Future Perspective of REDD+ Implemention & The National Forest Policy in Indonesia

By:

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International Seminar on REDD+ Implementation & SFM,
REDD Research & Development Center, FFPRI, Tokyo, Japan February 7, 2014

Presentation Frame of Thought

1. FOREST PRINCIPLES & CLIMATE CHANGE

2. GLOBAL UPDATE

3. SOME LATEST NOTE: BILATERAL

4. HOW INDONESIA EXPLAIN & FULFILL THE GAPS

5. WORLD COMPANIONSHIPS

Climate Change, Global: Why Forests

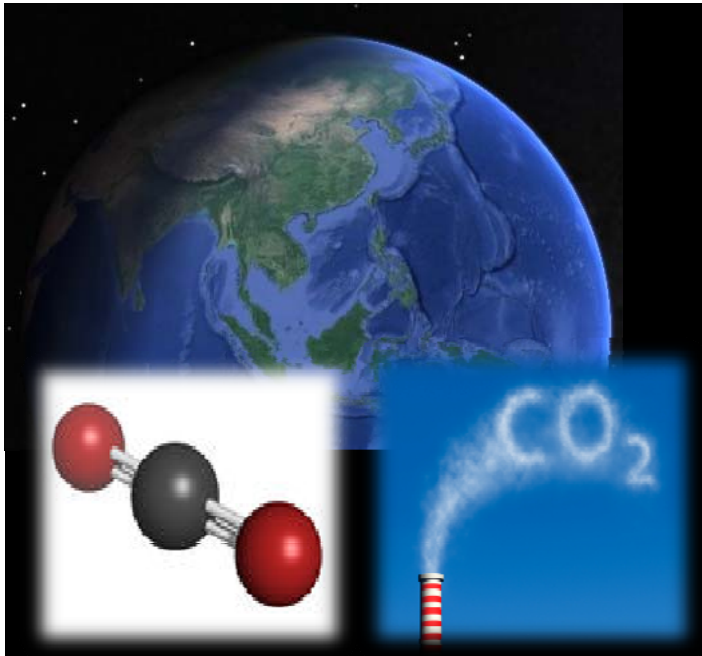
- Source of emission (mainly CO2, CH4)
- Carbon conservation (Balance of terrestrial carbon, solid C)
- Sustainably manage forests… (services & green products)
- Enhancement of forest carbon stock

COP 13, 2007: Bali Action Plan article 1.b.iii

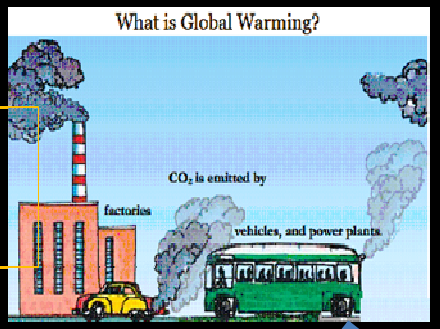
REDD+ : Copenhagen Accord

CO2 Cycle

CO2 GREEN HOUSE GAS and TREES



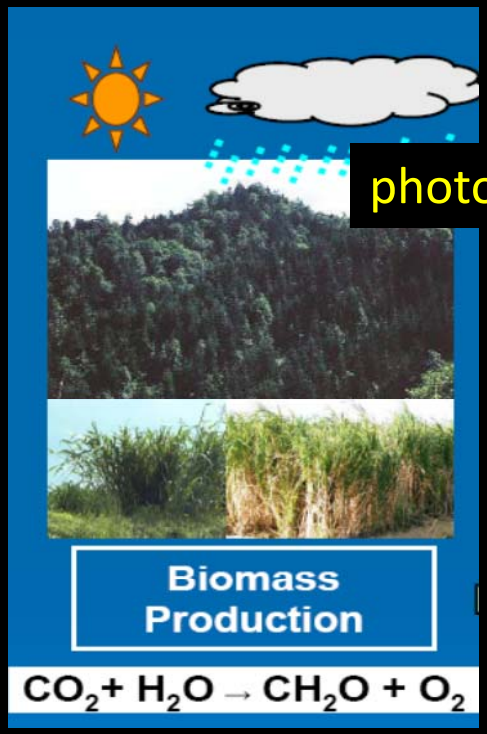
80 % CO2

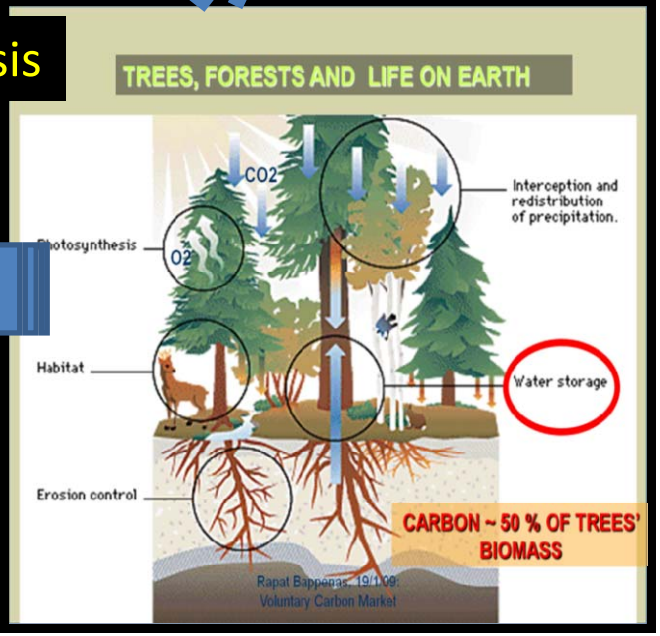


20 % CO2

Tree's biomass to carbon ~ 0.5
Carbon to CO2 ~ 3.7
Biomass to CO2 ~ 1.83

Delta carbon
(the principle of
net emission factor)





TREES / FOREST AND GHG CO2 CYCLE

- Planting trees: absorbing CO2
- Managing Forest: Holding solid C in term of standing biomass
- Producing Sustainable Renewable Biomass: absorbing CO2 continuously; renewable green products—holding solid C and replace/substitute high CO2 products (coal, oil, cement, steel, etc)
- Reducing Emission From Forest: Self remedy

Tropical Regions

(Geography, Demography, Social: 11 hrs sun shine, 365 days)

Climate Change, Carbon & Forests

- Forest controversial issue since Kyoto Protocol
- AR CDM (decision 14/CP.10) is not easy (IPCC Guide Line …)
- Bali Action Plan, 1.(b).(iii) accepting full functions of forests:

