Intensive Lecture for Department of Global Agricultural Sciences
Graduate School of Agriculture and Life Science, The University of Tokyo
27 October 2018

WILL
REDD+

Reducing Emission from Deforestation and Degradation Plus (REDD+)

WORKS IN DEVELOPING COUNTRIES?
A historical process for gaining REDD+ implementation in Indonesia

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Self Introduction

- **Name**   : Arief Darmawan
- **Place/date of birth**   : Bogor, Indonesia/ July 1st,1979
- **Education**
  - Bachelor of Forestry : Bogor Institute of Agriculture (IPB) (2002)
  - Master of Science   : GAS, The University of Tokyo (2006)
  - Doctor of Philosophy : GAS, The University of Tokyo (2009)

- **Research interest**   :
  - Forest Biomass Inventory
  - Landscape Ecology and Habitat Analysis
  - Environmental Spatial Analysis (GIS & Remote Sensing)

- **Employment**   :
  - GIS *officer*, WWF Indonesia (2003)
  - Lecturer, Dept. of Forestry, Lampung University Indonesia (2008 -present)

- **Secondment**   :
  - Secretary of MRV Working Group, REDD+ Task Force, President's Delivery Unit for Monitoring and Oversight of Republic Indonesia (2010 – 2013)
  - Associate Director for Measurement, Reporting and Verification (MRV), *ad-hoc* REDD+ Agency of Republic of Indonesia (2013 – 2015 until the agency was joined with MoEF)
  - Member of REDD+ technical expert panel for Directorate General of Climate Change, Ministry of Environment and Forestry (MoEF) of Republic of Indonesia

- **Motto**   :
  - Do what you love and love what you do ….

POINT OF DISCUSSION

Part I

I   REDD+ and Climate Change

II   What do we need for REDD+ to work?

Part II

III   Opportunity and Challenge for REDD+ implementation in developing countries

IV   Historical process, current status and way forward of gaining REDD+ Implementation in Indonesia

REDD+

The UN Framework Convention on Climate Change (UNFCCC) introduced forest based mitigation actions that includes **(1)** reducing emissions from deforestation and **(2)** forest degradation, and **(3)** the role of conservation, **(4)** sustainable management of forests, and **(5)** enhancement of forest carbon stocks in developing countries (REDD+) as an international fund- or credit-based mechanism for reducing Greenhouse Gas (GHG) emissions and protecting forest ecosystems
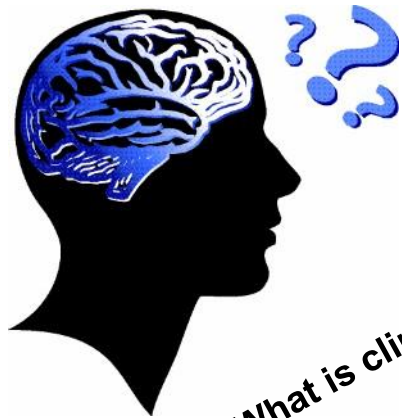
What is climate change ?

What is greenhouse gas?

Forest degradation?

Why there should be a plus?

Credit- or fund-based mechanism?

Is REDD+ a project? What kind of project is that?

Forest carbon stock?

Does reducing deforestation relate to climate change? How come?

I just know that UNFCCC is dealing with climate change…

Can local people get annoyed with this project?

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(2001)

AR3 → CO2 emissions from deforestation and forest degradation in developing countries have a large impact on the global carbon cycle

AR4
(2007)

→
- 80 % of CO2 was emitted by fossil fuel combustion and cement production, and that the remaining 20 percent was emitted as a result of land-use changes such as deforestation
- 65% of the total mitigation potential in the forestry sector is located in the tropics and about 50% of the total could be achieved by reducing emissions from deforestation
- REDD-plus activities not only mitigate climate change, but also contribute to the livelihoods of indigenous people and other members of local communities by protecting biodiversity and conserving the ecological services provided by healthy forest ecosystems, such as forest products, water resources, and environmental quality.
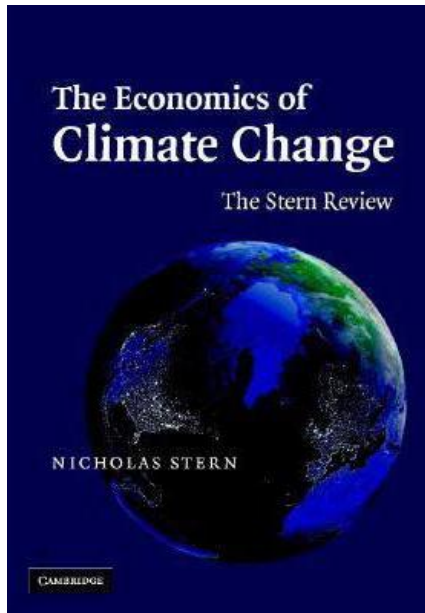
→ Stern Review has emphasized that reducing deforestation is a highly cost-effective way of reducing greenhouse gas (GHG) emissions

The Economics of
Climate Change
The Stern Review

NICHOLAS STERN

CAMBRIDGE

Stern review on the economics of climate change (2007).
Cambridge University Press, 211-238

COP 11, 2005

Papua New Guinea and Costa Rica jointly presented a proposal called "Reducing emissions from deforestation in developing countries: approaches to stimulate action."

The proposal was adopted into agenda by Subsidiary Body for Scientific and Technological Advice (SBSTA), is referred to as REDD – reducing emissions from deforestation in developing countries

COP 13, 2007

The proposal was broadened. REDD should also include mechanisms for the conservation and sustainable management of forests and enhancement of forest carbon stocks (the "plus" in REDDplus)
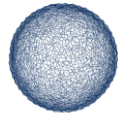
COP 15, 2009

The necessity of early development of the REDD+ framework including a financing mechanism was noted in the Copenhagen Accord

Agreed to use the latest IPCC guidelines to establish a **forest monitoring system** at national or subnational levels that uses a combination of **remote sensing** with a **ground-based inventory**, and to take into account each respective **country's** historical and present **circumstances** to establish **reference level** to serve as standards against which to evaluate actions. This agreement is the basis of the current REDD+ technical methodology
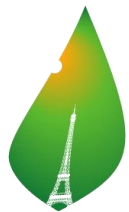
COP 16, 2010

Basic framework (requirement) for REDD+ implementation, which includes five targeted activities, a **phased approach**, and consideration of **safeguards**, was fully recognized. Cancun Agreement is the basis of REDD+

COP 19, 2013

Seven decisions on REDD+ "Warsaw Framework on REDD-plus".

1. Finance, work program on result-based finance to accelerate the full implementation of the activities
2. Coordination and Institutional Affairs (National Entity), coordination of support for the implementation of activities in relation to mitigation actions in forestry sector conducted by developing countries, including institutional arrangements
3. Reference Emission Level (REL) / Reference Level (RL), guidelines and procedures for technical assessment of submissions from parties on proposed forest reference emission levels and/or forest reference levels.
4. Measurement, Reporting and Verification (MRV), Modalities to conduct measurement, reporting and verification.
5. National Forest Monitoring System (NFMS), modalities for national forest monitoring systems including transparency of data and sub-national monitoring.
6. Drivers of Deforestation and Forest Degradation (Drivers of DD), addressing the driver of deforestation and forest degradation by encouraging every stakeholder.
7. Safeguards Information System (SIS), the timing and frequency of presentations of the summary of information regarding the process of addressing and respecting the safeguards referred to in decision 1/CP.16, appendix I.

With these decisions the overall framework for REDD+ implementation appears to be complete, although many details still need to be provided.

COP 21, 2015

The UNFCCC rulebook on REDD+ was completed. Paris Agreement, in which the Article 5, give acknowledgement for the role of forest and strong political signal for the full implementation of REDD+ through result-based payment.

