



**KGID
2025**

**Green Growth:
The Path to
Sustainable Jobs**

Peatland restoration Project and Korea's ODA Strategy in Forest Sector

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National Institute of Forest Science (NIFoS)



National Institute of Forest Science (NIFoS)

Forestry Experiment Station was founded under the Ministry of Agriculture and Forestry

1949

1967

Reorganized as Forestry Experiment Station under the Korea Forest Service

Renamed as Forestry Research Institute (FRI)

1987



2004

Reorganized and Renamed as Korea Forest Research Institute (KFRI)

2010



Hosted the 23rd IUFRO World Congress

Establishment of the National Forest Satellite Information Utilization Center

2024



MISSION

Research and Development of forest science and technology bringing the National Happiness and Virtuous Circle of Forest Value

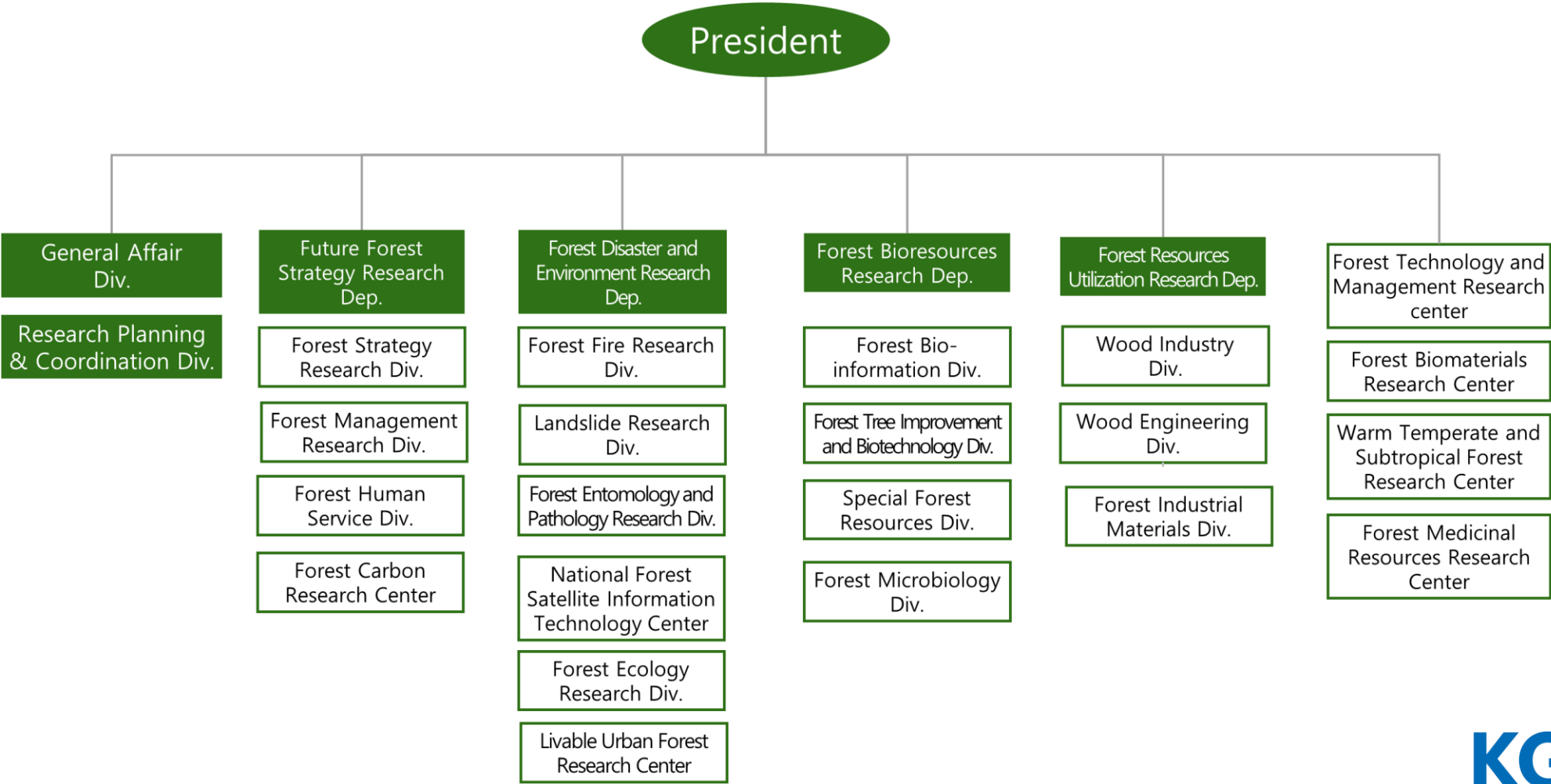


VISION

Research Institute for People by creating future value
with an innovative Science Technology