  REDD, Conservation, Sustainable Forest management, and Enhancing forest carbon stocks
- Understanding the role of forests in absorbing CO2 is still crucial (KP and future implementation of Bali Action Plan forest related)

….→ 2. GLOBAL UPDATE

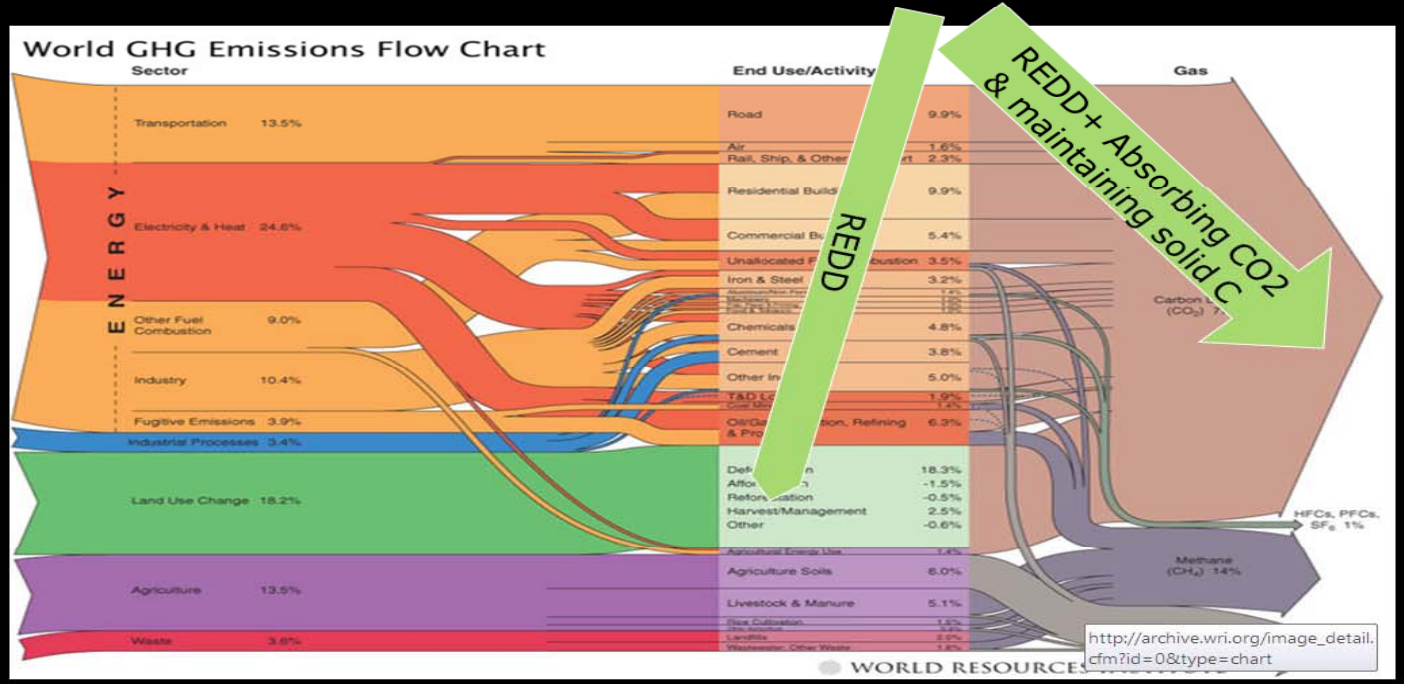
Integrating REDD+ into a green economy transition

(Watson et al:, **ODI Report 2013**)

Key messages

…the full potential of REDD+ – reducing emissions from deforestation and forest degradation, conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks – is rarely elaborated

CO2 Global: Basic data/idea for Partnerships
And Joint Actions/Implementations



Flowchart source: NICHOLAS STERN REVIEW, 2007 p.199:

GLOBAL UPDATE: Decisions adopted by COP 19/ CMP 9, WARSAW 2013

http://unfccc.int/2860.php#decisions

- Work programme on results-based finance to progress the full implementation of the activities referred to in decision 1/CP.16, paragraph 70 (75 kB)
- Coordination of support for the implementation of activities in relation to mitigation actions in the forest sector by developing countries, including institutional arrangements (64 kB)
- Modalities for national forest monitoring systems (55 kB)
- The timing and the frequency of presentations of the summary of information on how all the safeguards referred to in decision 1/CP.16, appendix I, are being addressed and respected (19 kB)
- Guidelines and procedures for the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels (85 kB)
- Modalities for measuring, reporting and verifying (36 kB)
- Addressing the drivers of deforestation and forest degradation (56 kB)

HIGH LEVEL EVENT
ON THE LAND SECTOR AND FORESTS , 18 November 2013)

Written conclusions heard by the Co-chairs of the High Level Panel event on the land sector and forests held on Monday 18th November 2013 during the nineteenth session of the Conference of Parties in Warsaw[1]

The High Level Panel event was organized by the COP19 Presidency with the cooperation of Finland and the UNFCCC secretariat.
The event was co-chaired by H.E Rachmat Witoelar, Indonesia and H.E Ville Niinistö, Finland.
The main objective was to begin a discussion on the potential role of the land sector, after 2020 and determine its role in the future climate regime.

The following points were made during the session:

- The land sector including forests is very important from the climate perspective
- Parties indicated:
  - priorities which include food security, livelihoods, energy security, ecosystem services
  - sustainable management of lands which respects indigenous and local communities and their knowledge
  - synergies between adaptation and mitigation
- The land sector including forests has potential for cost-effective actions
- There are a number of policies and measures already in place in countries, including progress made in REDD+
- The land sector should be an integral part of the future climate regime that will be applicable to all Parties but respecting national circumstances
- The importance of a holistic approach was highlighted
- For the future arrangement the following elements were indicated:
  - transparency
  - simplicity
  - need to build on existing arrangements and scientific and methodological guidance
  - flexibility addressing national circumstances
- The future approach should incentivize action in a broad sense – and could include both market and non-market-based approaches

[1] Written conclusions heard by the Co-chairs were transmitted to the COP19 President and to ADP Co-chairs.