- COP-13 Bali stated that in preparation for the REDD+ implementation was to process development of Demonstration Activities (DA).
- While REDD+ negotiation is on-going under the UNFCCC, early implementation of REDD+ is required.
- The existence of the DA expected to deliver lesson learn and knowledge transfer to the initiatitive in prepare the REDD+ implementation. DA taking into account Multilateral, Bilateral and Voluntary Efforts
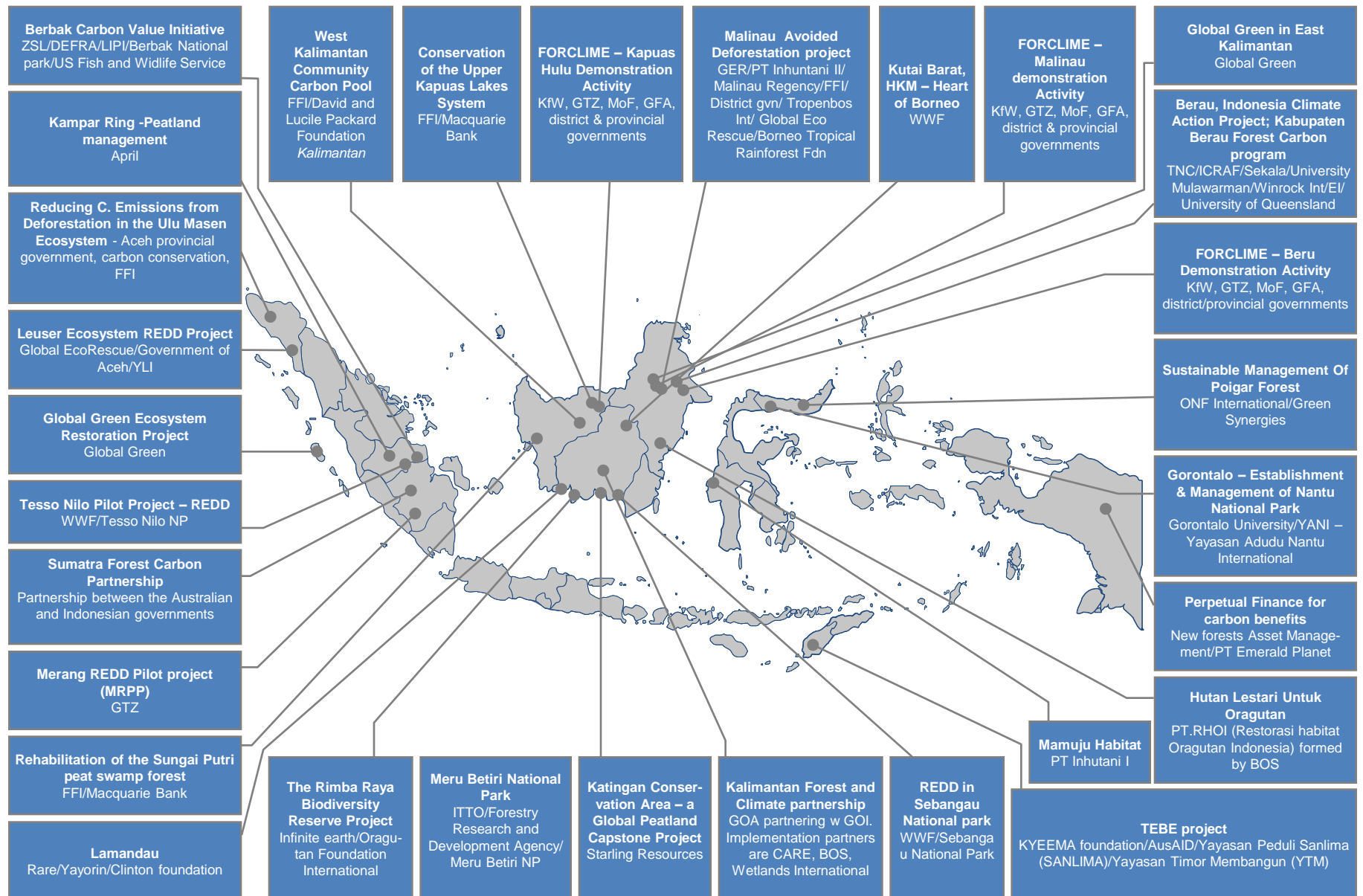

Bilateral Cooperation
- REDD+ Partnership, Indonesia – Norway
- IJ-REDD Project, Indonesia – Japan
- GIZ Forclime, German – Indonesia
- IAFCP, Indonesia – Australia

Multilateral Cooperation
- World Bank Forest Carbon Partnership Facility (FCPF)
- UN-REDD

Voluntary mechanism
- Verified Carbon Standard (VCS)
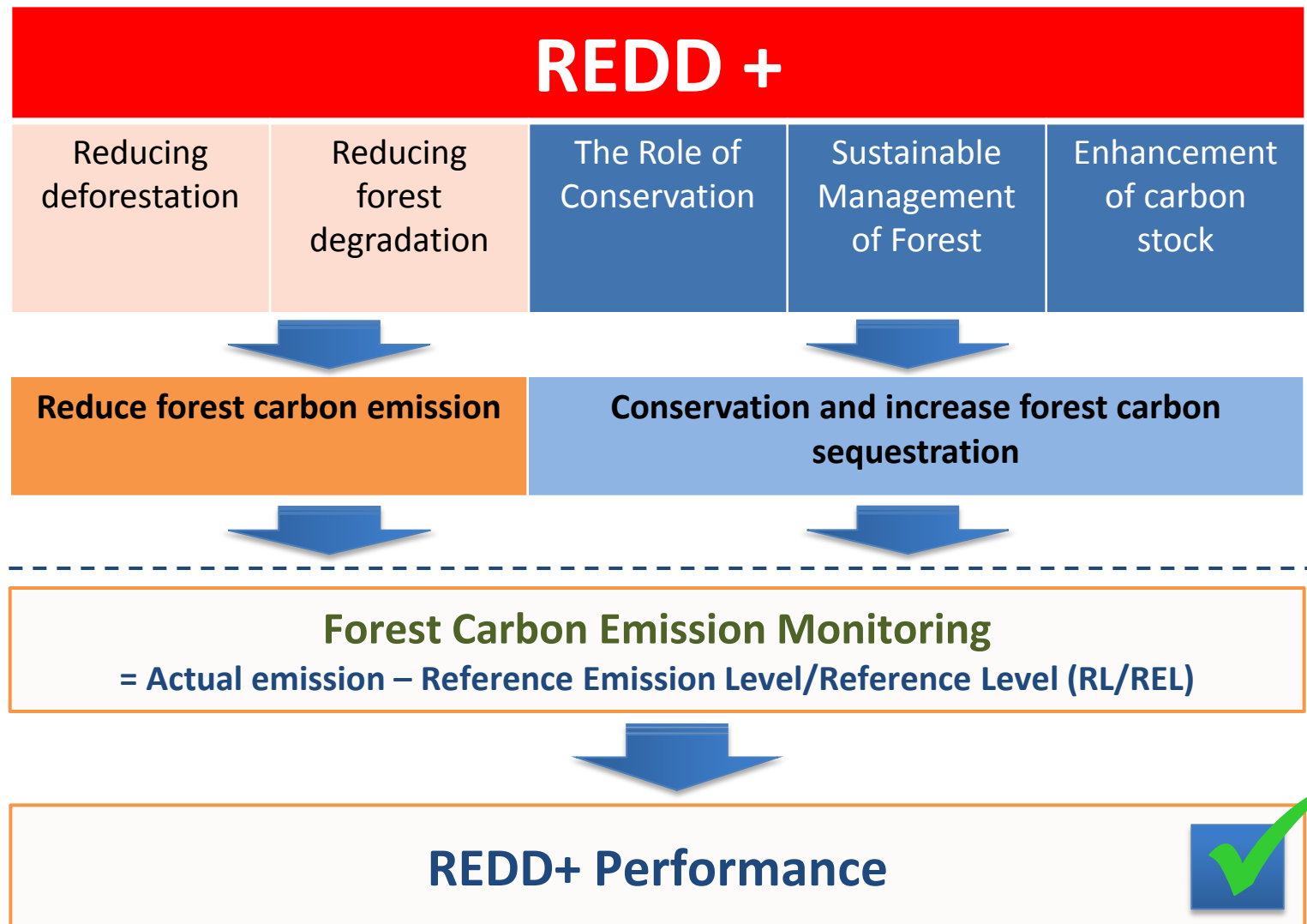- Plan Vivo Standard
- CCBA Standard

Berbak Carbon Value Initiative
ZSL/DEFRA/LIPI/Berbak National park/US Fish and Widlife Service

Kampar Ring -Peatland management
April

Reducing C. Emissions from Deforestation in the Ulu Masen Ecosystem - Aceh provincial government, carbon conservation, FFI

Leuser Ecosystem REDD Project
Global EcoRescue/Government of Aceh/YLI

Global Green Ecosystem Restoration Project
Global Green

Tesso Nilo Pilot Project – REDD
WWF/Tesso Nilo NP

Sumatra Forest Carbon Partnership
Partnership between the Australian and Indonesian governments

Merang REDD Pilot project (MRPP)
GTZ

Rehabilitation of the Sungai Putri peat swamp forest
FFI/Macquarie Bank

Lamandau
Rare/Yayorin/Clinton foundation

West Kalimantan Community Carbon Pool
FFI/David and Lucile Packard Foundation
Kalimantan

Conservation of the Upper Kapuas Lakes System
FFI/Macquarie Bank

FORCLIME – Kapuas Hulu Demonstration Activity
KfW, GTZ, MoF, GFA, district & provincial governments

Malinau Avoided Deforestation project
GER/PT Inhutani II/ Malinau Regency/FFI/ District gvn/ Tropenbos Int/ Global Eco Rescue/Borneo Tropical Rainforest Fdn

Kutai Barat, HKM – Heart of Borneo
WWF

FORCLIME – Malinau demonstration Activity
KfW, GTZ, MoF, GFA, district & provincial governments

Global Green in East Kalimantan
Global Green

Berau, Indonesia Climate Action Project; Kabupaten Berau Forest Carbon program
TNC/ICRAF/Sekala/University Mulawarman/Winrock Int/EI/ University of Queensland

FORCLIME – Beru Demonstration Activity
KfW, GTZ, MoF, GFA, district/provincial governments

