacts and risks i.e. GHG Emissions**
3. Biodiversity;
4. Ecosystem service performance
5. Carrying Capacity;
6. **vulnerability and adaptation to Climate Change**;

1. Changes in goal, objectives/Targets of RDTR
2. **Changes in strategies to attain the targets**;
3. Changes or adjustments in size, scale, location that environmentally sound

**Formulation of alternatives for PPP improvements**

(Article 15 GR 46/2016)

4. Changes or adjustments in **processes, methods and technologies**
5. **Postpone, changes in sequence or priority of PPP Implementation**;
6. Providing the environmental directive (safeguard) for maintaining, protecting and enhancing ecosystem integrity
7. Providing the environmental directive (safeguard) for Mitigating Environmental Impacts and risks

For PPP Decision Makers

**Formulation of PPP Improvement Recommendations**

(Article 16 GR 46/2016)

Contents:

1. Enhancing PPP;
2. The projects/Businesses and activities that can have environmental impact carrying capacity and are not allowed to be implemented

**A mitigation hierarchy approach**

1. Carrying Capacity
2. **Environmental Impacts and Risks i.e. GHG Emission**
3. Ecosystem Services
4. **Disaster**
5. Quality and availability of Natural Resources;
6. Biodiversity;
7. **Vulnerability and adaptation Capacity to Climate Change**
8. Poverty
9. Public Health
10. Threaten to certain protected area

**10 Criteria + PPP's: Direct Driver(s) of change**

# SEA: the foundation for Environmentally Sound IKN's Law and Regulations

*Environmental & Social  
Safeguard di Level  
Landscape*

**SEA for the  
New Capital  
City  
(MOEF-2019)**

**SEA for the New  
Capital Master Plan  
(Bappenas 2020)**

**SEA for The Spatial  
Plan of Nusantara  
Capital City  
(ATR/BPN 2021-2022)**

**9 SEAs for 9 Urban  
Detailed Spatial Plans  
(ATR/BPN 2022-2023)**

- Law No 3/2021 on State Capital City
- Presidential Regulation No. 63 OF 2022 On The **Details of Master Plan For The State Capital City of Nusantara** (18 April 2022]

Presidential Regulation No. 64 Of 2022 On **Spatial Plan For The State Capital City Of Nusantara** (18 April 2022)