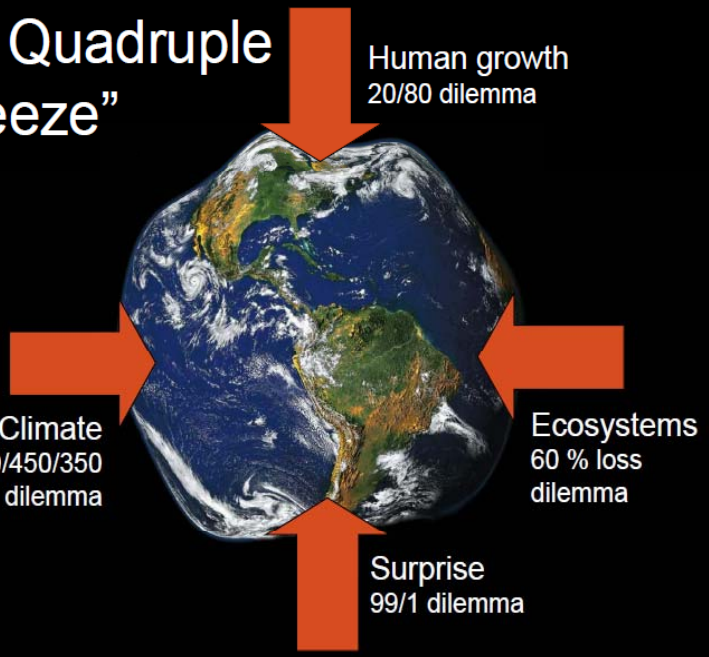
FOREST 300 YEARS AGO & FOREST 300 YEARS IN THE FUTURE

Jürgen Blaser

Based on the Paper: *Forests in the next 300 years*
Prepared by J. Blaser and H. Gregersen
UNASYLVA 240, Vol. 64: 61-73, 2013

↓ CO2 **Green Products**

"The Quadruple Squeeze"



Need for materials - Raise of Wood Fibre: Tree cracking – from macro to mini scale

Forest in the next 300 Years, some notes

(Source: J. Blaser and H. Gregersen, UNASYLVA 240, Vol. 64: 61-73, 2013)

- Innovations
- Tree Cracking … Nanotechnologies
- Fresh water
- Wood energy, raw materials..wood & wood fibre
- Buffer against changing environmental condition
- Sustaining forests: what kind of management..broader knowledge & discipline

SAFE(GUARD) OF PLANET EARTH:

GLOBAL COMPANIONSHIPS

- GLOBAL
- REGIONAL
- NATIONAL
- LOCAL

Companionships

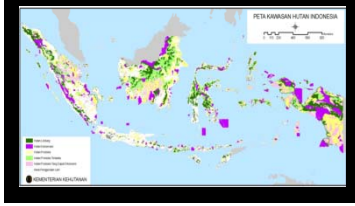
- *TECHNICAL..NATURAL LAW*
- *NASIONAL POLICY*
- *GLOBAL POLITICAL ECONOMY*
- *GLOBAL POLITICS*

Indonesia Forest Land Use System
(Forests Law 5/1967, partially since Dutch Colony)
Tropical Island Concept: Landscape Approach

1. Conservation Forests and Protected Forests
   Terrestrial carbon stocks ; Flora, Fauna & ecosystem
2. Production Forests & Climate Change..CARBON NEUTRAL):

- Giant CO2 Vacuum Cleaner for GLOBAL
- Giant Manufacture of Green Renewable Biomass (Energy etc.)
- Huge Value added for the benefit of global through Implementation SFM & Innovation enrich process of nature

3. Forests on other land uses
   Local ecosystem support (water, clean air..)
   Source of local economy.. renewable energy plantations



Doha COP 18, Forest Day CIFOR by ITTO & IUCN:

Panel on Forest Landscape Restoration

“ Indonesia’s Forests Land Used System since 1967, but not well known by global” (Yetti Rusli)

YouTube: http://www.forestforlife.web.id/2012/12/forest-landscape-restoration-enhancing.html

→ …3. Some Latest Notes:Bilateral

JCM--BILATERAL

New Mechanisms Information Platform

Inquiry | E-mail Newsletter | Japanese

Font Size: Standard | Big | Maximum Site Search Google™ Custom Search

HOME | Sitemap | Links

Joint Crediting Mechanism (JCM) | Support Programmes | Information on NAMAs | Useful Experiences | Useful Calculation Methodology | REDD/REDD+

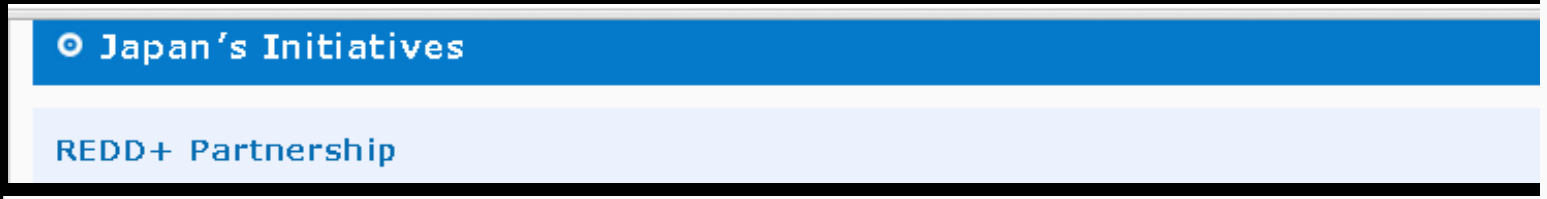
HOME > Joint Crediting Mechanism (JCM)

Joint Crediting Mechanism (JCM)

About JCM

- **Proposed Elements of the Joint Crediting Mechanism (JCM)**
- To facilitate diffusion of leading low carbon technologies, products, systems, services, and infrastructure as well as implementation of mitigation actions, and contributing to sustainable developed countries.
- To contribute to the ultimate objective of the UNFCCC by facilitating global actions for emission reductions or removals.

JCM



(2)Direction of future activities under the REDD+ Partnership

Based on the progress made so far, the Ministers recognized the importance of conti

IGES Institute for Global Environmental Strategies

Towards sustainable development - policy oriented, practical and strategic research on global environmental issues

Japan's Domestic Offset Mechanism: Japan Verified Emission Reduction (J-VER)

