

# Bioenergy Sustainability

Helena Chum, NREL, RSB

Adrian Suharto, Neste Oil

Andrea Rossi, FAO

Contributions from :

- Cesar Velarde, ICAO
- Jean Marc Roda, CIRAD
- Tommy Hendaro, Pertamina
- Norman Perdana, Pertamina
- Afif Fajari , Indonesia Ministry of Transportation
- Sayuta Senobua, Indonesia Ministry of Transportation

# Q1. Sustainability Challenges

- Land use change
  - Deforestation
  - Food security
- Emissions
  - Air, water, soil
- Integration of Politics and Implementation
  - Regulatory Framework
  - Lack of enforcement (adaptation)
  - Governance fragmentation
- Implementation of Sustainability Standards
  - Examples for smallholders exist (e.g., RSB small holder standard\*), are being tested and continuously improved
- Availability of Sustainable Production
  - Degraded lands?
  - Expansion (multiple government views)

\*<http://rsb.org/activities-and-projects/smallholder-standard/>

# Q2. Innovative Sustainability Approaches

- Territorial Unit (KPH) - Indonesia
  - Forest Management Unit (*Kesatuan Pengelolaan Hutan-KPH*)
  - Management of conflicts of use, environment, social, at village levels, aligned with provincial, district, and national government. Various sources of funding national and multilateral (WB, ADB, etc)
- Biomass towns – Japan and pilots SE Asia
  - MAFF GBEP presentation  
[http://gec.jp/gec/en/Activities/FY2009/ietc/wab/wab\\_day3-7.pdf](http://gec.jp/gec/en/Activities/FY2009/ietc/wab/wab_day3-7.pdf)
- Village Energy Security Program (India)
  - <http://neda.up.nic.in/PROGRAMMES/VESP.PDF>
- Indonesia Sustainable Palm Oil for all uses

## Forest Management Unit (*Kesatuan Pengelolaan Hutan-KPH*)

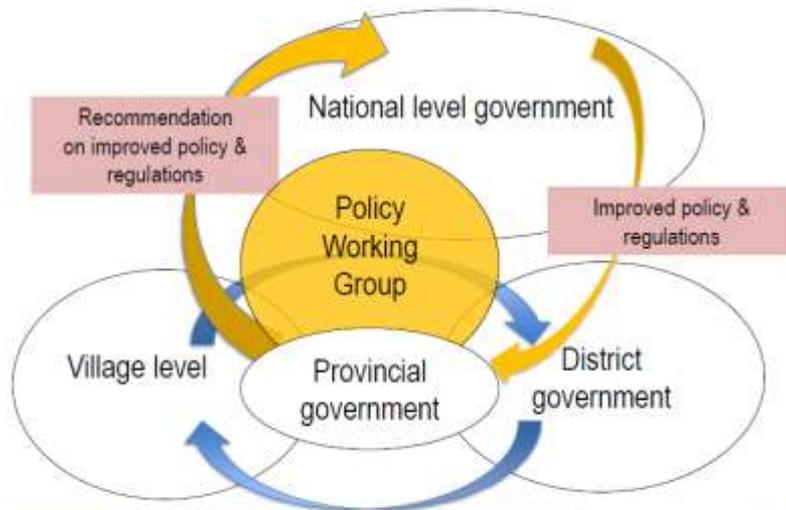
A landscape-platform of a certain ecological function that allows:

- ❖ Conservation, rehabilitation and economic and sociocultural activities can be complementary implemented in addressing ecological problems, as well socioeconomic and tenurial conflicts under an integrated management
- ❖ Interaction between key stakeholders, including local communities, to collaborate in managing the resources and resolve conflicts participatively