*Environmental  
& Social  
Safeguard at  
the project  
level*

**Environmental Documents  
[EIAs) & Environmental  
Approvals**

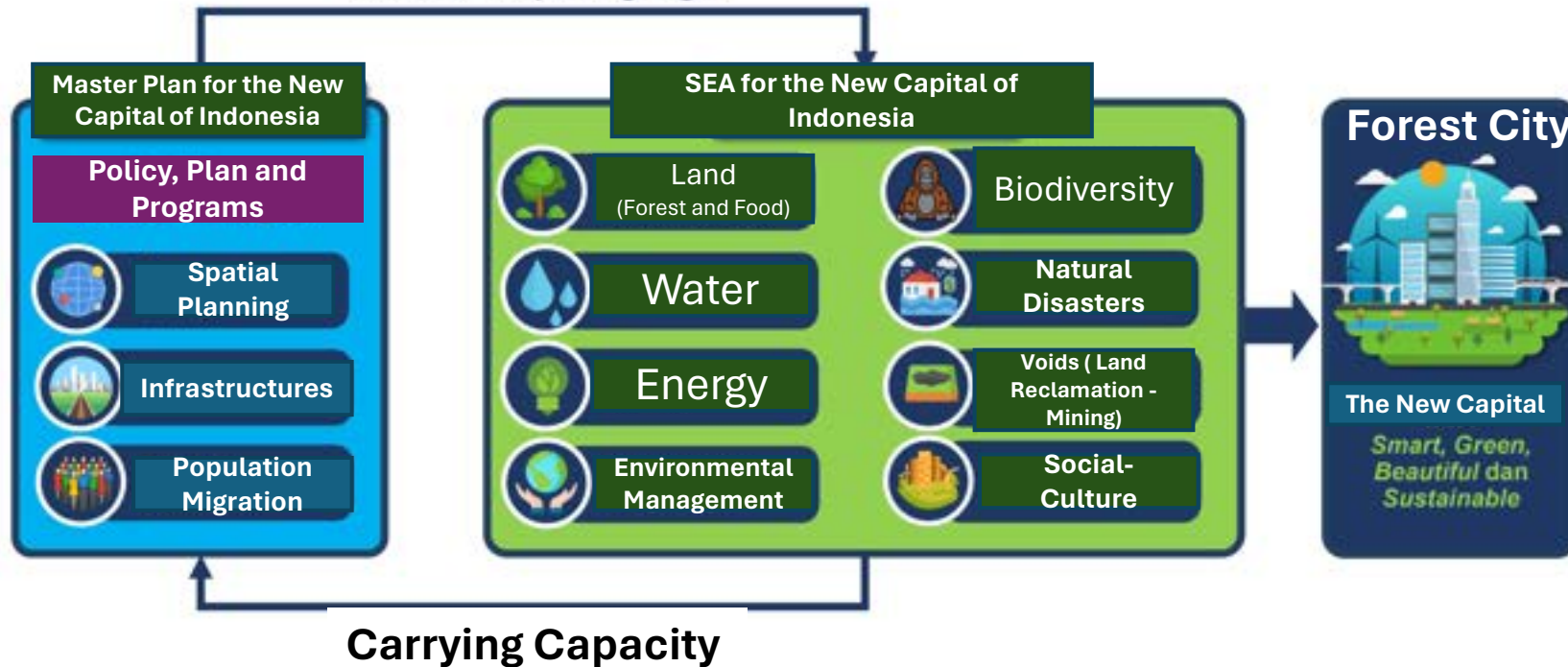
**Sustainable  
Infrastructures  
Development of IKN &  
Implementation of  
Environmental &  
Social Safeguard and  
Environmental  
Standards**

**HITS as an Approach to Strategic  
Environmental Assessments (SEAs):**  
Holistic, Integrative, Thematic and Spatial

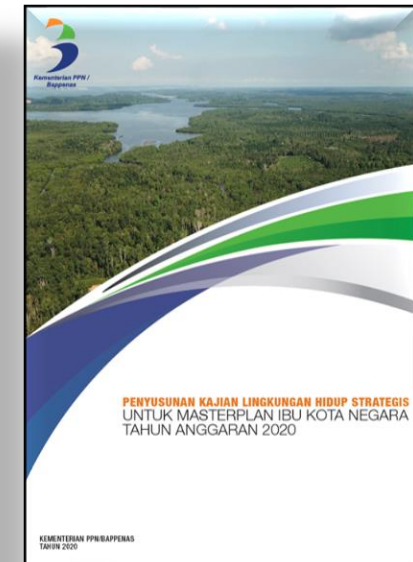
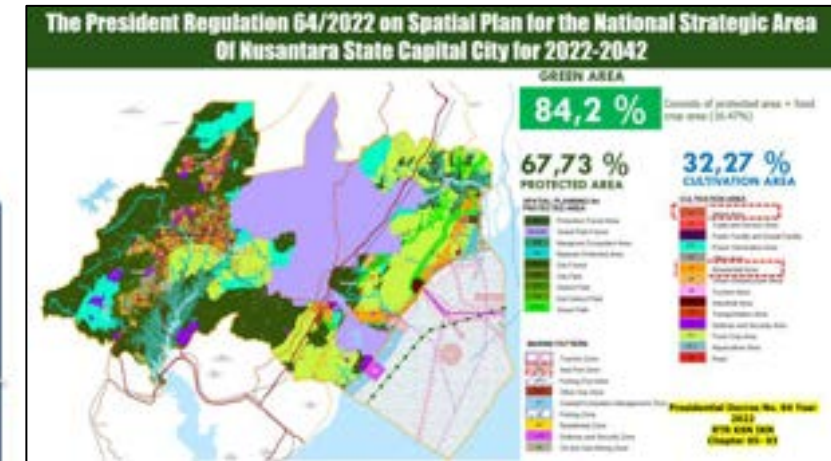