4 November 2011
Workshop for New Market Mechanism in Mongolia
at Ulaanbaatar

Yuriko KOYANAGI
Assistant Researcher, Market Mechanism Group, IGES

JAPAN DOMESTIC: J-VER established 2008

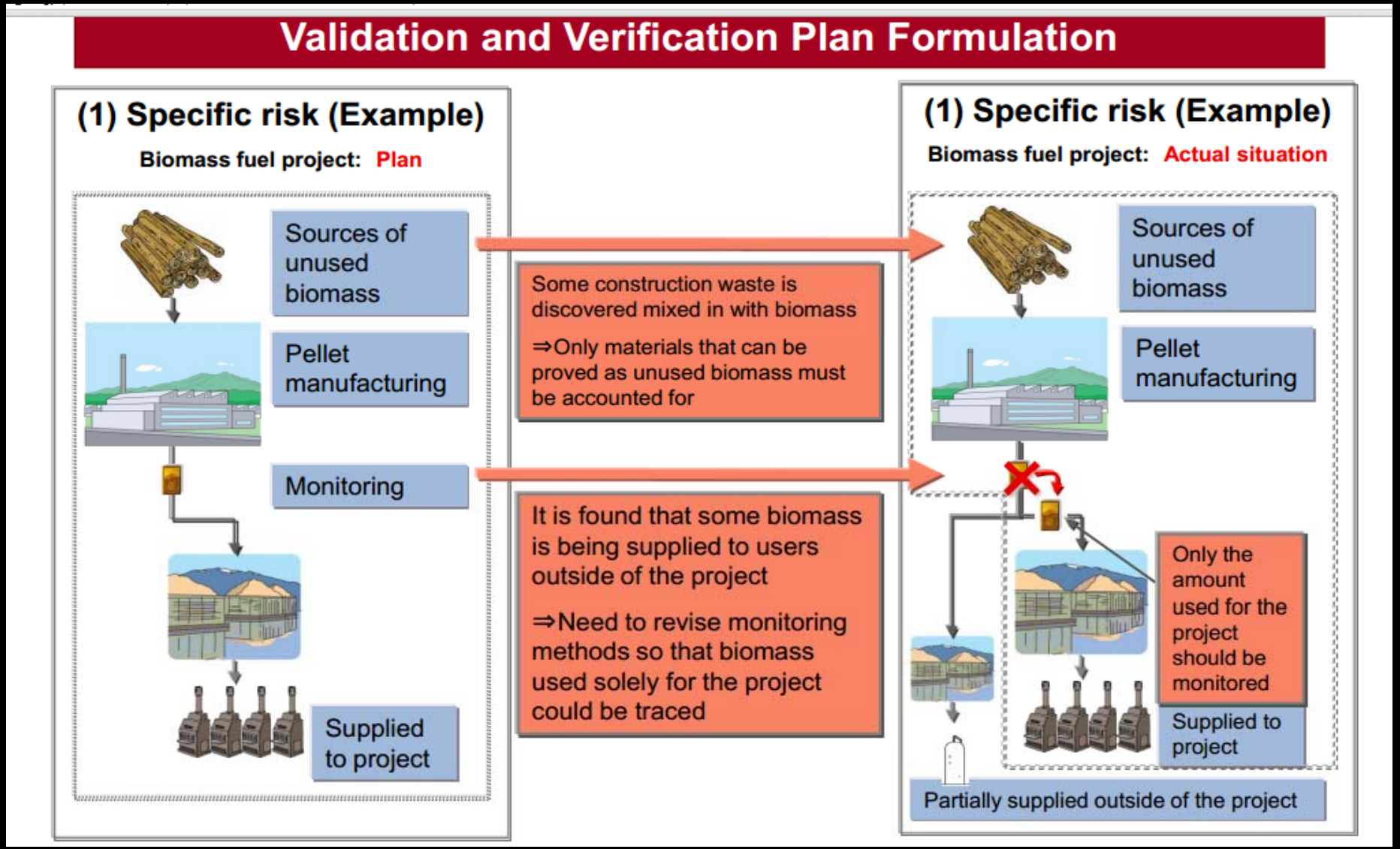
- Credits are issued for the period from 2008 to 2012.
- Certified credit amount is about 140,000t-CO_2.
- 80% of total credits come from forestry projects.
- 160 project are registered as of October 2011.

Approved Methodologies

E001	Biomass boiler use
E002	Biomass pellet boiler use
E003	Biomass pellet stove use
E004	Biodiesel use (made from waste edible oil)
E005	Sewage biosolid use
E006	Exhaust heat recovering and use
E007	Wood stove use
E008	Efficiency delivery system through Information and Communication Technology (ICT)
E009	Intelligent gas meter (ICT)
E010	High efficient light
E011	**High efficient boiler**
E012	**High efficient air-conditioning (ex. heat pump)**
E013	Energy saving through free cooling
E014	High efficient iron
E015	**Small hydroelectric generation**
E016	**Cogeneration**
E017	High efficient fan and pump and inverter
E018	Biogas use (made from waste)
E019	**Heat pump**
E020	Refuse paper & plastic fuel (RPF)
E021	Oil and gas use made from waste
E022	Heat recovery from waste combustor
E23	Eco-drive equipment
E24	**Photovoltaic generation**
E25	Fuel switch to biomass in cement kiln
E26	Energy saving through green roof
R001	Sequestration through thinning
R002	Sequestration through sustainable forestry
R003	Sequestration through afforestation
L001	Nitrous oxide emission reduction through use of low protein feed for stock
L002	Methane avoidance through manure management

As of Oct. 2011. Updated list can be found in: http://www.4cj.org/jver/system_doc/methodology.html

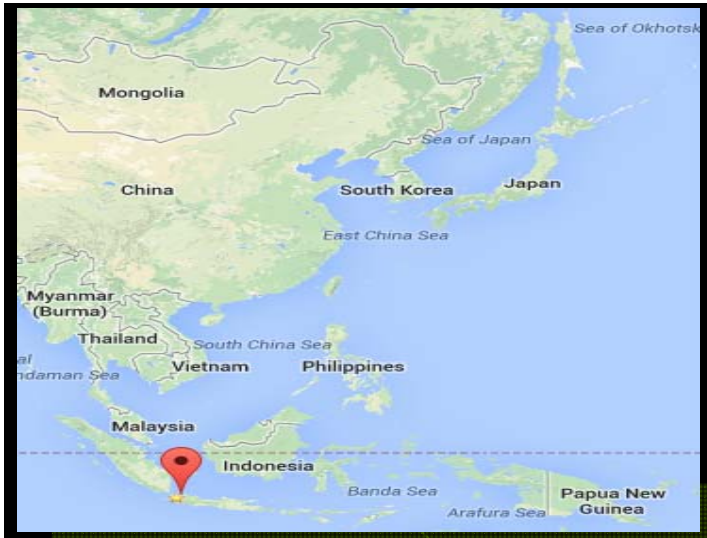
J-VER, Outline of the MRV
for Offset Credit (J-VER) scheme, Nov 2011:
http://j-ver.go.jp/document/e/J-VER_MRV20111115.pdf



CHRONOLOGICAL OF INDONESIA FORESTS

- Year 1808, Daendels establish *Dienst van het Boschwezen* (Jawatan Kehutanan – Department of Forests),
- Dai Nippon Jepang (1942-1945) Dient van het Boschwezen become Ringyo Tyuoo Zimusyo
- Indonesia Law No. 1/1967 Foreign Investment Act, Indonesia Law No. 6 Tahun 1968 Domestic Investment Act
- 1984, the Indonesia Wood Panel Association (APKINDO); A separate marketing arm was established for Japan by APKINDO, named NIPINDO, this company provides warehousing for incoming Indonesian plywood and wholesales it into the Japanese market.
- Between 1989 and 1991, Japan purchased 80% of Indonesian's concrete form plywood.