National Institute of Forest Science (NIFoS)

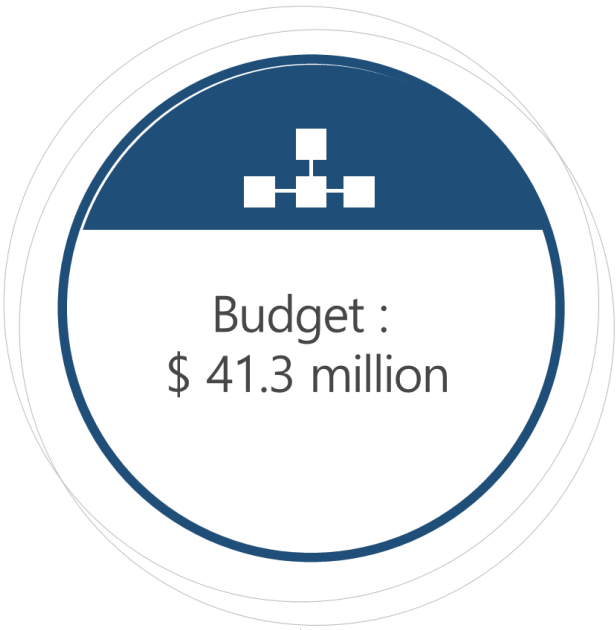
4 Departments, 16 Divisions, 3 Center and 4 Regional Center



National Institute of Forest Science (NIFoS)



- Security Guard : 36
- Administrative Assistant : 142
- Doctoral Master’s researcher : 87
- Academic training : 3



- Forest Science Research : \$29 million
- Forest Carbon Neutralization Research : \$ 3 million
- Agricultural • Forestry Satellite Utilization Research : \$ 4 million
- Climate change response and adaptation Research : \$ 2.86 million



- General research : 95
- Special research : 15

FOREST RESTORATION PROJECT :

WHAT IS THE PEATLAND?

Definition

- : Peatland is defined as a wetland in which peat, **a partially decomposed organic material, accumulates in a submerged anaerobic environment.**
- : Peatlands cover only 3% of the Earth's surface, but **store at least 55 billion Gt of carbon**, which is large enough to account for about 45% of the carbon stored in the world's soils.

Formation Process

- ① Lowlands are **submerged** due to overflow from rivers.
- ② **Dead organic matter** like leaves and roots was **accumulated** in the wetland and decomposed by microorganisms at a very slow rate in an oxygen-poor environment.
- ③ After a long period of time, **a peat layer is formed** (0.5 to 2 mm per year), and peat forest is formed above it. An area where a peat layer has accumulated at least 30 cm is considered as peatland.

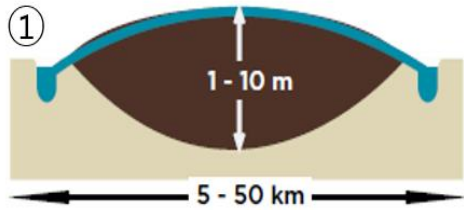


FOREST RESTORATION PROJECT :

WHAT IS THE PEATLAND?

Degraded Process

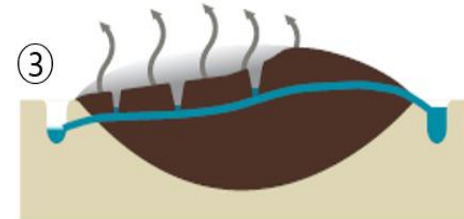
— Water table ■ Peat ■ Clay/Sand



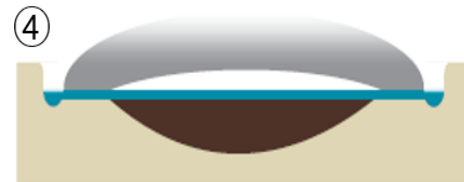
In **natural peat**, the height of the peat surface and the water table are similar.



If the peatland is **drained**, as the **groundwater level drops**, the peat exposed to the atmosphere is **rapidly decomposed** by aerobic microorganisms.



The **Surface** of the peatland was **subsided** due to the decomposition of the peat. Dry peat continues to be decomposed, making it more **vulnerable to fire** and **releasing a lot of CO₂**.