# The Strategic Environmental Assessments (SEAs) of The New Capital of Indonesia

## Environmental Impacts and Pressures

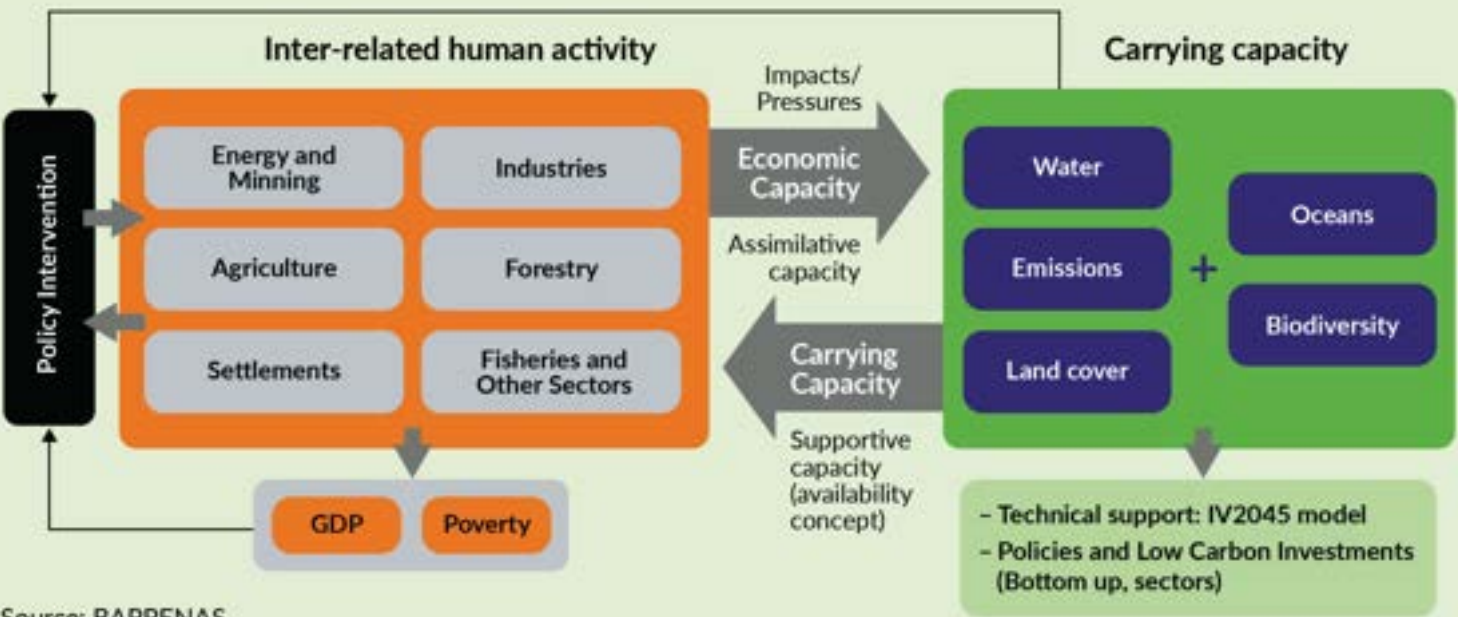


## Carrying Capacity



# Strategic Environmental Assessment (SEA) of the RPJMN and the Sustainable Development Goals (SDGs) in the LCDI Framework