→ …4. How Indonesia Explain & Fulfill the Gaps



Indonesia's Forests (tropical region, 11 hours-365 days)

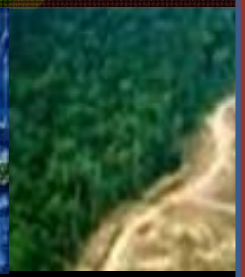
Forest Land Use System based on Forests Function

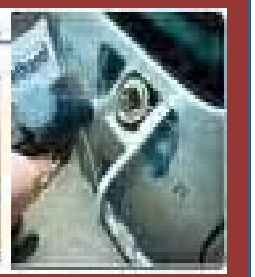
Conservation Forests 25.3 m ha.

Protected Forests 30,9 m ha

Production Forests 80.4 m ha

Community Forests





Ecosystem/ Environment

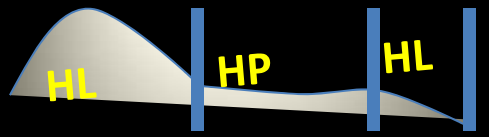
Services/ Commodity

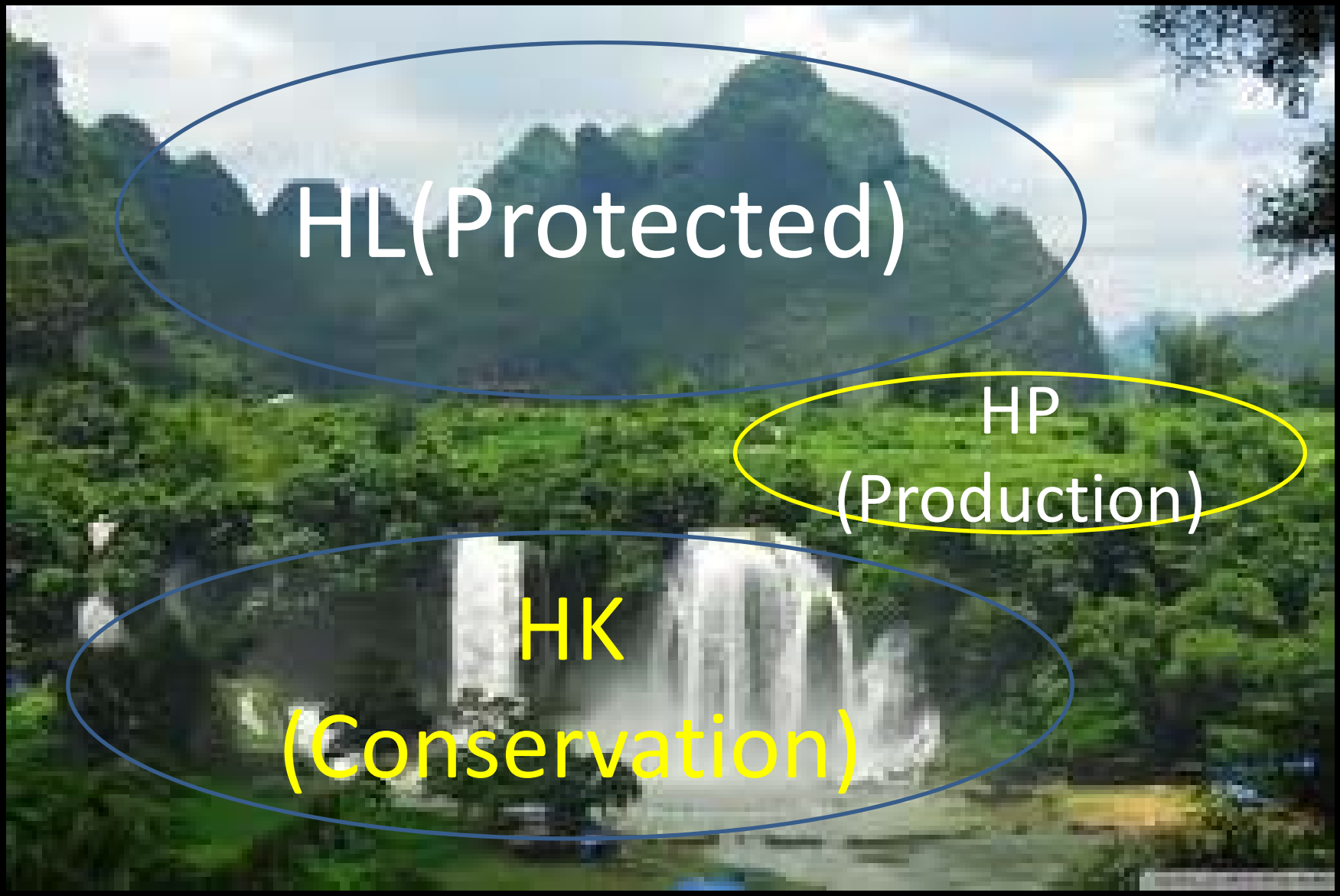
Renewable Energy (Wood pellet, Methanol)

VALUE RELATED TO CLIMATE CHANGE (CO2/C CYCLE), Green Renewable Products (biomass – energy, fiber

