



Synergy of adaptation and mitigation of forests against climate change through sustainable forest management

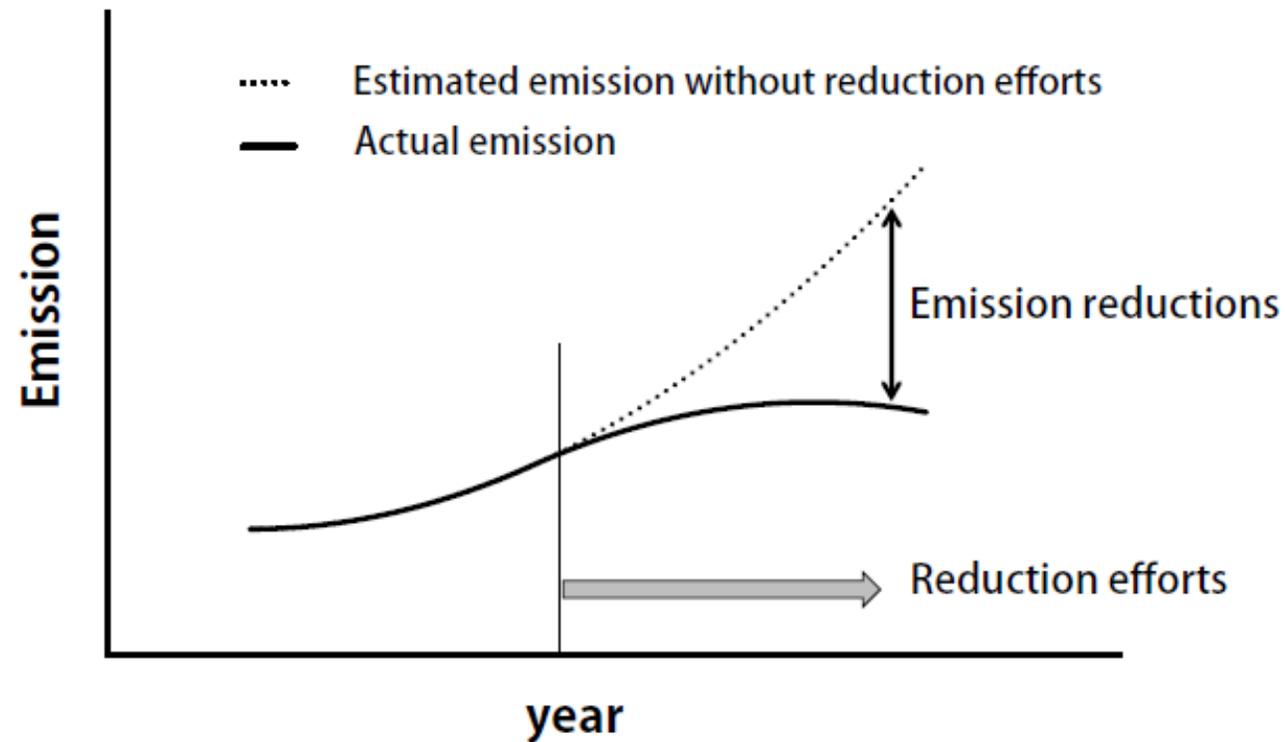
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Mitigation

According to the IPCC Special Report on Climate Change and Land, activities in the agriculture, forestry, and other land use sector (AFOLU) account for 23 percent of total net anthropogenic emissions of greenhouse gases.

The IPCC identifies REDD+ as the activity with the largest potential for reducing AFOLU emissions.