Finally, peatland is **degraded**.

Degradation Factors

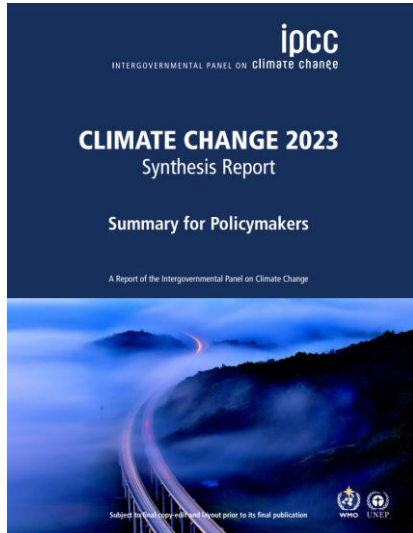
: **Artificial drainage** from conversion of peatlands to agricultural and industrial plantations

Problems

- : **Large-scale fire** in peatlands (850,000 ha damage in 2019)
- : Public **health** concerns, **environmental** and **economic** damage, and **diplomatic conflicts** due to cross-border **haze**



WHY IS PEATLAND IMPORTANT?

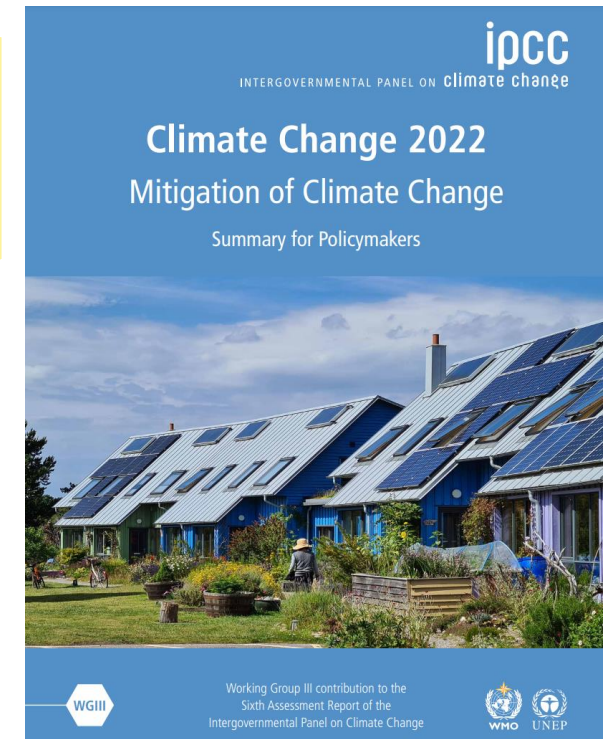


B.6.4 Mitigation options often have synergies with other aspects of sustainable development, but some options can also have trade-offs. There are potential synergies between sustainable development and, for instance, energy efficiency and renewable energy. Similarly, depending on the context⁴⁸, biological CDR methods like reforestation, improved forest management, soil carbon sequestration, peatland restoration and coastal blue carbon management can enhance biodiversity and ecosystem functions, employment and local livelihoods.

Peatland is Carbon Stock.

: Peatlands can store carbon **ten times** as much carbon as mineral soil.
As peatlands serve as **effective carbon storage**, preserving and restoring peatlands is of great global significance.

C.9.1 The projected economic mitigation potential of AFOLU options between 2020 and 2050, at costs below USD100 tCO₂-eq⁻¹, is 8-14 GtCO₂-eq yr⁻¹ [FOOTNOTE 61] (*high confidence*). 30-50% of this potential is available at less than USD20/tCO₂-eq and could be upscaled in the near term across most regions (*high confidence*). The largest share of this economic potential [4.2-7.4 GtCO₂-eq yr⁻¹] comes from the conservation, improved management, and restoration of forests and other ecosystems (coastal wetlands, peatlands, savannas and grasslands), with reduced deforestation in tropical regions having the highest total mitigation. Improved and sustainable crop and livestock management, and carbon sequestration in agriculture, the latter includes soil carbon management in croplands and grasslands, agroforestry and biochar, can contribute 1.8-4.1 GtCO₂-eq yr⁻¹ reduction. Demand-side and