Sustainable Management Of Poigar Forest
ONF International/Green Synergies

Gorontalo – Establishment & Management of Nantu National Park
Gorontalo University/YANI – Yayasan Adudu Nantu International

Perpetual Finance for carbon benefits
New forests Asset Management/PT Emerald Planet

Hutan Lestari Untuk Oragutan
PT.RHOI (Restorasi habitat Oragutan Indonesia) formed by BOS

Mamuju Habitat
PT Inhutani I

The Rimba Raya Biodiversity Reserve Project
Infinite earth/Oragu-tan Foundation International

Meru Betiri National Park
ITTO/Forestry Research and Development Agency/ Meru Betiri NP

Katingan Conser-vation Area – a Global Peatland Capstone Project
Starling Resources

Kalimantan Forest and Climate partnership
GOA partnering w GOI. Implementation partners are CARE, BOS, Wetlands International

REDD in Sebangau National park
WWF/Sebanga u National Park

TEBE project
KYEEMA foundation/AusAID/Yayasan Peduli Sanlima (SANLIMA)/Yayasan Timor Membangun (YTM)
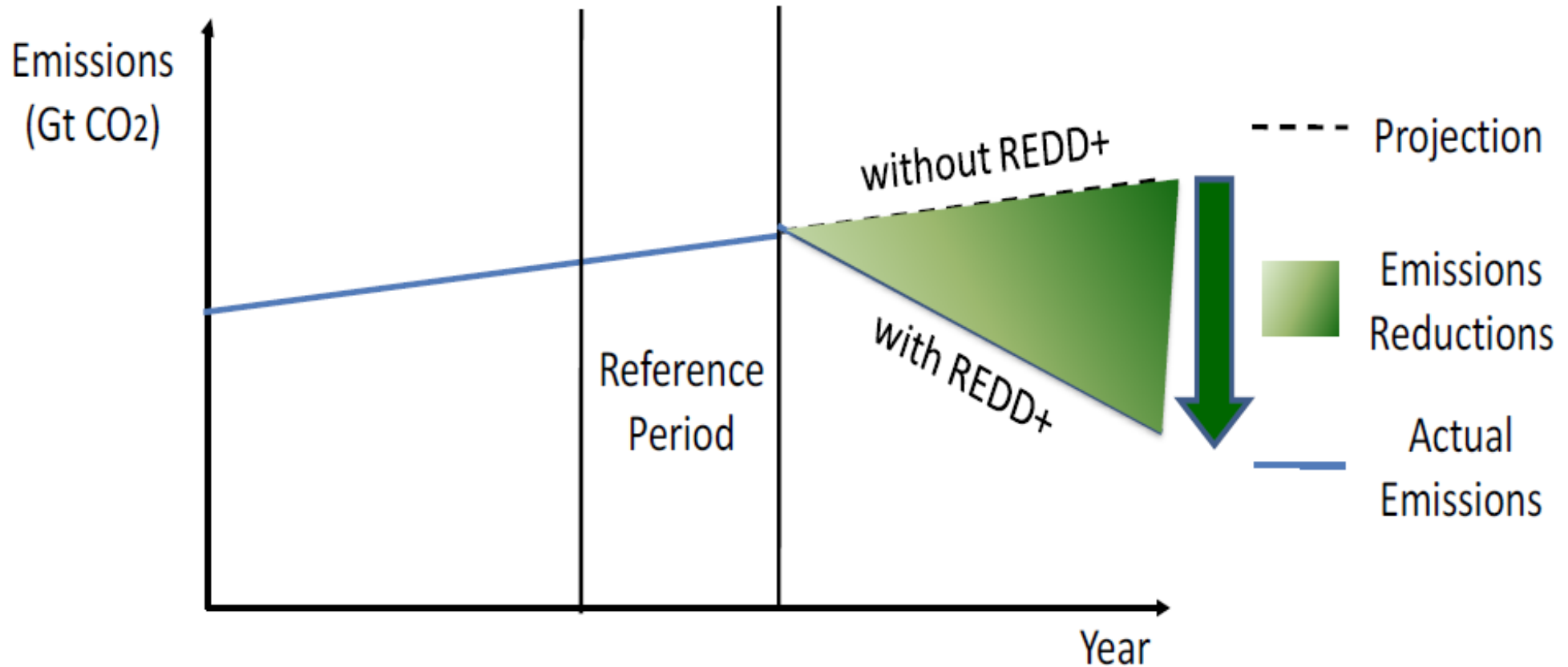
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Intensive Lecture

REDD +

Reducing deforestation	Reducing forest degradation	The Role of Conservation	Sustainable Management of Forest	Enhancement of carbon stock

Reduce forest carbon emission

Conservation and increase forest carbon sequestration

Forest Carbon Emission Monitoring

= Actual emission – Reference Emission Level/Reference Level (RL/REL)

REDD+ Performance

Green shaded area is reduced emissions from REDD+ actions

Source : UN-REDD Programme

REDD+ Implementation is Phased Approach

PHASE I : READINESS	PHASE II : IMPLEMENTATION	PHASE III : RESULT-BASED ACTIONS

PHASE I : READINESS

- Developing national strategies or action plans, policies and measures, and other capacity building activities.
- As requested by the Conference of Parties (COP) to the UNFCCC, countries implementing REDD+ - with the expectation of adequate and predictable financial and technical support- should develop a:
  - National REDD+ Strategy or Action Plan;
  - National Forest Reference Emission Level;
  - Robust and transparent National Forest Monitoring System; and
  - Safeguards information system

  These are also known as the Warsaw Framework elements.

PHASE II : IMPLEMENTATION

- Implementing national policies and measures, and national strategies or action plans. These might involve additional capacity building, technology development and transfer and results-based demonstration activities.

- The implementation of these activities is likely to derive from different sources of funding as, in most cases, no single source will be able to cover all financial needs. Sources of finance might include domestic government agency budgets, private investments, and/or international climate finance.

PHASE III : RESULT-BASED ACTIONS

- Result-based REDD+ actions are implemented at the national (country) level and results are fully measured, reported and verified

- Country who can proved that their emission reduction was verified, can claim for REDD+ payment

Paragraph 71 of decision 1/CP.16 requested developing countries aiming to undertake REDD+ activities under the convention, in the context of the provision of adequate and predictable support, including financial resources and technical and technological support, to develop a number of elements as follows: (1) REDD+ National Strategy or Action Plan; (2) Forest Reference Emission Level/Forest Reference Level (FREL/FRL); (3) A robust and transparent National Forest Monitoring System; and (4) Safeguards Information System

Elements of UNFCCC Warsaw Framework for REDD+

Forest Reference Emission Levels/ Forest Reference Levels (FREL/ FRL)	National Forest Monitoring Systems (NFMS)	National Strategies/ Action Plans (NS/AP)	Safeguards/ Safeguards Information Systems (SIS)

Source : UN-REDD Programme

What is REDD+ National Strategy?

- Comprises the basic goals and objectives of REDD+, including the major programs of action chosen to reach these goals and objectives, and the resource allocation necessary.

- It is composed of several interlocking parts. REDD+ governance, REDD+ tracking mechanisms, and effective programs to address the drivers of emissions from deforestation and forest degradation will all be needed to deliver REDD+ goals and objectives

- Note also that a REDD+ strategy is both a blueprint to guide actions—a REDD+ strategy document—and the implementation of those actions through time. It should be underlined that no strategy is better than its on-the-ground implementation.

Why does a country need REDD+ National Strategy?

- REDD+ is a large and complex undertaking, any tropical forest country that wants to achieve a significant reduction of its forest-related CO_2 emissions clearly needs a comprehensive REDD+ strategy.

- This need has been identified by UNFCCC discussions in articles 71 and 72 of the Cancun Agreement (COP 16), which request that developing country parties aiming to undertake REDD+ activities develop "a national strategy or action plan… that addresses, inter alia, the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations, and safeguards…".

- The Cancun Agreement puts it clearly at the beginning of the readiness phase of REDD+

- National REDD+ strategy development is one of the initial REDD+ activities requested or supported by almost all existing multilateral and bilateral financing windows

VISION

MISSION

VALUES

STRATEGY

16

- Monitoring forests over time allows countries to observe changes. Regular and accurate monitoring of forest cover, forest cover change and drivers of change provides the necessary information to support policies and management practices to protect, conserve and sustainably manage forests and to ensure the different functions of forests

- Focus of forest observation systems is on monitoring forest area and changes in forest area and on monitoring forest carbon stocks and changes. It should be noted that different attempts use different definitions of forests and earth observation may provide varying estimates of "forest area" depending on the definition and method that is used.

- Earth observing satellite data analyses, together with field-based national forest inventories provide data on forest cover and forest cover change at national scale.

- The system needs to effectively address the individual problems of each REDD+ participating country, so it is indispensable for each country's individual circumstances to be taken into account when the system is designed.

