



# **ROLE OF MANGROVE ECOSYSTEMS IN ADDRESSING CLIMATE CHANGE MITIGATION AND ADAPTATION IN INDONESIA**

**DR. NUR MASRIPATIN**

**DIRECTOR GENERAL OF CLIMATE CHANGE**

**MINISTRY OF ENVIRONMENT AND FORESTRY, INDONESIA**

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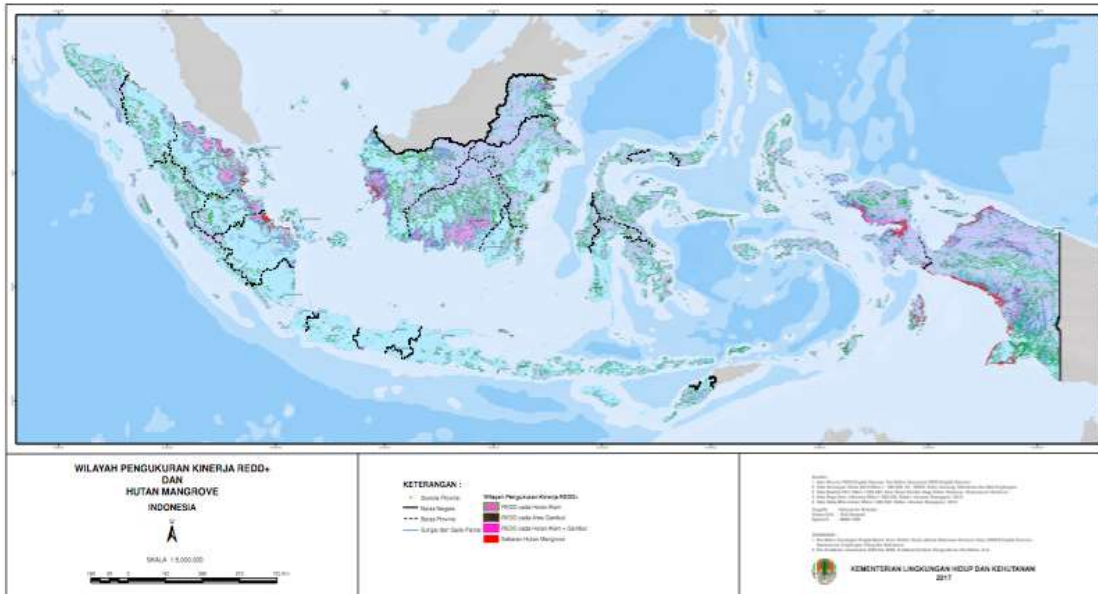
# **CC MITIGATION AND ADAPTATION AFTER RATIFICATION OF THE PARIS AGREEMENT (UU 16/2016)**

- ❑ Implementation of PA through NDC (mitigation and adaptation under 4 pillars : emission reduction, economic growth, climate resilience, equal opportunity for development),**
- ❑ Mitigation target : emission reduction of 29 % (unconditional) - 41 % (38 %) conditional,**
- ❑ Adaptation target : economic resilience, social and livelihood resilience, ecosystem and landscape resilience.**
- ❑ Forest plays important roles in Indonesia's economy, social and environmental protection.**

# **ROLE OF MANGROVE**

- ❑ With 2.9 million ha of mangrove, Indonesia has been recorded as the home of the largest mangrove area (~ about 30 % of the total mangrove area in the world),**
- ❑ Although Indonesia's NDC has not quantitatively stated the role of mangrove in the emission reduction target, the target from forestry sector covers all forest area including mangroves,**
- ❑ Mangrove ecosystems also play an important role in adaptation under NDC.**

# MANGROVE ECOSYSTEMS IN THE CONTEXT OF NDC MITIGATION



- Total forest area ~ 128 million ha :
- ◆ ~ 113.2 million ha natural forest in 1990, used to construct FREL – REDD+ (~ 60% of the total country land areas)
  - ◆ ~ 96.6 million ha natural forest in 2012, as REDD+ area

**Most recent data on mangrove (MoEF, 2016) :**

**Total mangrove area : ~ 2.9 million ha**

◆ ~ 2.8 million ha in REDD+ areas

◆ ~ 0.1 million ha in non-REDD+ area

# MANGROVE ECOSYSTEMS IN THE CONTEXT OF NDC ADAPTATION

Ecosystem and Landscape Resilience : integrated, landscape-based approach in managing the terrestrial, coastal and marine ecosystems.



MANGROVE ECOSYSTEM



Ecosystem and Landscape Resilience



Social and Livelihood Resilience



Economic Resilience



# CLOSING REMARKS

- Mangrove forest covers only about 3 % of the total forest areas in Indonesia, but is recorded as the largest mangrove area in the world.
- Science has shown the role of mangrove ecosystems in CC mitigation and adaptation.
- For Indonesia, mangrove is not only about CC mitigation and adaptation, but also has a significant livelihood component, utilized in economic activities, and needed for coastal area's protection. Mangrove is also under threat because of increasing demand for development in the coastal areas.
- Considering the scale of mangrove in Indonesia and also in the world, to protect mangrove, we need to see (and communicate as a package) mangrove as a unique ecosystem with multi dimension of functions/used and the risks for not protecting mangrove ecosystem.

# TERIMA KASIH (THANK YOU)



***passion & integrity***

[nurmasripatin@gmail.com](mailto:nurmasripatin@gmail.com)

<http://ditjenppi.menlhk.go.id>