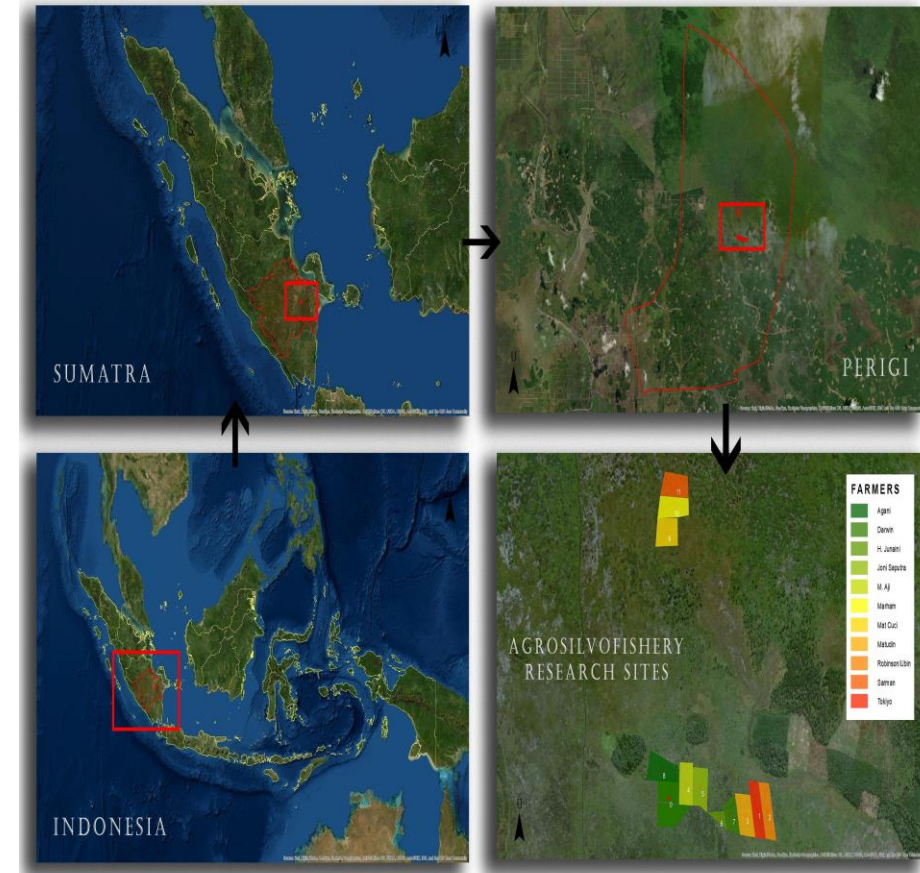


Source: IPCC (2022) Climate Change 2022: Mitigation of Climate Change. Summary for Policymakers /
IPCC (2023) Climate Change 2023: Synthesis Report. Summary for Policymakers

WHAT IS GOING ON THIS PROJECT?