- It is important to build the system progressively and flexibly in consideration of a country's capacity

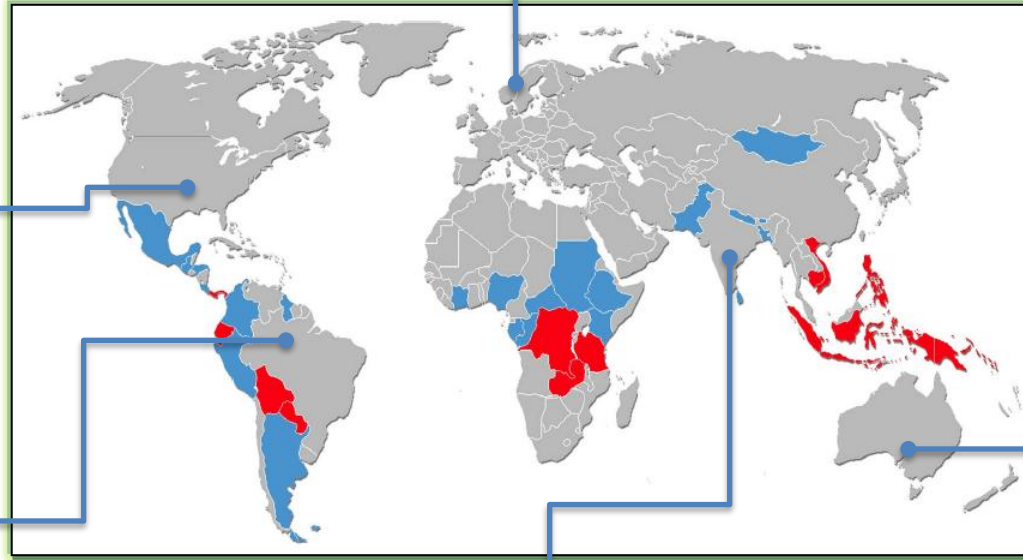**Ex: Indonesia's NFMS using Landsat data series from 1990.**
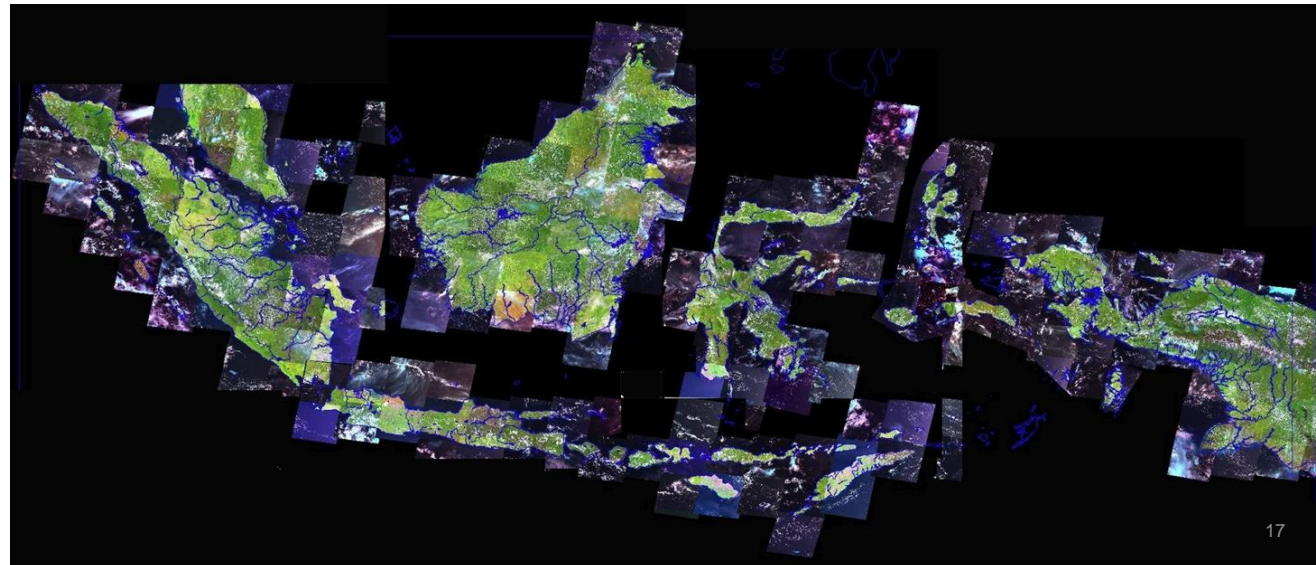
National Forest Monitoring System

USA

- **Forest Inventory and Analysis (FIA) :** USDA-FS since 1952
- **Natural Resouce Inventory (NRI) :** USDA-NRCS
- **National Land Cover Dataset (NLCD) :** USGS

NORWAY

- **National Forest Inventory (NFI) :** 11.000 permanent plots with 3x3 km intervals since 1952
- **Natinal Land Monitoring:** Landsat image, aerial photographs, InSAR and LiDAR

BRAZIL

- **Prodes :** Annual deforestation monitoring
- **DETER :** Near real-time deforestation monitoring
- **DEGRAD :** Forest degradation estimation

INDIA

- **Forest cover monitoring :** Landsat and IRS images
- **National Forest Inventory :** three classes of forest density
- **Forest Fire Early Detection:** Modis image

AUSTRALIA

- **National Carbon Accounting System (NCAS):**
  – Ecosystem model **FullCAM** (satellite image, climate, soil type, land management database)
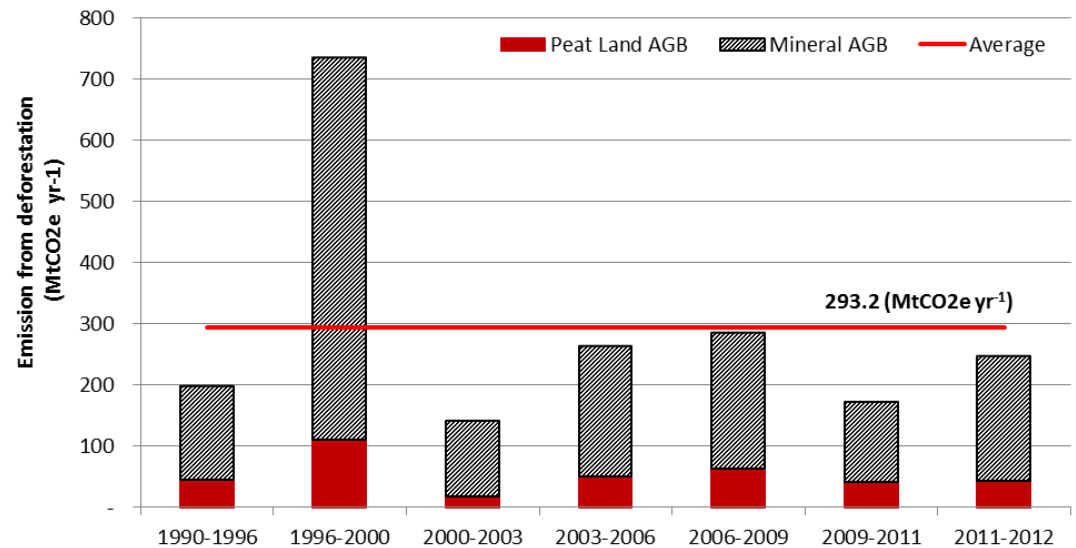
- Benchmarks for assessing each country's performance in implementing REDD+, expressed in **tons of carbon dioxide equivalent per year**.
- Technical definition of FREL is a projection of CO_2 emissions that is used as a reference to compare against actual emissions in a given of time in the future

Emissions (Gt CO_2)

without REDD+ --- Projection

with REDD+

Reference Period

Emissions Reductions
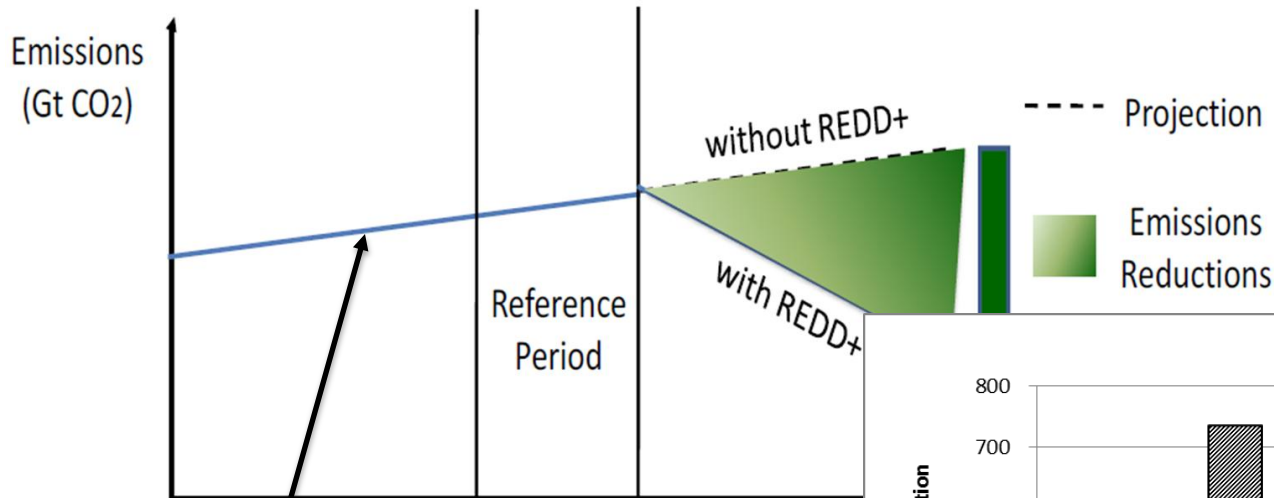
Green shaded area is reduced emissions from

Reference Emission Level (REL)

Emission from deforestation (MtCO2e yr-1)

Peat Land AGB / Mineral AGB — Average

293.2 (MtCO2e yr^{-1})

1990-1996 1996-2000 2000-2003 2003-2006 2006-2009 2009-2011 2011-2012

UNFCCC decisions require that, in the implementation of REDD+, seven safeguards should be promoted and supported :

1. Actions that complement or are consistent with the objectives of national forest programmes and relevant to international conventions and agreements;
2. Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
3. Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;
4. The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in the actions;
5. Actions that are consistent with the conservation of natural forests and biological diversity, ensuring that the actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits;
6. Actions that address the risks of reversals;
7. Actions that reduce displacement of emissions.