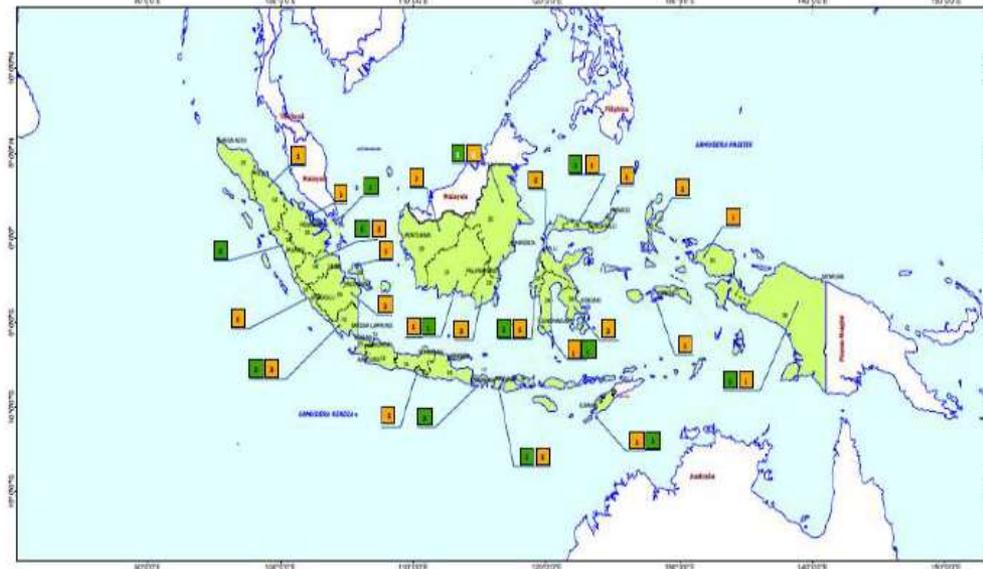
“A best management practice”