YR@YETTI RUSLI

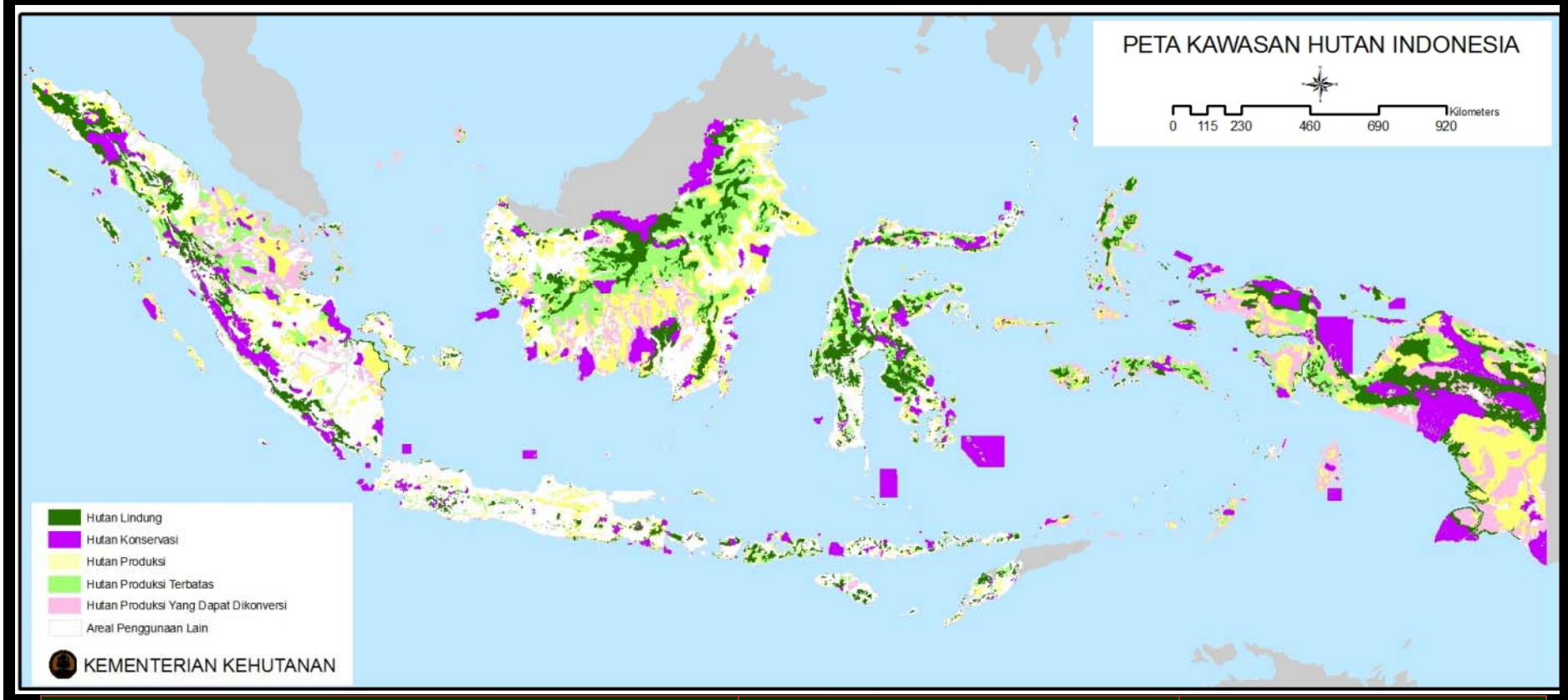
Tropical Forest Landscape, Modalities
Forest Function / Forest-land Classification





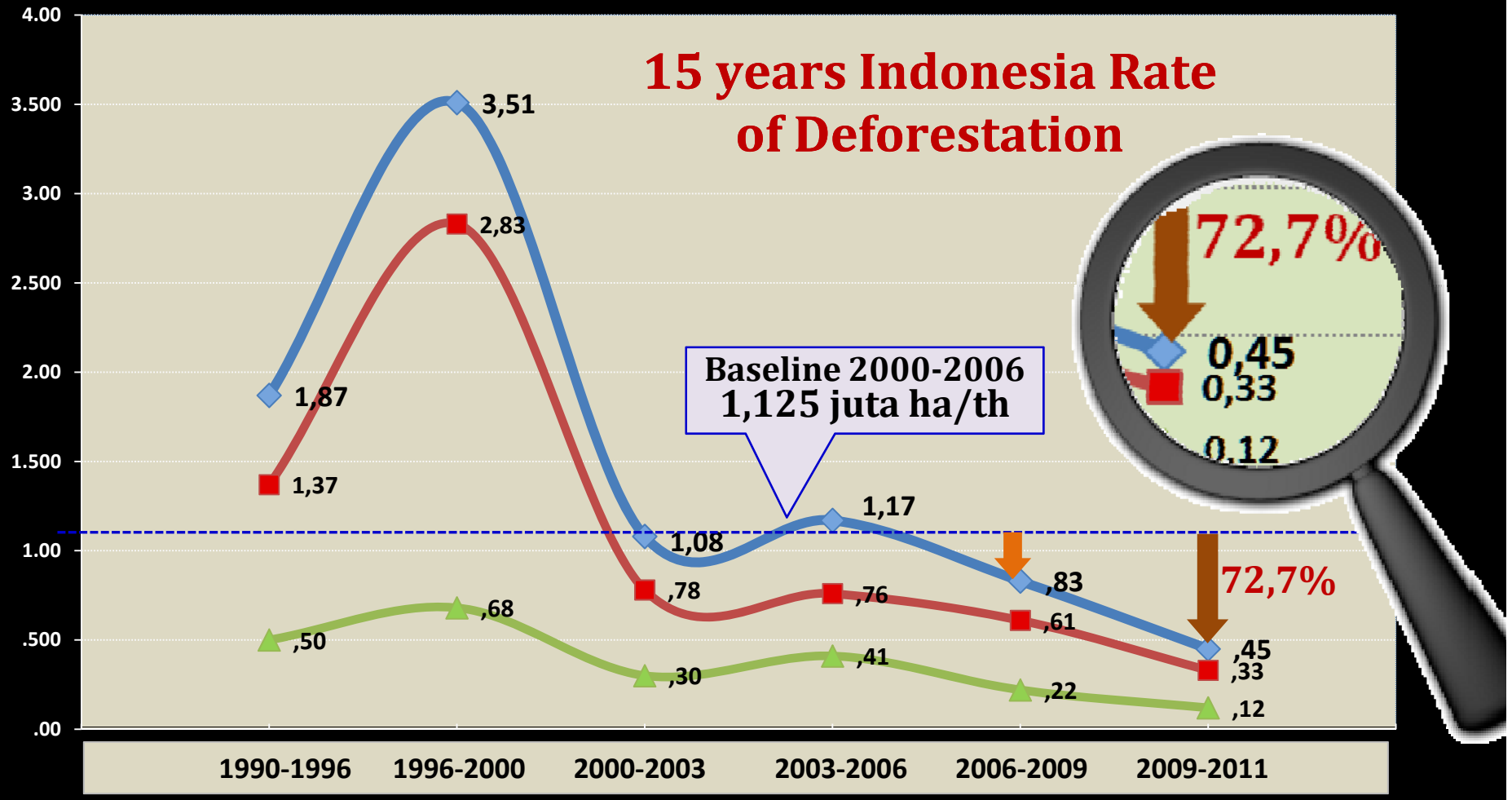
Forest Land Use Data

(December 2012)