- Safeguards are required to ensure that the implementation of REDD+ reduce adverse impacts as much as possible in relation to 3 (three) aspects : governance, social and environmental.
- During international REDD+ negotiation process, safeguards are crucial issue, since it is closely associated/related to result-based or performance-based payment.
- Parties intending to implement REDD+ received mandate to implement those 7 safeguards, and mandated to develop a system for providing information on how these safeguards are addressed and respected

Intensive Lecture

## Benefits of implementing REDD+ activities at the national level

- Support to design and implementation of Policies and Measures (PAMs) in the forestry and other sectors that have an impact on REDD+ efforts;
- RBPs per ton of carbon emissions reduced or removed;
- International recognition for mitigation results;
- Multiple other benefits: biodiversity conservation, poverty alleviation, catalyzing a green economy that integrates multiple sectors (e.g. forestry, agriculture, energy, finance).
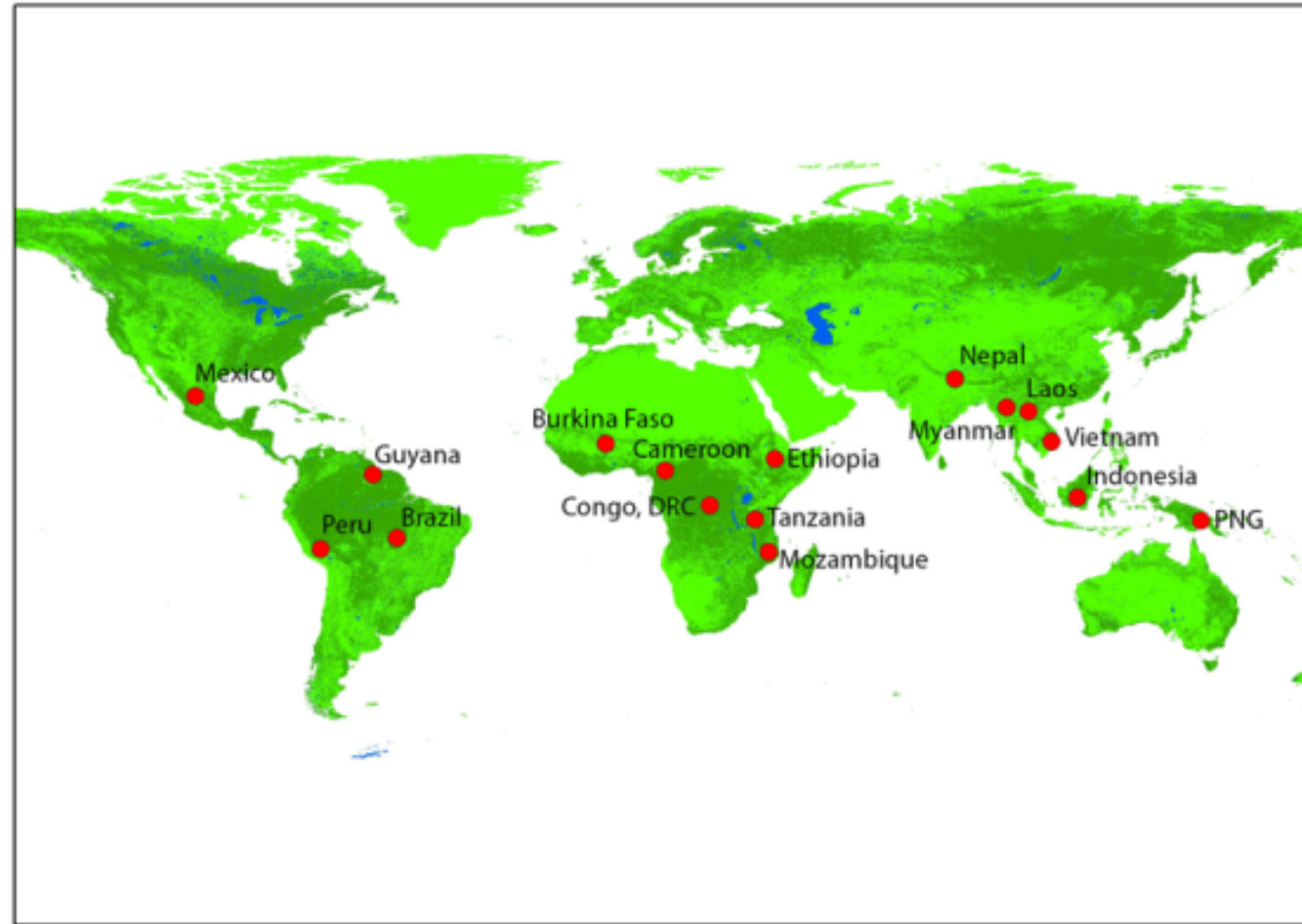
Source : CIFOR REDD+ Global Comparative Study

Intensive Lecture

Challenges of implementing REDD+ activities at the national level

- **Permanence**: how to ensure that reductions in emissions from deforestation, forest degradation, sustainable management of forests, conservation and enhancements of forest carbon stocks are not eventually reversed by other actions;

- **Displacement**: how to ensure that actions are not reversed by increases in deforestation or forest degradation activities elsewhere;

- **Finance**: ensuring meaningful sources of finance and adequate private sector engagement
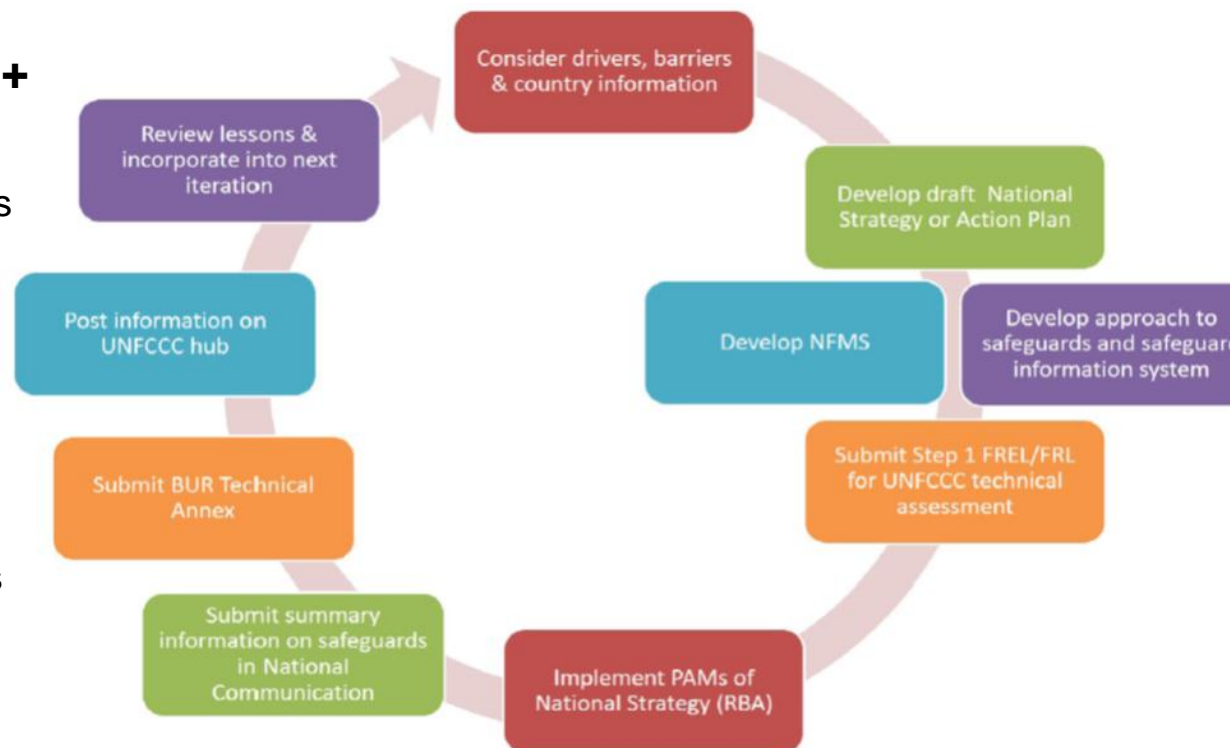
The iterative process of REDD+ implementation (UN-REDD)

- **Conflicting interests**: powerful political and economic interests may favor continued deforestation and degradation;

- **Institutional arrangements**: implementation must be coordinated across various government levels and agencies – e.g. ministries of environment and forest should successfully coordinate with ministries of finance and planning;

- **Benefit sharing**: if benefits are to be distributed, effectiveness, efficiency and equity need to be balanced; tenure insecurity and safeguards must be genuinely addressed for all stakeholder groups, including those more marginalized, such as women, youth, indigenous people, etc.; and transparent institutions must be put in place

- **Technical complexity**: measuring emissions from forest and establishing reference levels can be difficult because of country circumstances.