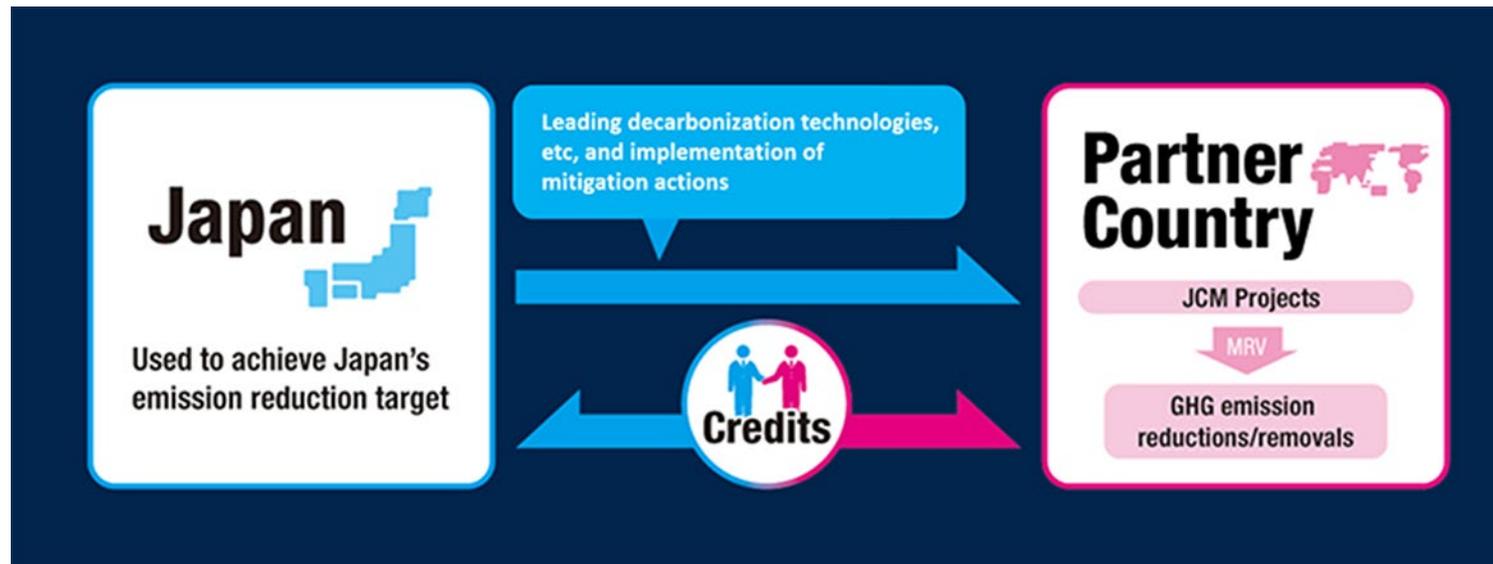
Concept of Emission Reduction in REDD+



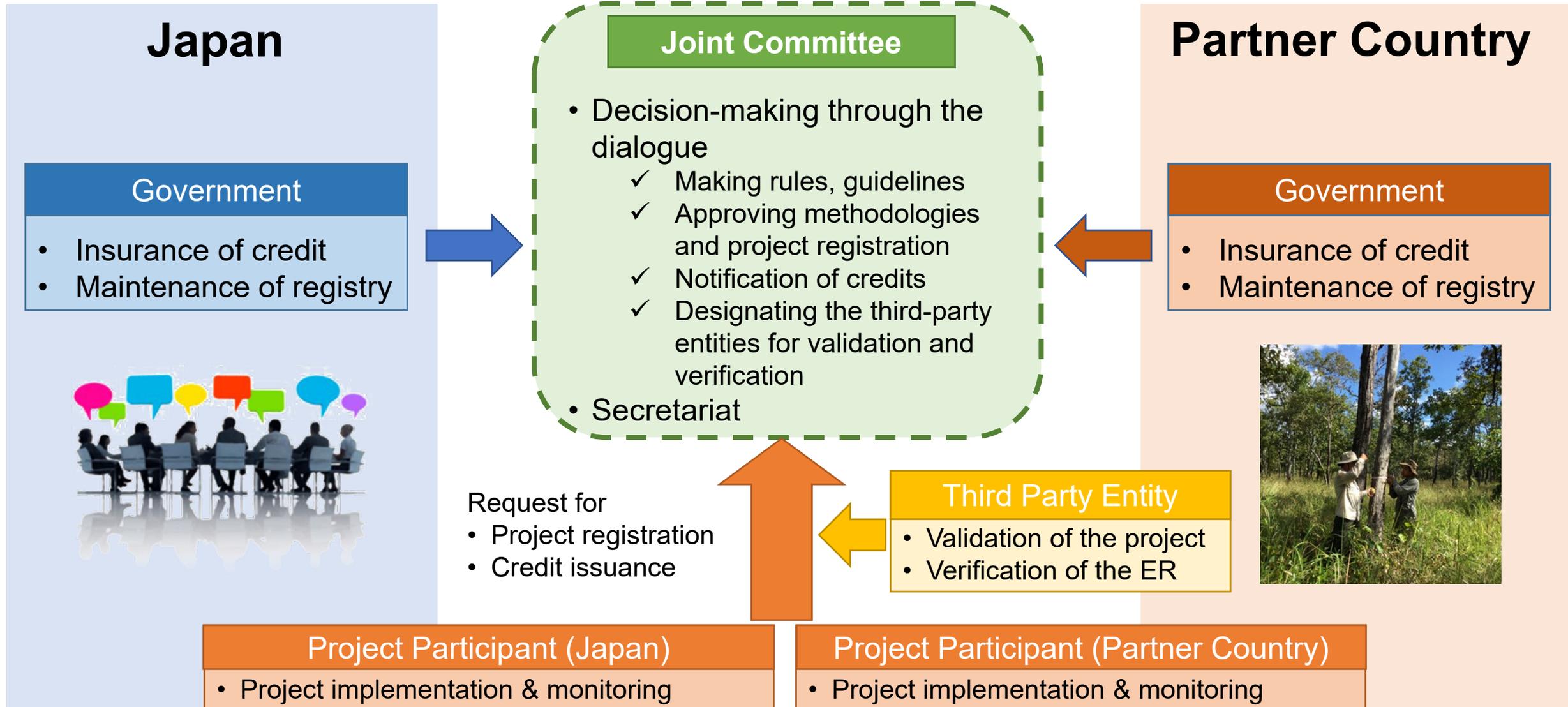
- The basic concept of REDD-plus is to provide economic incentives such as funding or credits to developing countries for REDD activities and "plus" activities.
- To quantify reductions in CO₂ emissions due to REDD-plus activities, compared with the case where no REDD-plus activities are undertaken, a reference emission level and a reference level have been established.