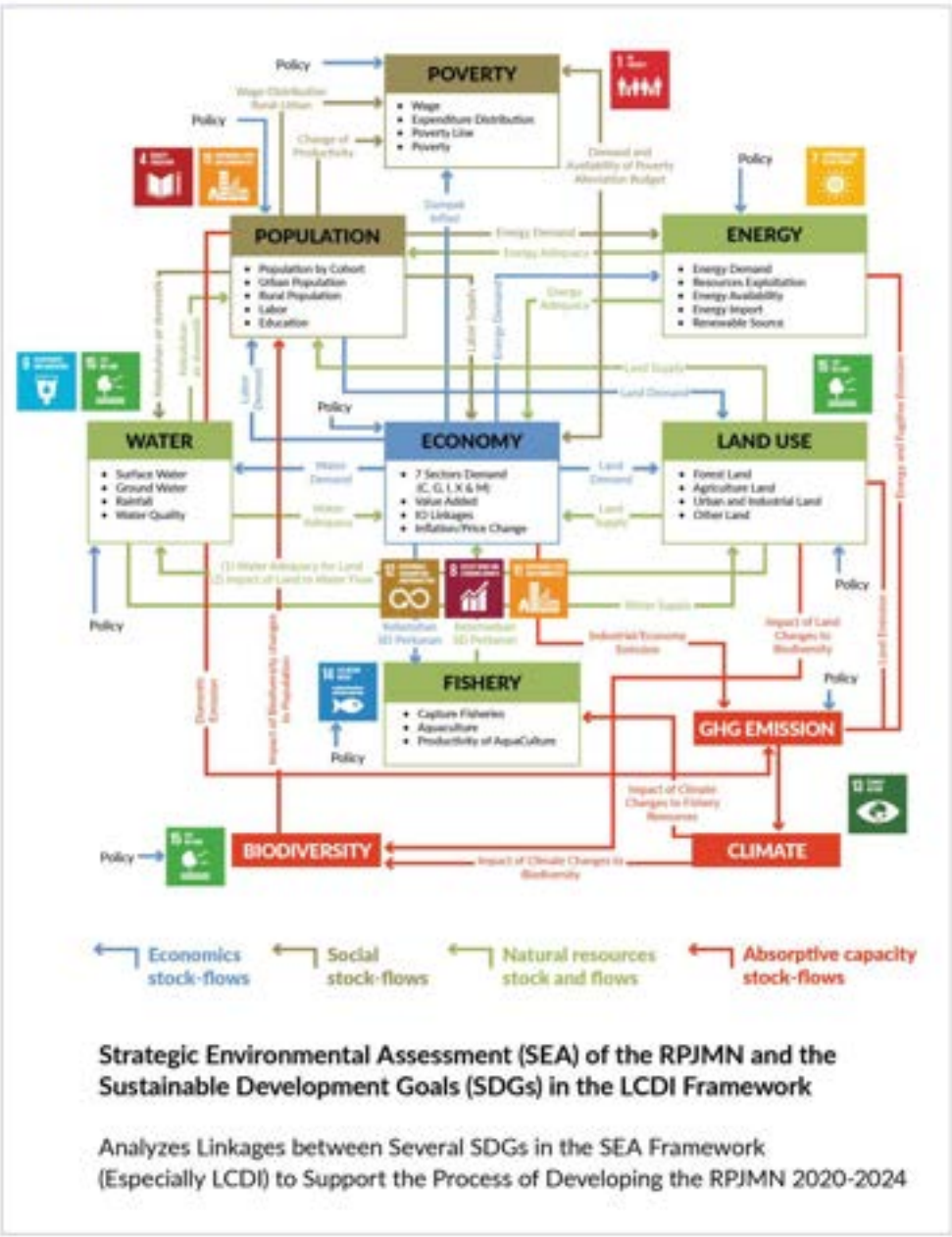
FIGURE 18: Relationships Between Policy, Human Activities and Carrying Capacity



Analyzes Linkages between Several SDGs in the SEA Framework (Especially LCDI) to Support the Process of Developing the RPJMN 2020-2024