1. Does REDD+ is a logic mechanism to mitigate climate change? Can you explain more detail based on your perspective?
2. Can you elaborate a web of driver of deforestation and forest degradation in tropical forest?
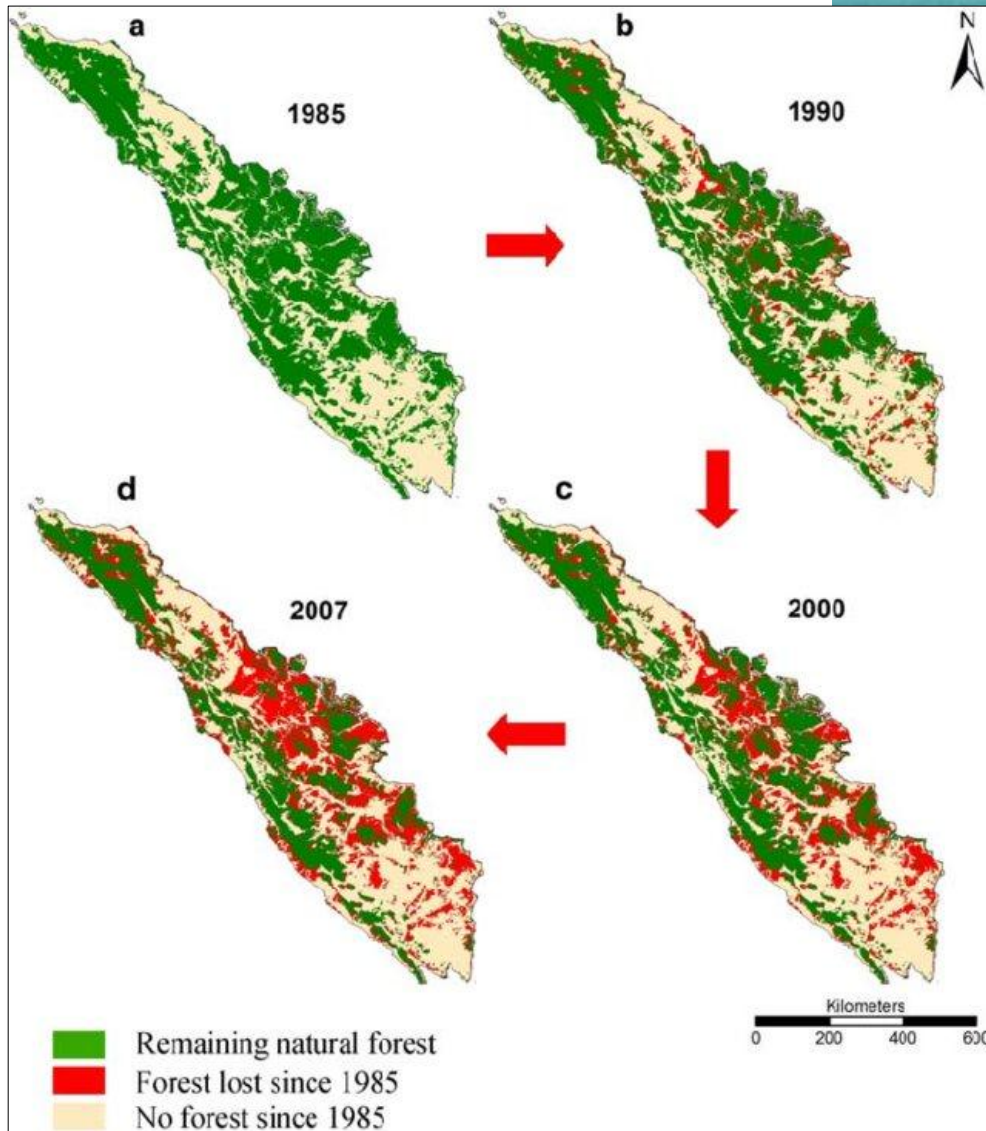
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Remaining natural forest
Forest lost since 1985
No forest since 1985

Source: Laumonier et al. (2010)

- The original idea of REDD+ : to contribute to climate change mitigation by creating incentives for developing countries to keep their forests standing, as deforestation is an important cause of carbon emissions.
- a highly cost-effective way of reducing greenhouse gas (GHG) emissions

Courtessy : youtube.com

Courtessy : youtube.com

Intensive Lecture
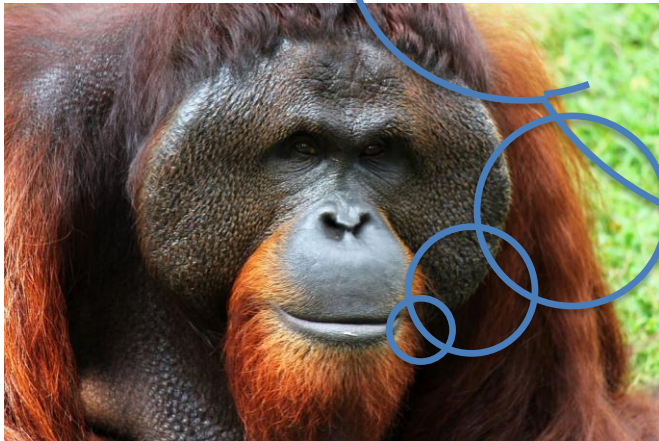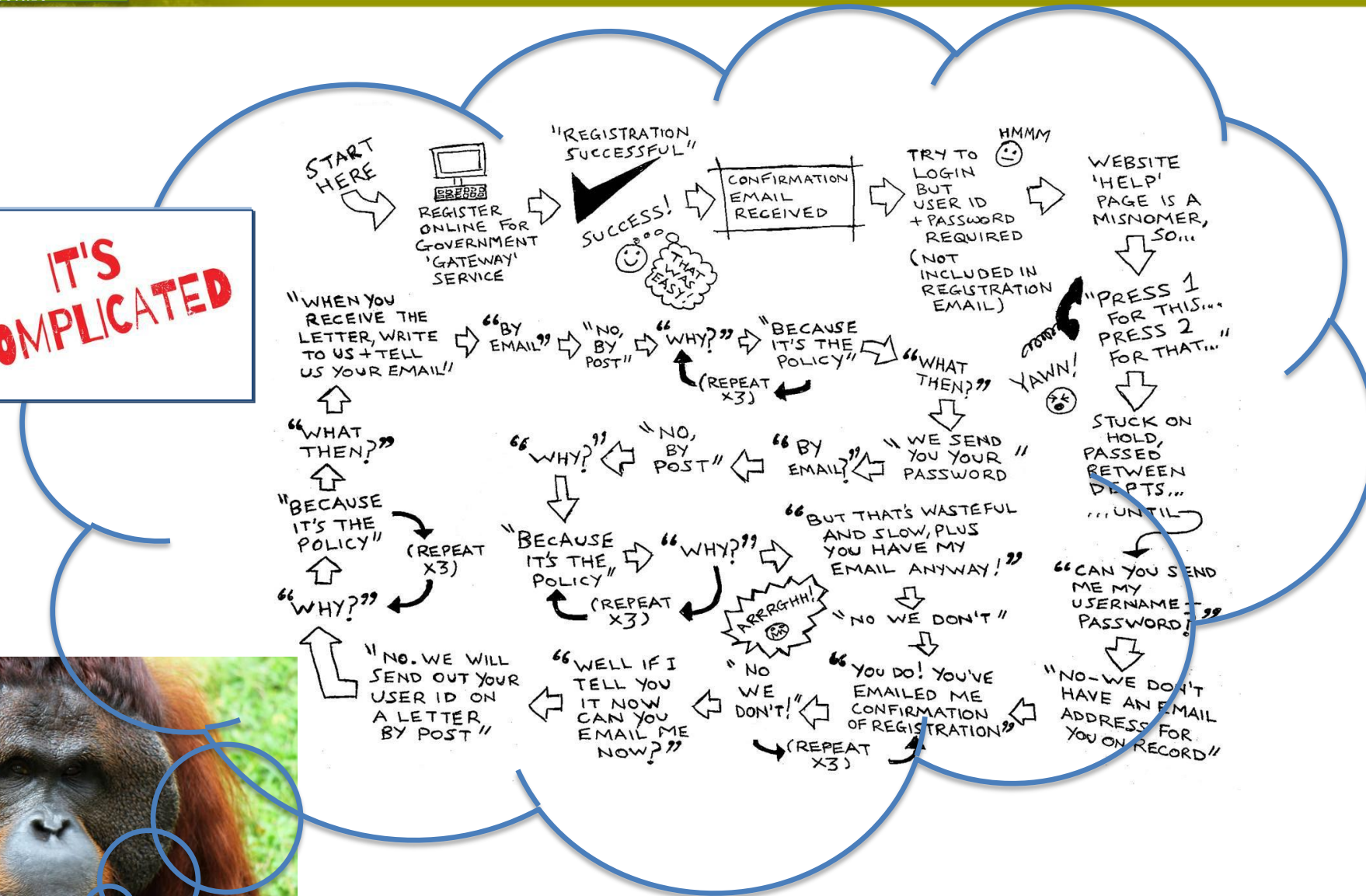
There are at least four challenges for REDD+ that can be identified (CIFOR, REDD-GCS)

- **Carbon measurement technology**
  New technology such as satellite images and computer modeling will assist forest carbon measurement timely and accurate. A transparent system to perform such measurement and verification of emission reduction is quite available. However, will that system economically efficient?