Needs to be continued and strengthened per pilot recommendations

### 6.4. Impact pathway: policy working group

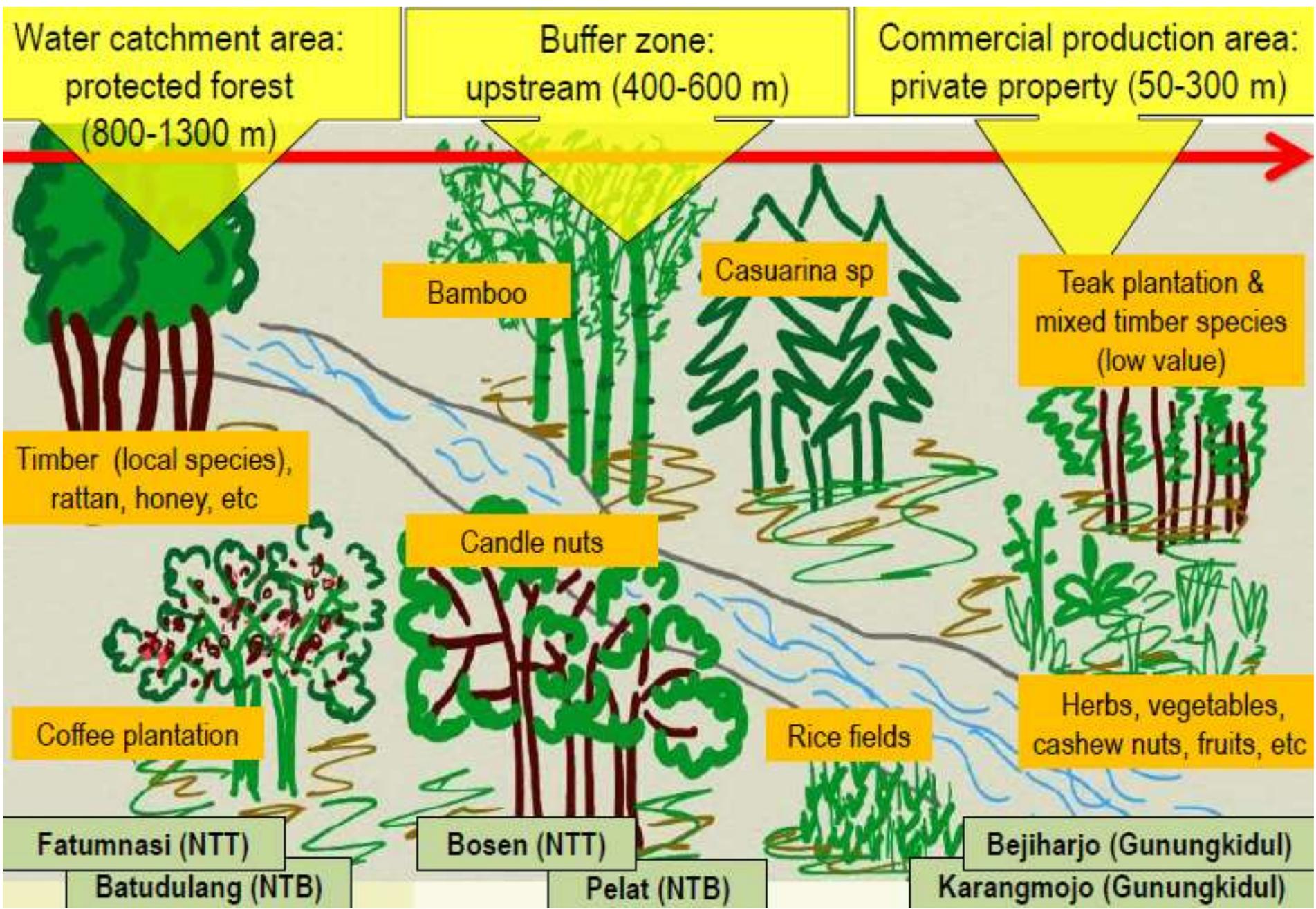


### 6.1. National level FMU Pilots: 36 sites by 2012



<http://www.fao.org/fileadmin/templates/rap/files/meetings/2013/131103.03-indo.pdf>

[https://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/IMPROVING%20LOCAL%20GOVERNANCE%20THROUGH%20THE%20KPH%20SYSTEM\\_FIPYOGYA\\_25092013\\_Final.pdf](https://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/IMPROVING%20LOCAL%20GOVERNANCE%20THROUGH%20THE%20KPH%20SYSTEM_FIPYOGYA_25092013_Final.pdf)



**Pilot Examples – restoration of landscape for forest protection, watershed management, ...**

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▶ Smart Community Exhibition

▶ PPS Exhibition

▶ Biomass Expo

▶ Plant Factory & Smart Agri Zone

▶ Next Generation Vehicles Exhibition

▶ Cloud Community 2015

▶ Exhibitors List

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## Biomass Expo

### Manufacturing equipments and materials for Biomass energy

## Biomass Expo



This expo is a prime opportunity to transmit the latest information on biomass conversion technology (power generation, heat utilization, fuel ) which effectively uses widely dispersed biomass resources, as well as material conversion and utilization technologies such as composting and fodder usage.

In July of 2012, the FIT (feed-in tariff) policy was implemented , and the buying price of biomass power generation was also established. As an energy source suited to localities, an opportunity to create employment and cash flow, this policy will be used to promote urban development and regional regeneration by combining various renewable energies.

**Organizer : Biomass Expo Executive Committee**

**Co-organizers : Japan Organics Recycling Association(JORA), The Nikkan Kogyo Shimbun, Ltd.**

### Exhibition Focus

#### ●Biomass Power Generation & Biomass Heat Utilization

Plant design/manufacturing technologies, gas transitional technology, thermal decomposition/direct liquefaction technologies, hydrolytic degradation/ direct liquefaction

## Q3. Regional – Level Sustainability Indicators

- Yes, where markets are integrated
- Work better if done beforehand

## Q4. Voluntary Standards

- Developed locally work best
- Small holder involvement (less foreign intervention)