Forest Function	Total Area (m.ha)	%
Conservation (NO TIMBER CUT)	22.25	11,74
Protected (NO TIMBER CUT)	30.097	15,87
Limited Production	27.874	14,70
Production	30.180	15,92
Convertible	17.818	9,40
Total Forest	**128.225**	**67,63**
Other land use	61.375	32,36
Total Land	**189.600.**	**100,00**

Nasional Remote Sensing Landsat ETM7+



Mill ha/ Year	1990-1996	1996-2000	2000-2003	2003-2006	2006-2009	2009-2011
Indonesia	1,87	3,51	1,08	1,17	0,83	0,45
Forest	1,37	2,83	0,78	0,76	0,61	0,33
Other Land Use	0,50	0,68	0,30	0,41	0,22	0,12

REMOTE SENSING DATA *) EXAMINATION BY WORLD WIDE EXPERTS

In Focus

March 2013

AsiaViews
regional insights global outreach

TRANSPARENCY IS KEY TO PROGRESS

Kuntoro Mangkusubroto

WHEN President Susilo Bambang Yudhoyono announced that the country's deforestation rate had dropped in 2011 to the lowest annual figure of 450,000 hectares of forest cleared, he was optimistic that Indonesia was well on its way to reducing significant amounts of carbon emissions from land-use change.

In a spirit of openness, the President's Delivery Unit for Development Monitoring and Oversight (UKP4)/REDD+ Task Force and the Ministry of Forestry gathered together more than 50 international forestry experts and observers in Jakarta last month to discuss and share their knowledge of a reliable deforestation calculation methodology. In the two-day discussion—attended by experts from various nations, including Brazil, the Netherlands, Japan and the United States—participants shared their experiences in approaches and methodologies for deforestation calculation. Across the board, appreciation was expressed for the Ministry of Forestry's willingness to share methodologies and spatial data related to deforestation on its website.

→ .. 5. World Companionships Up scaling best practices

Forests: Fuel Wood Plantation & Biomass Energy

- GREEN COMMODITIES (Forest Carbon Neutral; Replacing CO2 Fossil Energy) :
  - From Fuel Wood / Kayu Bakar to…
  - Wood Pellet
  - Torrefied Wood
  - Wood Methanol
  - Wood Hydrogen
- Management: Plantation on Bare land with Short Rotation Coppice System
- Market, technology and Investment

FUEL ESTATE WOOD ENERGY: FUEL WOOD, PELLET WOOD, TORREFIED WOOD, WOOD METHANOL, HYDROGEN

-SRC remain productive for up to 30 years
-productivity 2- to 5-fold greater
(http://www.tappi.org/Downloads/unsorted/UNTITLED---pulp0160pdf.aspx)

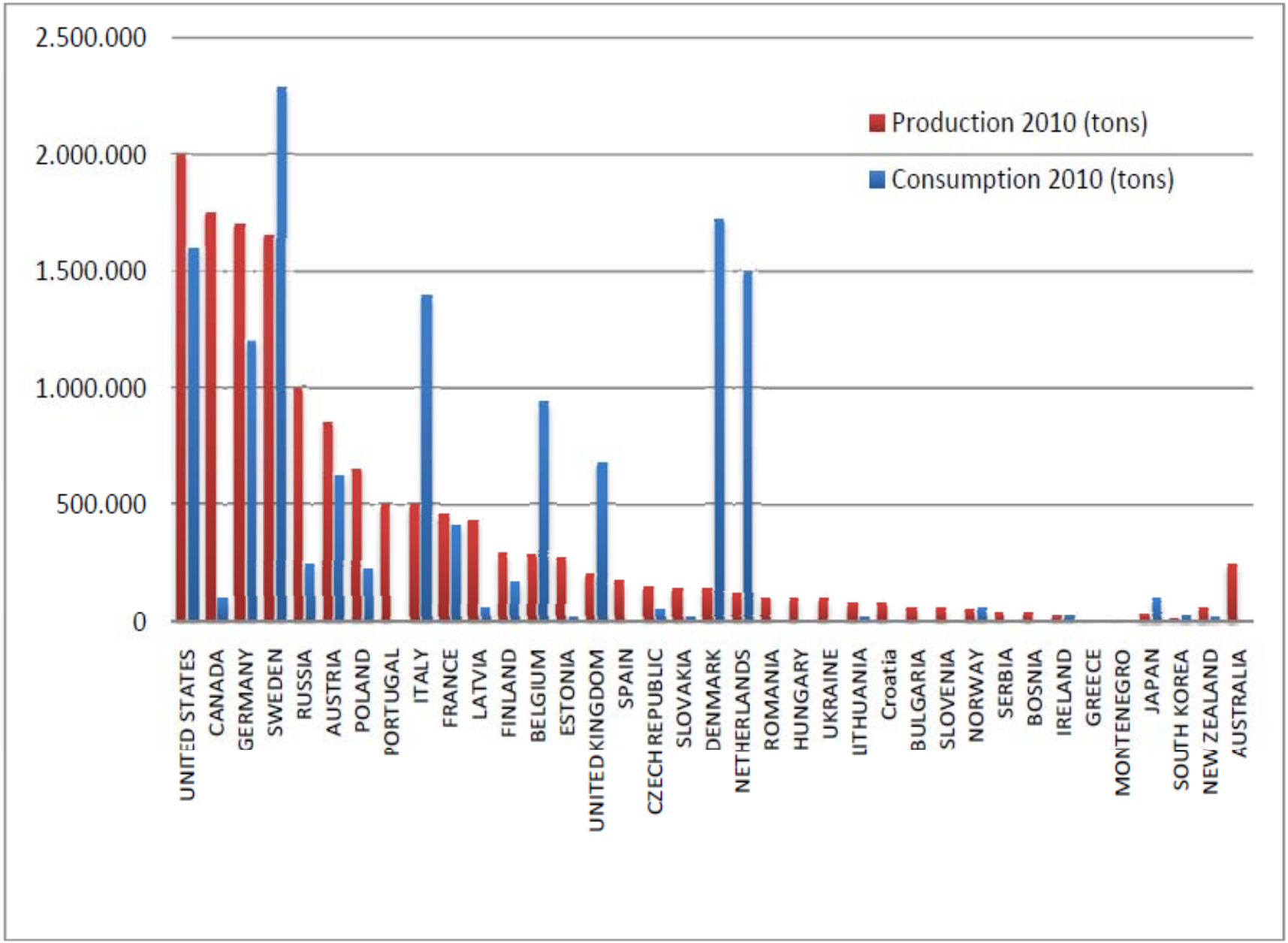
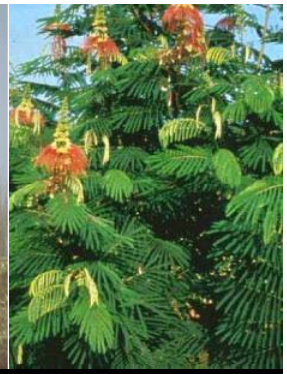
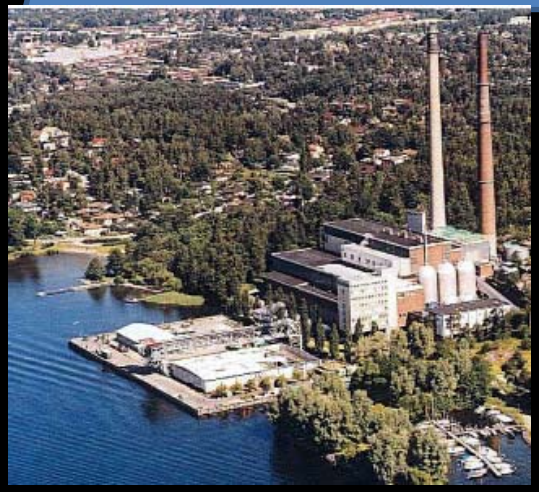