- **Payment**
  How can a country get payment and in what form of payment will be given? Who will get a next payment from the country (government) for an effort of protecting a particular forest area: local government, local forest community or logging company? Donor country is willing for the payment can benefit the poor. However, REDD+ country want to administer its own payment distribution.

- **Accountability**
  When REDD+ payment was done, but the deforestation and forest degradation undesirably increasing, what would be happened? Accountability is related to a guarantee that REDD+ payment can support sustainable forest protection.

- **Funding**
  Options are available. Does it better developed countries provide a funding to appreciate developing countries who can reduce emission from deforestation? Or is it better this emission reduction mechanism being connected with carbon trade with market based? We need to consider the most appropriate market system
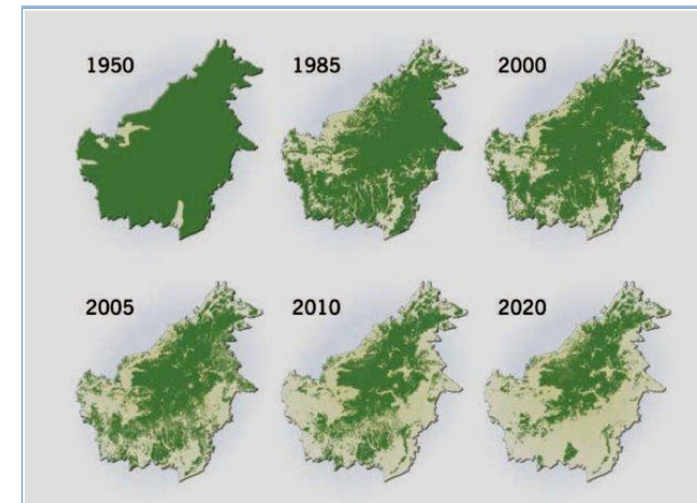
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REDD+ National Strategy (June 2012)

REDD+
National Strategy

Indonesian REDD+ Task Force
June 2012

www.satgasreddplus.org

National Forest Reference Emission Level (Technically Assessed by UNFCCC 2016)

Submission by Indonesia

NATIONAL FOREST REFERENCE EMISSION LEVEL FOR DEFORESTATION AND FOREST DEGRADATION

In the Context of Decision 1/CP.16 para 70 UNFCCC

Republic of Indonesia

National Forest Monitoring System, already established with gradual improvement

- TSP/PSP (NFI)
- NSDH

Emission Factor

- Remote sensing
- Landcover

Activity Data

Inventory — Monitoring — Spatial Data Network — Mapping

- Spatial Data Validation Unit
- WebGIS

Data sharing & exchange

- GIS
- Mapping

Spatial Analysis

Safeguards Information System, already established with gradual improvement

SISTEM INFORMASI SAFEGUARDS REDD+ INDONESIA

Indonesia REDD+ National Strategy

1 Institutions and Processes

- REDD+ Agency
- Funding Instrument
- MRV Institution
  - Measurement
  - Reporting
  - Verification

2 Legal and Regulatory Frameworks

- Review land rights and accelerate spatial planning
- Improve law enforcement and prevent corruption
- Enforce 2 year moratorium on issuance of new permits for the exploitation of forests and peatlands
- Improve data and permit issuance systems for forests and peatlands
- Provide incentives for the private sector

REDD+ aims to achieve 4 objectives, as described in our REDD+ National Strategy.

3 Strategic Programs

a Conservation & rehabilitation
- Establish protected area function
- Control conversion of forests and peatlands
- Restore forests and rehabilitate peatlands

b Sustainable agriculture, forestry & mining
- Increase agricultural and plantation productivity
- Manage forests sustainably
- Control conversion of productive land to open-cut mining
- Prevent and control fires in forests and peatlands

c Sustainable management of landscapes
- Promotion of value added downstream industries
- Expansion of sustainable alternative livelihoods
- Management of multi-function landscapes

4 Changes to Work Paradigm and Culture
- Strengthening of forests and land use governance
- Empowerment of local economies using sustainability principles
- National "Save Indonesia's Forests" campaign

5 Inclusion/ Involvement of Stakeholders
- Facilitate interaction with and among stakeholders (national, regional and local governments, private sector, non-governmental organizations, indigenous and local peoples, international community)
- Develop social and environmental safeguards
- Ensure equitable benefit sharing

- ☑ **Emissions reduction**
- ☑ **Increased carbon stocks**
- ☑ **Conservation & maintenance of biodiversity**
- ☑ **Economic growth**

Current Ministrial Decree No. 70/2017 on REDD+ Implementation Guideline stated that the current FREL will be valid until 2020, in which the next FREL will be submitted to UNFCCC. This allows the government to accommodate improvement plans provided during the technical assessment of FREL, as much as possible, according to country capacity and capabilities.
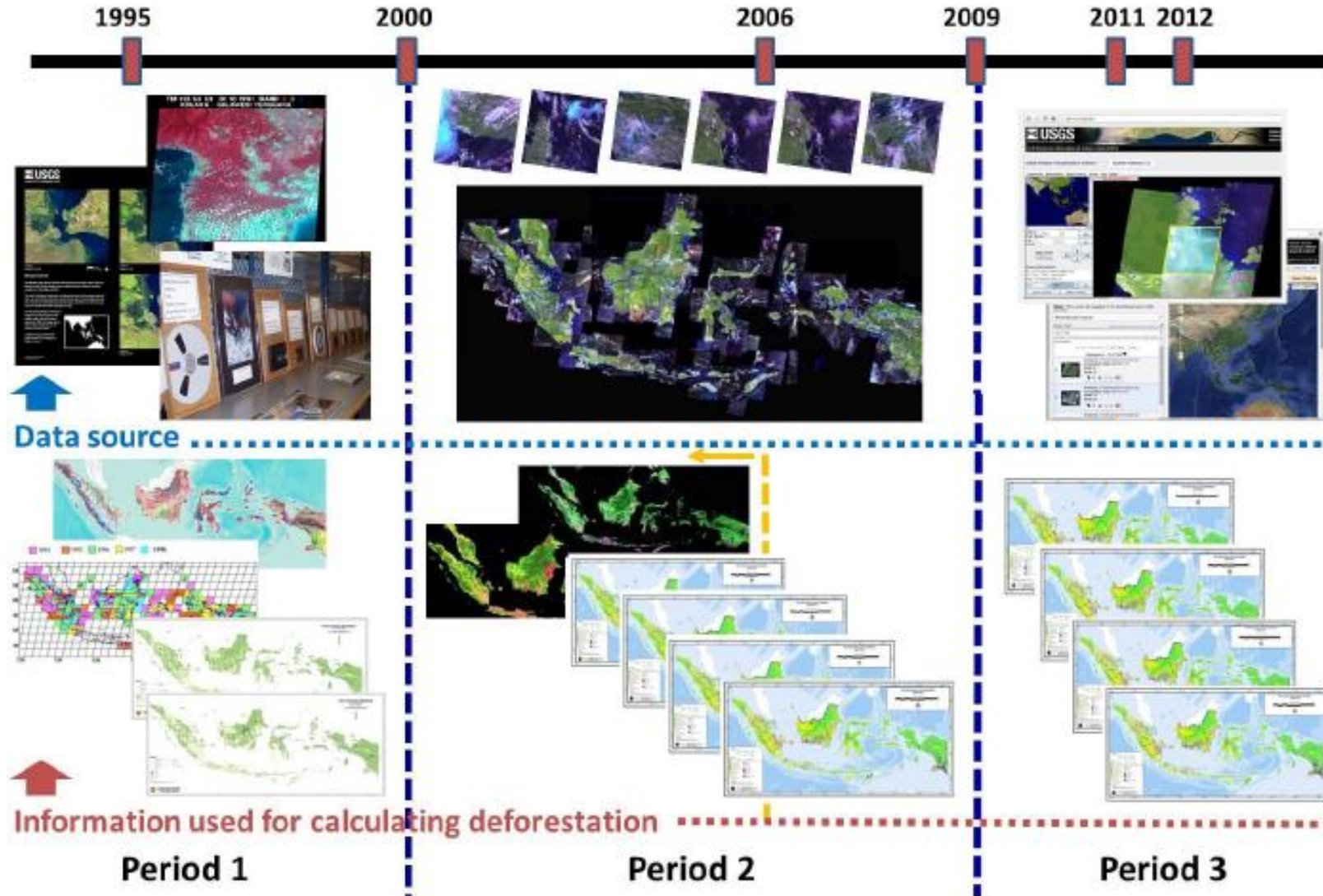
Historical condition and improvement in establishing the land-cover map of Indonesia that consists of three significant periods (1990s: NFI period; 2000-2009: period of limited Landsat data used; >2009: period of free download Landsat data)