What is JCM ?

JCM (Joint Crediting Mechanism), a pioneering mechanism under Article 6, Implements mitigation actions, and contributes to the sustainable development in Partner countries.



Structure of the JCM

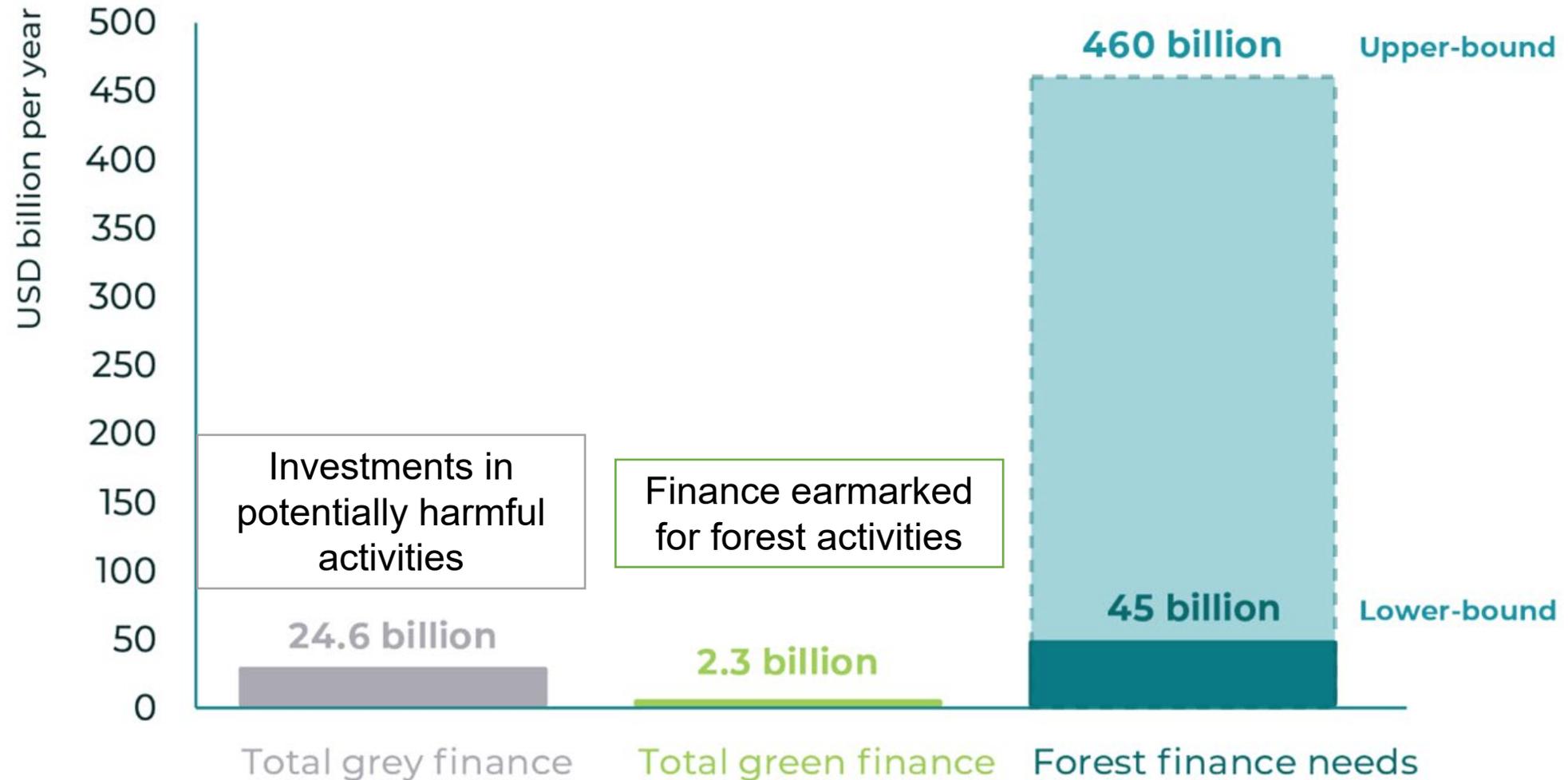


JCM and REDD+

- **R**EDD+ is one of the potential sector of the JCM.
- **J**apan contributes to reduce deforestation and forest degradation in the Partner Countries, through JCM-REDD+ projects.
- **T**he credits are generated through Measurement, Reporting and Verification(MRV) of the GHG emission reductions or removals achieved by the projects.
- **C**redits will be shared depending on the contribution.



Even if all grey public finance flows were redirected to green, finance totals would still fall woefully short of the total finance needed to protect forests.



Adaptation

Increase in landslides and storm surge damage due to climate change

“ It is **unequivocal** that human influence has warmed the atmosphere, ocean and land.”(IPCC AR6)

Increasing intensity and frequency of torrential rains, very low pressure cyclones, and typhoons due to the manifestation of extreme phenomena

Effective countermeasures against slope hazards and storm surge damage are a common **global challenge**

Recent **unregulated** land use changes in mountainous and coastal areas have caused serious damage





Necessity of disaster prevention and mitigation by utilizing the functions of forests

During the period of economic growth, traditional land use rules were neglected and land use was **expanded** to areas with high disaster risk, resulting in more frequent disasters

Early introduction of erosion control technology and conservation measures to prevent and mitigate storm surge damage will be **cost effective** in terms of investment in the future.

Only a few international projects on disaster prevention and mitigation utilizing forest functions

World Bank

2001-2021

							Unit: USD million	
All contracts	Amount	Forest	Amount	Disaster	Amount	Forest + Disaster	Amount	
1. China	50,119.3	1. Russia	78.8	1. Bangladesh	409.6	No contract	n/a	