Fig. 1.6 – Wood pellet production and consumption by country in 2010

CURRENT USE OF WOOD PELLET

http://www.pelletclub.jp/en/pellet/use.html





300MW boiler facility

Tanker, which brings wood pellets for facility. (Sweden)
Source: Pamphlet of Birka Energy

15-40kW small-scale boiler (Sweden)

Made in Japan

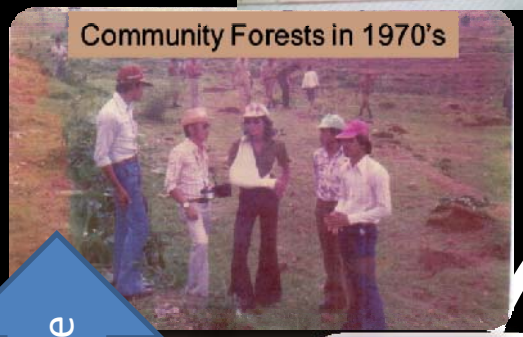
Made in Sweden

WOOD (GASIFIER) STOVE

Successful of Local (Madura Island) Knowledge Supporting Modern green life, GREEN PLANET

National Reward Kalpataru 2010

Minister of Forestry Indonesia, 2011



Start here

Use of Local knowledge started y 70's

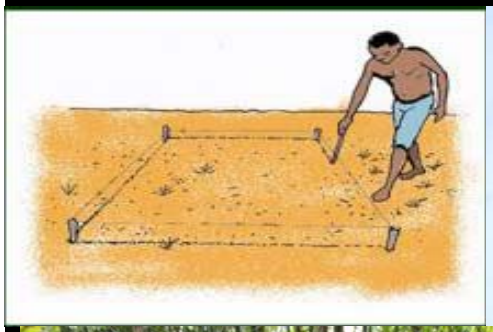
Green ecosystem, trees, Fruit, wheels, livestocks, biogass

Community Forests Green Certification (2011)

Short Rotation Coppice for Pellet (>200 ha Jan 2013)

Small Scale Community Pellet Processing Plant (on going)

FUEL ESTATE: Short Rotation Coppice System

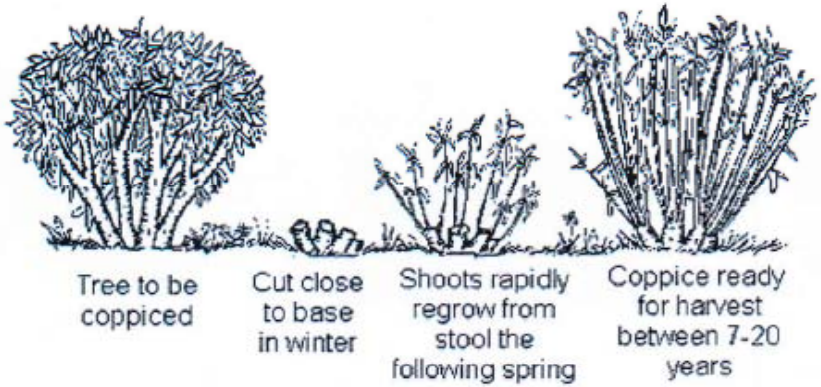


Fuel Estate Short Rotation Coppice
WOOD Biomass Energy Source

How to Supply Big Volume

Establishment of SRC for Wood Pellet – What is the SRC

- SRC(Short Rotation Coppices : 1-2 year rotation)
  - Planting of suitable varieties of coppices
  - Repeated cutting(combined harvest/chipping operation)
  - Resprouting of the crop 1-2 years cycle for up to 20-25years



Source: Solar Park 2012

Short Rotation Coppice System

In BAHASA (3T): Tanam, Tebang/Pangkas, Trubus

-SRC remain productive for up to 30 years
-productivity 2- to 5-fold greater
(http://www.tappi.org/Downloads/unsorted/UNTITLED---pulp0160pdf.aspx)

Possibility of Pellet & Torrefied Wood (substituting Coal)

- Raw materials: Fuel Estate from bare land, very short time (first harvest 2 years plantation; next harvest every 1 years → produce torrefied wood
- January 29 2013, New Biomass Energy Makes Third Bulk Shipment of 4,000 tons Torrefied Wood Pellets to Europe; produced at New Biomass Energy's plant, Quitman, Mississippi.
- Future Investment for raw materials & technology

- NATIONAL & SUB NATIONAL
  based on Forestry Development Plan, rules & regulations .. Best Practices /Forest climate change Scheme ..up scale ~ REDD+

- FOREIGN PARTERSHIPS Forest & CC ~ REDD+
  (G to G → B to B): establishement of Standardization (Inventory, MRV)..KEY IMPLEMENTATION
  - Carbon Conservations :
    - Carbon credits
    - Buffer zone green development
  - Improved Green Products Biomass Based (Wood based products & wood biomass energy):
    - Investment
    - Technology

Come & joint
greening the one planet earth
together through
sustainable forests &
green renewable biomass

Thank You

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