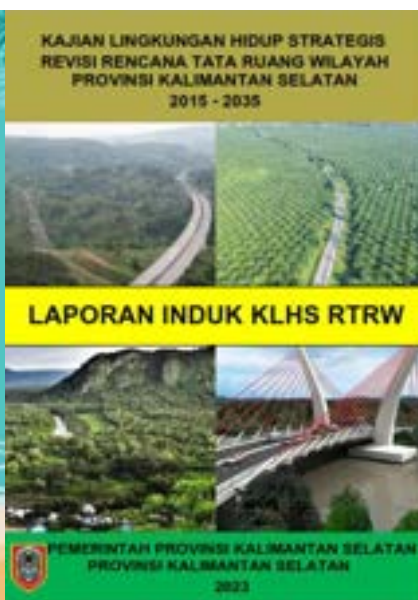
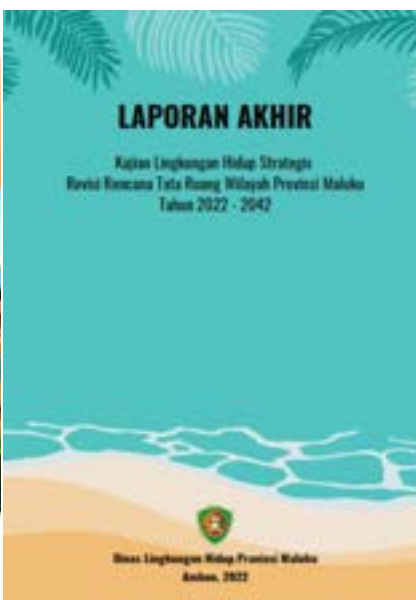
Source: Low Carbon Development: A Paradigm Shift Towards a Green Economy in Indonesia - Bappenas

FIGURE 19: A High-Level Representation of IV2045





# Examples of The SEA Reports at the National dan Sub National Level



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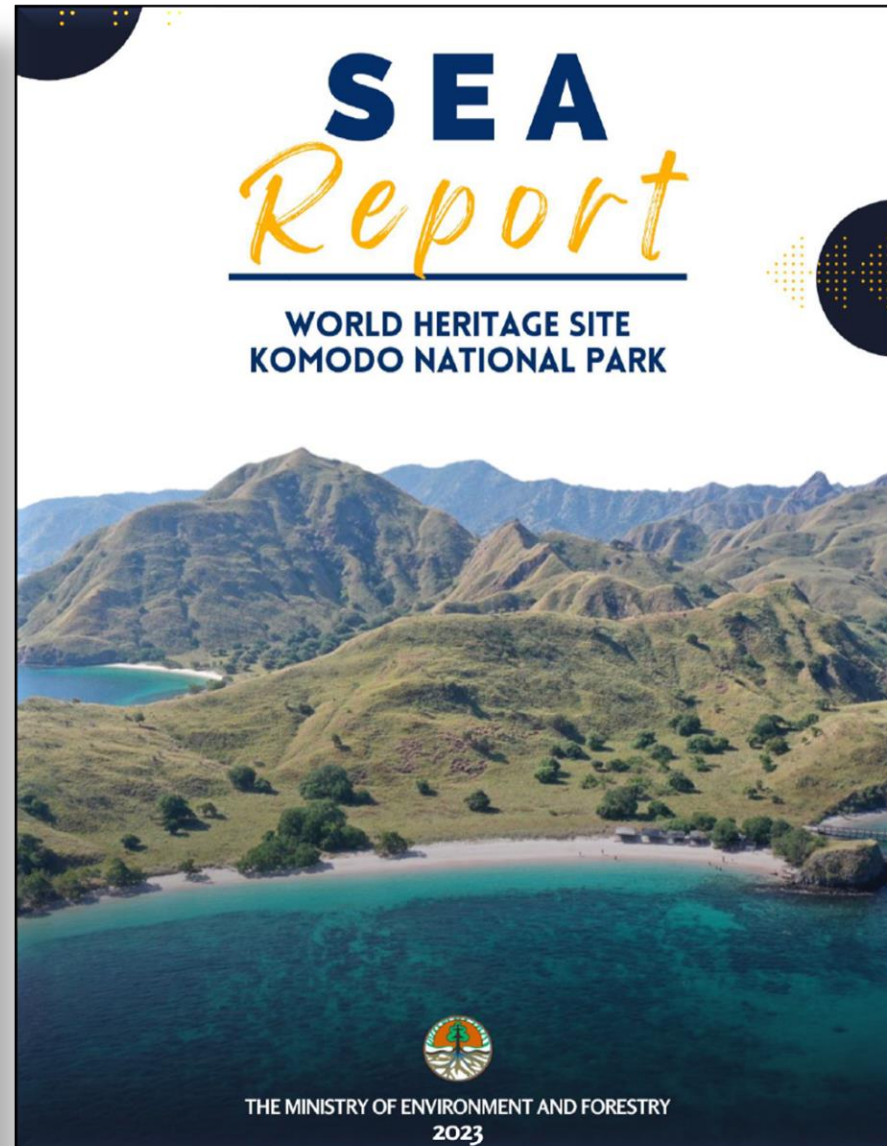
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# The SEA Reports for the World Heritage Sites Based [Tropical Rain Forest of Sumatera and Komodo] Based on the UNESCO Standard/Guideline