2. India	28,817.8	2. Internat. Org.	56.1	2. India	262.4		n/a	
3. Brazil	11,149.6	3. Congo Dem.	46.9	3. Viet Nam	124.9		n/a	
4. International Organization	8,758.8	4. Uruguay	40.0	4. China	74.4		n/a	
5. Turkey	7,326.7	5. Argentina	37.7	5. Cambodia	71.0		n/a	

Source: World Bank, 2022 [1]. Author's calculation. **Period: 2001-2021**. As of March 2022.

[1] <https://finances.worldbank.org/Procurement/Major-Contract-Awards-Prior-reviewed-since-FY-2001/4bhp-2q7b>

Asian Development Bank (ADB)

2017-2022

							Unit: USD million	
All contracts	Amount	Forest	Amount	Disaster	Amount	Forest + Disaster	Amount	
1. India	15,035.9	1. China	71.6	1. Indonesia	1,000.0	1. UK	0.1	
2. China	12,353.6	2. Philippines	15.4	2. Philippines	500.7	2. Mongolia	0.1	
3. Philippines	9,181.4	3. Indonesia	12.6	3. Nepal	124.9			
4. Indonesia	8,936.0	4. Pakistan	8.6	4. Pakistan	80.7			
5. Pakistan	6,035.2	5. Mongolia	3.6	5. Tonga	24.1			

Source: ADB, 2022 [1]. Author's calculation. **Period: 2017-2022**. Based on contract amounts.

[1] Operational Procurement Database 2017-2022. <https://data.adb.org/dataset/operational-procurement-database>

Synergy of adaptation and mitigation of forests

- **E**xpect projects to contribute to adaptation and mitigation measures, given the limited amount of funds that can be spent on forest conservation
- **O**ne **way** is to utilize REDD+ credits
- **H**owever, it is **difficult** to create synergies between adaptation and mitigation
- **A**daptation requires afforestation and conservation in areas with **high** disaster risk
- **R**EDD+ projects should **avoid** implementation in areas with high disaster risk



Concluding remarks

- **S**tart with what we **can do**.
- **M**angrove plantations are **relatively low-risk** and synergistic
- **P**roper land use management, including afforestation, can lead to synergies in mitigation and adaptation, as well as **national development**.
- **Additional risks** associated with climate change, however, need to be taken into account.



Thank you for your attention

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