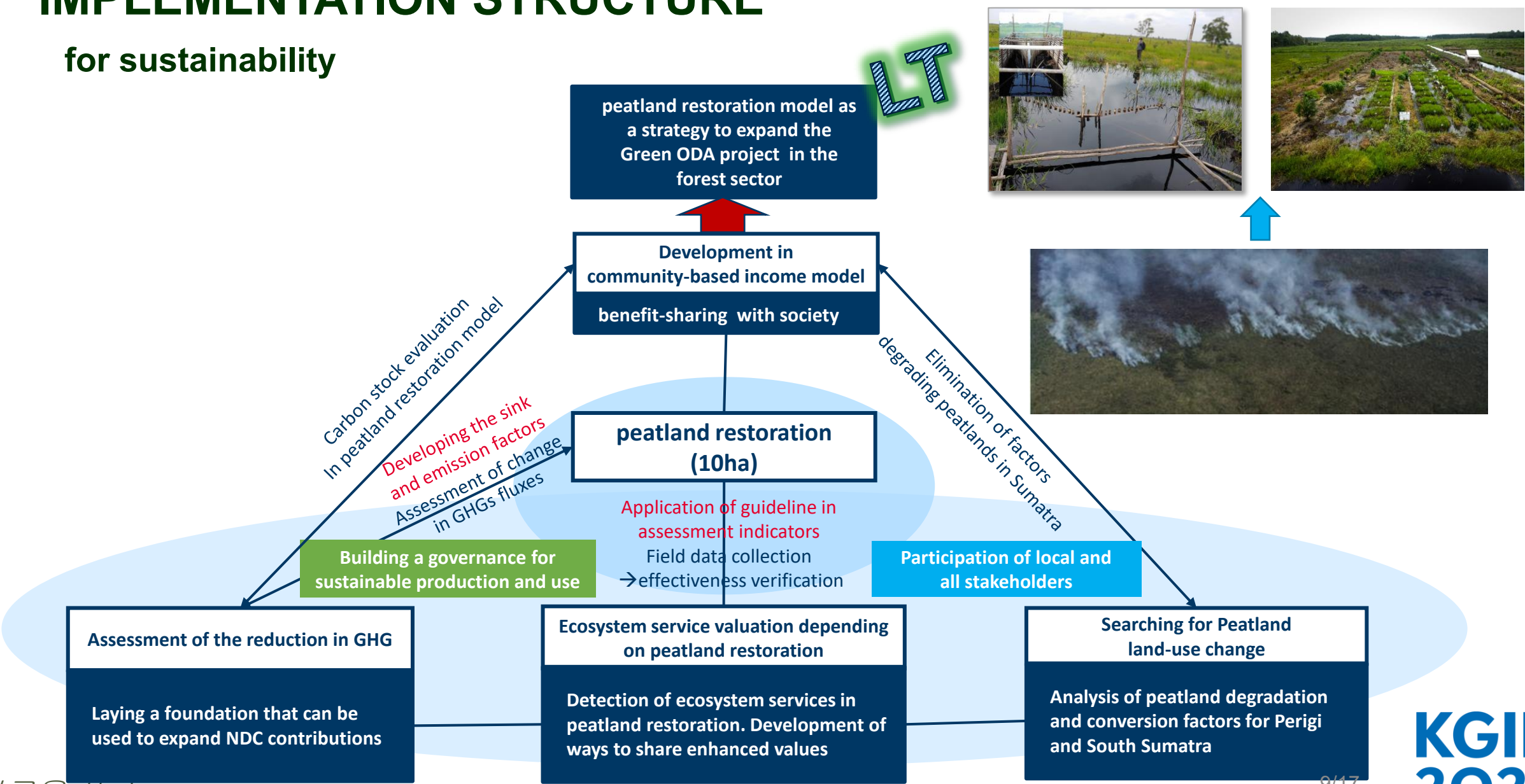
R&D ODA Project supported by the Korea government (NIFoS)

- 🌿 *Project period: 2021 ~ 2030 (10 years)*
- 🌿 *Project site: Perigi village, South Sumatra, Indonesia*
- 🌿 *Cooperation with NIFoS, CIFOR-ICRAF, Sriwijaya Univ. BRIN, KIFC, etc.*
- 🌿 *Implementation Stages of Project*
 - Stage 1 (2021~2022) : Restoration(10 ha), Joint Research, Capacity-building
 - Stage 2 (2023~2027) : Development of community-based income models
 - Stage 3 (2028~2030) : Technology transfer & sustainable management of developed income model