# Strategic Environmental and Social Assessment (SESA) of the Energy Transition Mechanism (ETM) in Indonesia



## FINAL SESA SCOPING REPORT

Strategic Environmental and  
Social Assessment (SESA) of the Energy  
Transition Mechanism (ETM)  
in Indonesia

### Box E.1: Best Practice Considerations for the Indonesia SESA

- Establish clear assessment goals and outcomes;
- Be integrated with existing policy and planning structures;
- Be flexible, iterative and customized to context;
- Analyse potential risks and impacts of ETM, its alternatives (including the do-nothing option), and other policies, plans and programs against a framework of environmental and social quality objectives (ESQO) at the earliest stage possible;
- Identify environmental and socio-economic impacts (positive and negative; direct, indirect and cumulative; trans-boundary and other unintended consequences) and propose mitigation measures for negative potential impacts and to enhance environmental and social benefits;
- Identify environmental and socio-economic opportunities and constraints;
- Address the linkages and trade-offs between environmental, social and economic considerations (and their relationship with economic concerns and drivers);
- Provide explicit justification for the selection of any preferred alternatives and the acceptance of significant trade-offs (e.g., between different sectoral policy objectives);
- Involve key stakeholders and encourage public involvement from the earliest moment possible and engaging them throughout the entire SESA process;
- Be transparent throughout the process, and clearly communicate the results to SESA stakeholders and other interests;
- Propose a mechanism for effective implementation of SESA recommendations through a Strategic Environmental and Social Management Plan (SESMP) which will set out measures for monitoring and follow up of outputs using indicators of success that allow for a flexible and adaptive response to management, and
- Provide opportunities to build capacity of SESA participants throughout the SESA process.

*Modified from Sadler and Verheem, 1996; Dalal-Clayton and Sadler, 2006 and OECD DAC, 2006*

The objective of the Indonesia SESA is to strategically assist and inform the GoI as early as possible to **integrate environmental, socio-economic and sustainability considerations** into the policy making, planning and decision-making processes for **ETM implementation in Indonesia**, prior to any project/asset-level decisions being made.

<https://fiskal.kemenkeu.go.id/docs/SESA-ENG.pdf>

# Environmental and Social Safeguards for Landscape & Project Sustainability

## Environmental Economic Instruments (IELH)

### Planning Stages

#### PPPs Planning

Spatial Plan i.e. Regency or Municipality Spatial Plan, Food Estate Development

SEA for the Spatial Plans, Development Plans and other PPP's have potential environmental impacts and risks

#### ENVIRONMENTAL SAFEGUARD at the LANDSCAPE Level

#### 1. SEA Report

#### Project Planning

#### ENVIRONMENTAL SAFEGUARD at The Project Level

#### EIA dan Environmental Standards

SEA: basis for developing detail *Environmental Safeguard* (EIA) at the Project Level

1. EIA and Environmental Approval;
2. Businesses Permits or the Government Approval

### Implementation Stages

#### Pra-Constructions

#### Constructions

#### Operation and Maintenance (OM) + Post Ops.

## Implementation and Compliance of *Environmental Safeguard*:

To Control Environmental Pollution and Degradation

a

- To Conserve Biodiversity,
- To Mitigate and Adapt Climate Change

b

To Maintain Carrying Capacity

c

To Create Sustainable Project (businesses and/or activities)

d

## Environmental Audits

1. The Environmental Management and Monitoring Implementation Report;
2. The Environmental Compliance Inspection Report;
3. Environmental Audit Documents



# Thank You



**Ministry of Environment and Forestry**  
**Directorate General for Forestry Planning and Environmental Governance**  
**Directorate of Environmental Impact Prevention of Sectoral and Regional Policies**

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Dit. Pencegahan Dampak Lingkungan  
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Direktorat PDLKWS