PERATURAN PRESIDEN REPUBLIK INDONESIA
NOMOR 77 TAHUN 2018
TENTANG
PENGELOLAAN DANA LINGKUNGAN HIDUP

DENGAN RAHMAT TUHAN YANG MAHA ESA

PRESIDEN REPUBLIK INDONESIA,

Menimbang:

bahwa untuk melaksanakan ketentuan Pasal 30 ayat (3) Peraturan Pemerintah Nomor 46 Tahun 2017 tentang Instrumen Ekonomi Lingkungan Hidup, perlu menetapkan Peraturan Presiden tentang Pengelolaan Dana Lingkungan Hidup.

Mengingat:

1. Pasal 4 ayat (1) Undang-Undang Dasar Republik Indonesia Tahun 1945;

2. Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup (Lembaran Negara Republik Indonesia Tahun 2009 Nomor 140, Tambahan Lembaran Negara Republik Indonesia Nomor 5059);

3. Peraturan Pemerintah Nomor 46 Tahun 2017 tentang Instrumen Ekonomi Lingkungan Hidup (Lembaran Negara Republik Indonesia Tahun 2017 Nomor 228, Tambahan Lembaran Negara Republik Indonesia Nomor 6134).

MEMUTUSKAN:

Menetapkan:

PERATURAN PRESIDEN TENTANG PENGELOLAAN DANA LINGKUNGAN HIDUP

Policy umbrella for operationalizing REDD+ financing has been established (Government Regulation No. 46/2017 and President's Regulation No. 77/2018)
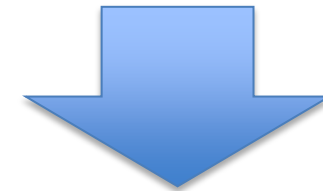
This policy support benefit sharing mechanism for REDD+, either National to Sub National or other entities

2007

May 2010

2018

COP 13 in Bali

- Indonesia pushed forest as the priority agenda
- Paradigm shift: economic value of standing forest

Indonesia-Norway Partnership

LOI signed

- Aligns with Indonesia policy and goals
- Supports infrastructure and implementation

Completing Readiness Phase of REDD+

- National Strategy (2012)
- National FREL (2016)
- NFMS (already started)
- SIS (2015)
- Financing Policy (2018)

REDD+ momentum has been drop too many …

Intensive Lecture

Some notes on the process …

- REDD+ has been discussed many times internationally and nationally, but the issue was rather kept nationally as an academic or political debates than put it as a best practice directly in the field (sub national)

- Forestry sector has been the backbone of Indonesia's income since 1960's, so much of technical requirements for REDD+ e.g. NFMS, FREL, SIS, MRV were not a new object. However, changing paradigm and culture from a business-as-usual practice on forestry or agricultural production into more sustainable (environmental friendly) production were something new to Indonesia

- Changing paradigm may be portrayed by posing REDD+ National Strategy into the National Development Planning, which is the backbone of government development objectives and budgeting system. However, it has not been seen …..

- Indonesia's budget allocation to the provincial and district government is based on the tax provided by the locals, which many of them come from natural resources extraction. So, frankly speaking, the bad boy get a big money …. This system is very much different with how REDD+ benefit sharing works.
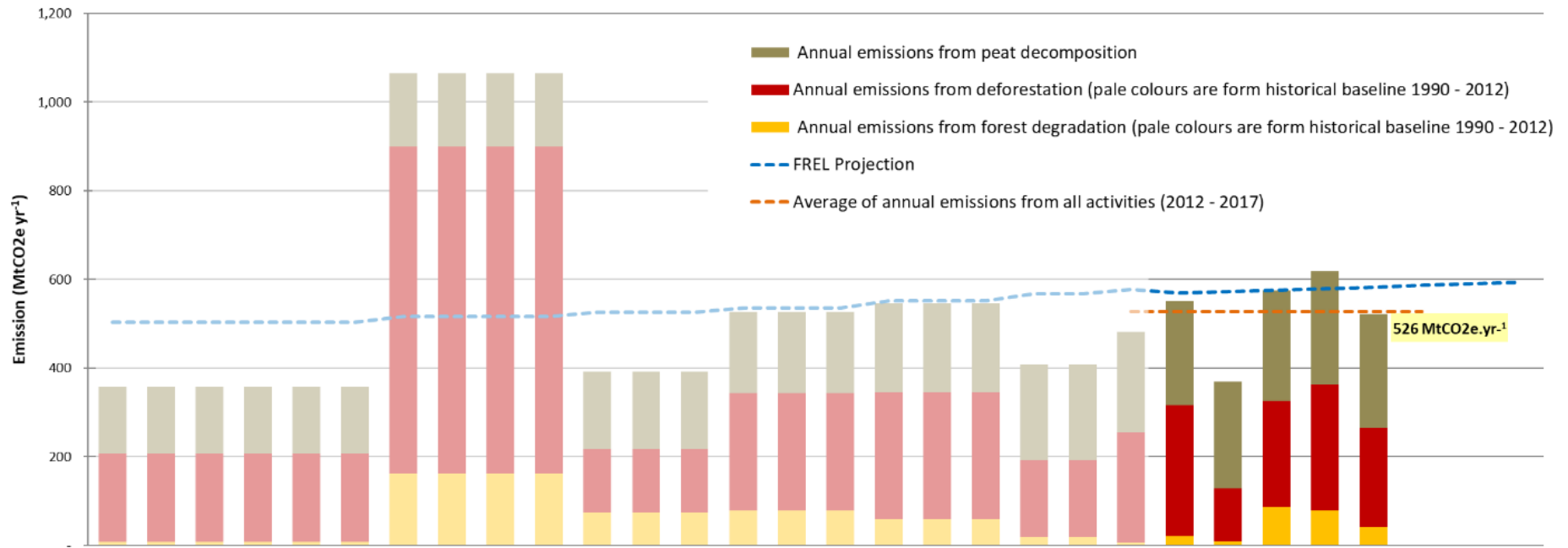
Intensive Lecture

Some notes on the process …

- The REDD+ mechanism has been a homework for a big country with a high population such as Indonesia, because benefit sharing mechanism of REDD+ payment will be very difficult to be done. Who will get paid: local forest community, logging company, forest management unit, local government, central government? Then, the next question is: Does the money enough to fit with the need for sustainable development?

- Too many actors … too many interest … So, climate change issue is very much related to political situation (e.g. new president…new policy…new regulation…, new governor…new perspectives…new proposal…, etc)

- The driver of deforestation is bigger than we expected, it is not that cost-effective as we predicted before. It is intricately linked with political regime as well as the world's demand on the particular agricultural or energy commodities …..

Indonesia already calculated the performance ...

Year	Deforestation (tCO2e)	Forest Degradation (tCO2e)	Peat Decomposition (tCO2e)	Total without Peat Decomposition (tCO2e)	Total with Peat Decomposition (tCO2e)
2012-2013	-3,100,238	37,601,183	-16,552,152	34,500,944	17,948,792
2013-2014	174,461,409	48,178,662	-19,669,559	222,640,071	202,970,512
2014-2015	53,707,417	-27,968,390	-24,326,074	25,739,027	1,412,953
2015-2016	9,414,169	-20,646,652	-27,571,853	-11,232,484	-38,804,337
2016-2017	70,788,838	15,685,914	-25,110,537	86,474,752	61,364,215
Average	61,054,319	10,570,143	-22,646,035	71,624,462	48,978,427
Total	305,271,594	52,850,717	-113,230,175	358,122,311	244,892,135
% of reduction from references	20.8	18.2	-10.1	20.4	8.5

Source : Draft of REDD+ Annex on 2nd Biennieal Update Report (BUR), Indonesia

1. Technical capacity is not mainly the challenge of implementing REDD+. Do you think that statement is correct? Can you elaborate more?
2. Do you agree that climate change mitigation actions are very much related to the political situations? Please give a good reason …

Intensive Lecture for Department of Global Agricultural Sciences
Graduate School of Agriculture and Life Science, The University of Tokyo
27 October 2018

WILL
REDD+

Reducing Emission from Deforestation and Degradation Plus (REDD+)

WORKS IN DEVELOPING COUNTRIES?
A historical process for gaining REDD+ implementation in Indonesia

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