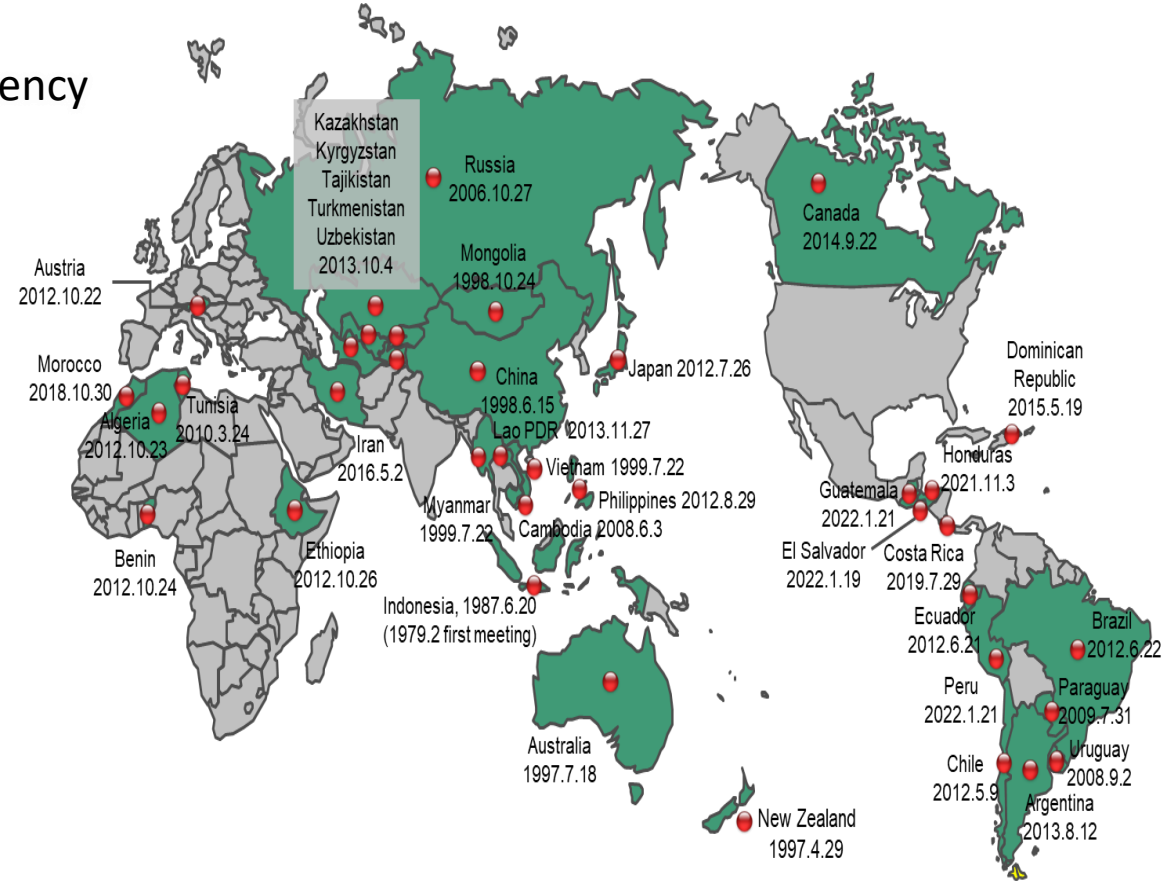
IMPLEMENTATION STRUCTURE

for sustainability





ODA and FOREST and FORESTRY SECTOR

- Changes in the global status of the Republic of Korea
 - 1991 Establishment of **Korea International Cooperation Agency**
 - 1999 **Ceasing ODA recipient status (about US\$12 billion)**
 - 2010 Join as the 24th member of OECD DAC
 - ~2020 Donation US\$2.2 billion, 2010~2020 10.2% increase rate
- Bilateral Cooperation by **Korea Forest Service** : **39** countries (~2024.12)
 - Started from Asian region, to Latin America & African countries
 - Transfer greening technology : **ODA, Loan**
※ **0.32% of Korean ODA**



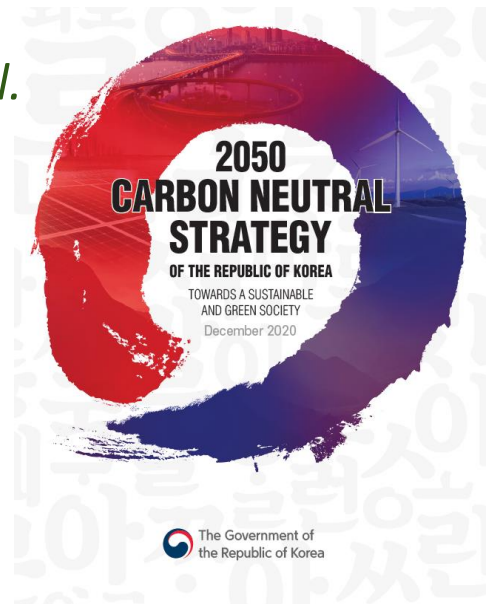
WHAT IS THE GREEN ODA?

GREEN ODA is about contributing to a “win-win green recovery” while addressing climate change in developing countries

-  The government of the Republic of Korea has adopted the **“Green New Deal ODA Promotion Strategy”** to support climate change action and expand green ODA ('21. 7)
-  **Green New Deal ODA** encompasses a wide range of sectors focusing on ‘low carbon’, ‘green growth’ and ‘carbon neutrality’ to achieve a comprehensive goal.
<This is an “Opportunity for the Forest Sector!!”>

The **sub-strategies** to achieve **Green ODA**:

- **(Strategy 1)** Strengthening support for green transition in developing countries,
* Increase the share of Green New Deal ODA: (average of '15~'19) 19.6% → ('25) 28.1%
- **(Strategy 2)** Leading the global Green New Deal,
- **(Strategy 3)** Expanding win-win partnerships



WHAT IS THE STRATEGIC GREEN ODA?



「2023 Comprehensive Action Plan for International Development Cooperation」 also emphasizes promoting the goal of ‘Strategic Green New Deal ODA’ in ‘ODA for Global Coexistence and Mutual Prosperity’.

- *The direction of implementing Strategic Green New Deal ODA clearly states that projects actively support the climate change mitigation in developing countries, such as reducing GHG emissions and achieving carbon neutrality.*
- *Emphasize using ODA for additional support (Technology Transfer, Capacity Building, etc.), when promoting cooperative projects to address climate change in developing countries and to secure national GHG emission reductions.*



「The Strategy for Promoting International GHG Reduction Projects」 proposes to implement the Green New Deal ODA as a mechanism to recognize the results of GHG reduction activities overseas and to utilize it as a ‘Supplement’ to achieve the National GHG Reduction Target(NDC).

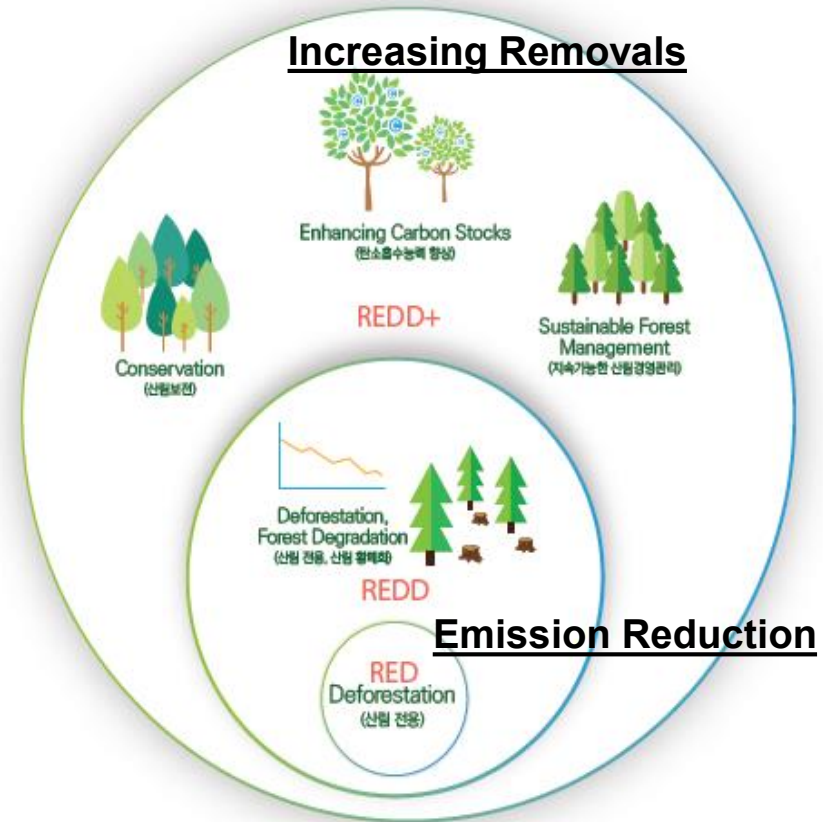
BACKGROUND ON REDD+

Reducing Emissions
from Deforestation and forest degradation
and the role of conservation,
sustainable management of forests and enhancement
of forest carbon stocks
in Developing countries

RED

REDD

+



The Way of Strategic Green ODA in the Forest Sector

As a strategic Green New Deal ODA best practice in the forest sector,
We propose a plan to utilize **REDD+** based on Articles 6.2 (cooperative approach) and 6.8 (non-market approach) of the Paris Agreement,

- Art. 5(**REDD+**): the **JMA**(Joint Mitigation & Adaptation) **approach**

- **Mitigation & REDD+**
* Art. 6.2(cooperative approach) & 6.4(a mechanism)

Mitigation

- **Adaptation & REDD+**
* Art. 6.8(non-market approach)

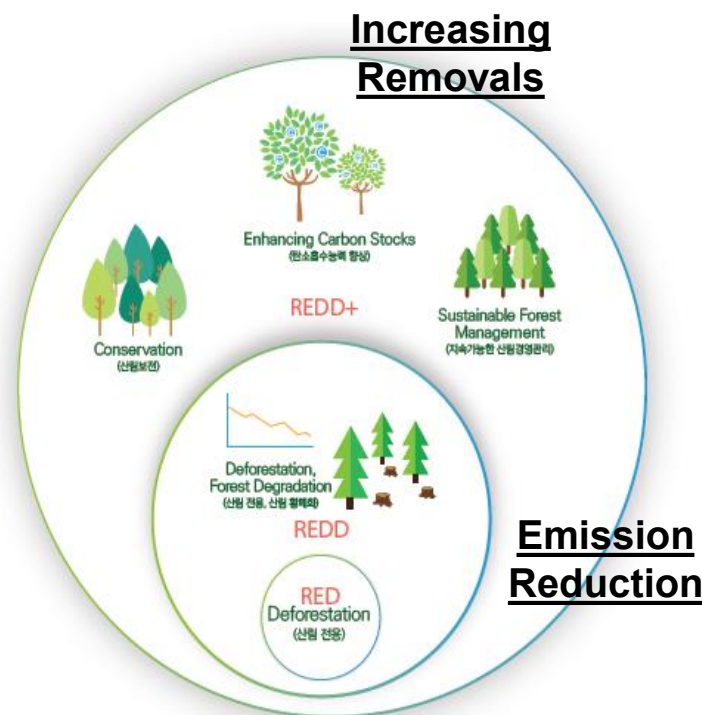
Adaptation

Finance

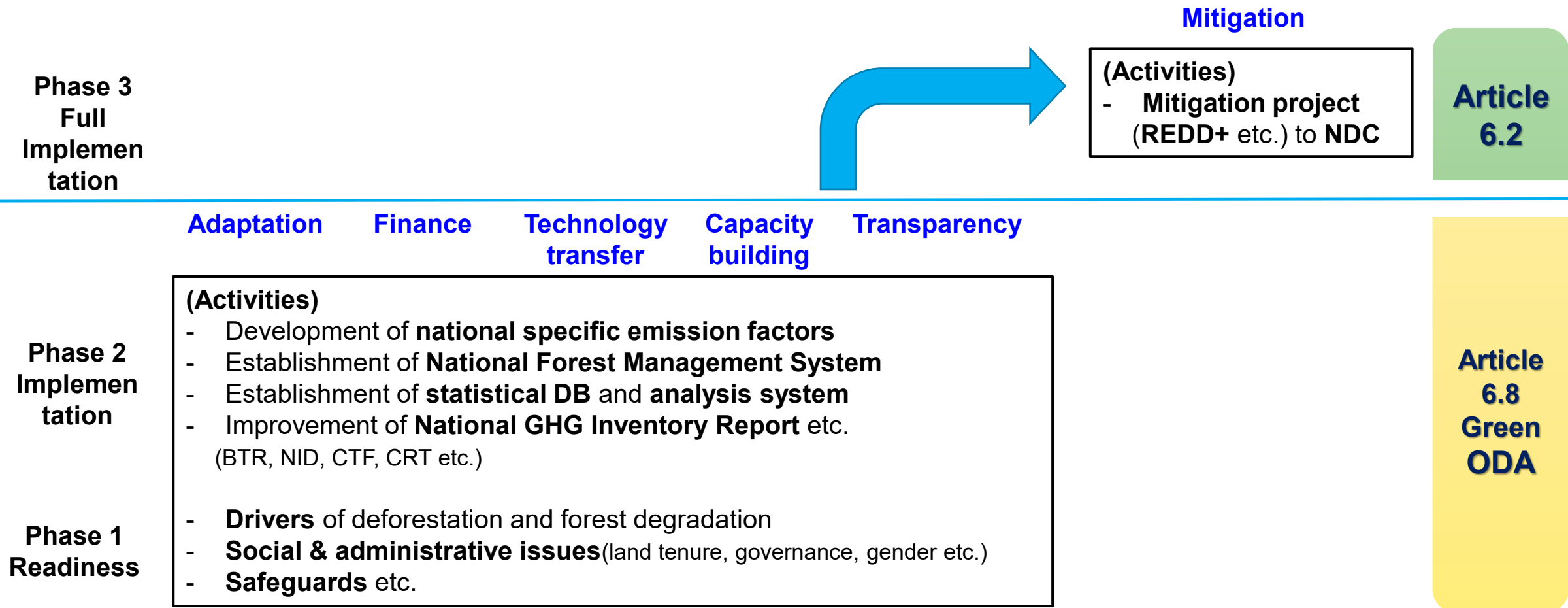
Technology transfer

Capacity building




Transparency



2-STEP APPROACHE OF REDD+



LESSON AND LEARNT, SUGGESTION

-  The important thing about peatland restoration is that it should be with people living in forest. This is the success requirement of the ODA project, and it linked to [sustainability](#).
-  GREEN ODA is about contributing to a “[win-win](#) green recovery” while addressing climate change in developing countries. When we engage in international development cooperation that considers mutual prosperity, the forest sector can be a good solution.
-  Government funding is an important, but public funding alone will not be enough to deliver forest that are functioning healthy of ecosystem, so investment is crucial.

: 2-STEP APPROACH OF REDD+ : investment (Article 6.2) + Green ODA (Article 6.8)

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Thank you !

