

Policies and Systems toward Sustainable Management of Production Forests in Indonesia and Malaysia

Workshop on SDG 13 “Climate Action” and 15 “Life on Land”

Sanjo Conference Hall, University of Tokyo, 18 Jan 2017

Hiromitsu Samejima
Institute for Global Environmental Strategies



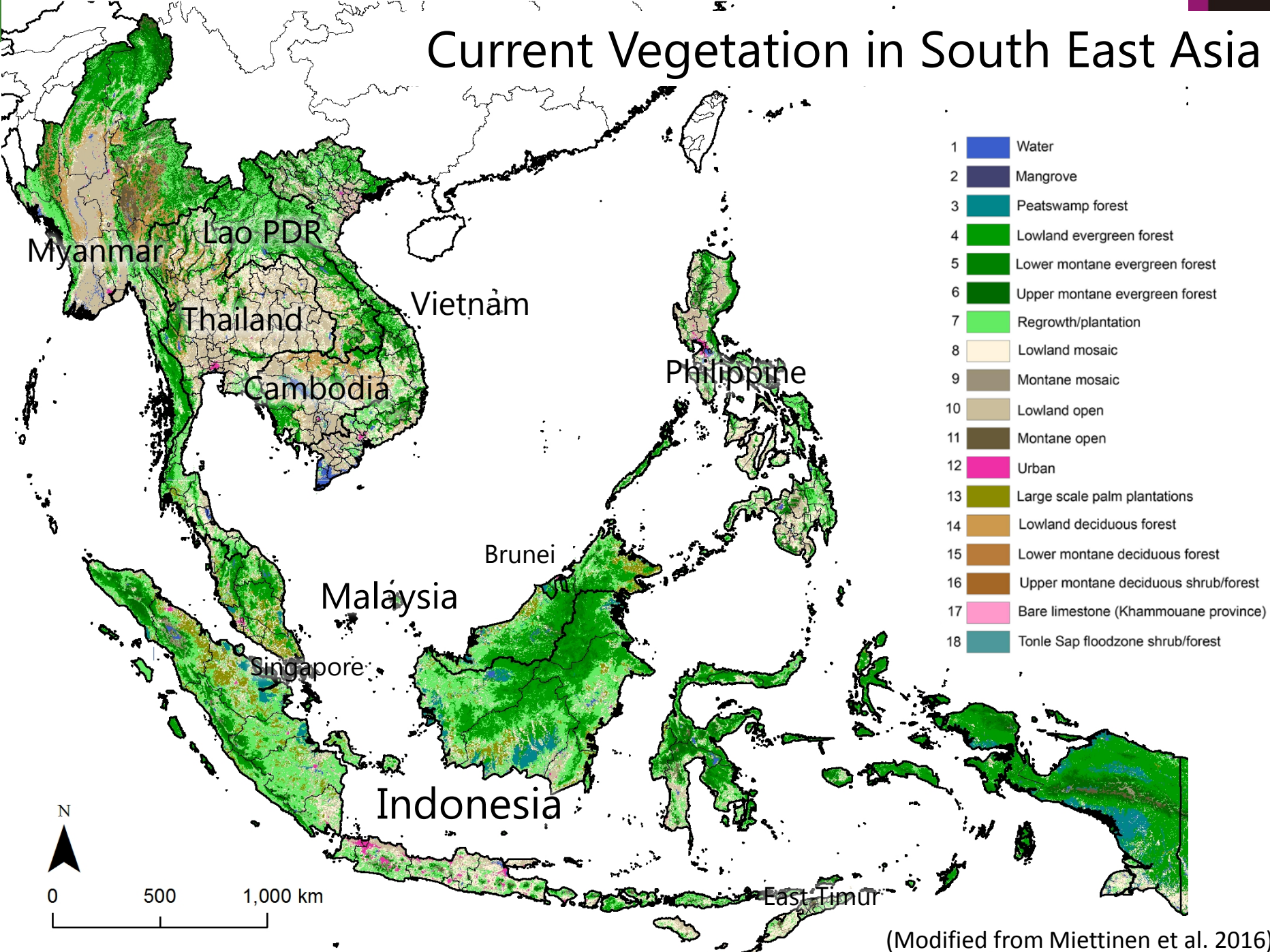


Goal 15: **Sustainably manage forests**, combat desertification, halt and reverse land degradation, halt biodiversity loss

- By 2020, ensure the conservation, restoration and sustainable use of terrestrial ... ecosystems and their services, in particular forests, ...
- By 2020, promote the implementation of **sustainable management of all types of forests**, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally
- Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
- Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems
- Mobilize significant resources from all sources and at all levels to finance **sustainable forest management** and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

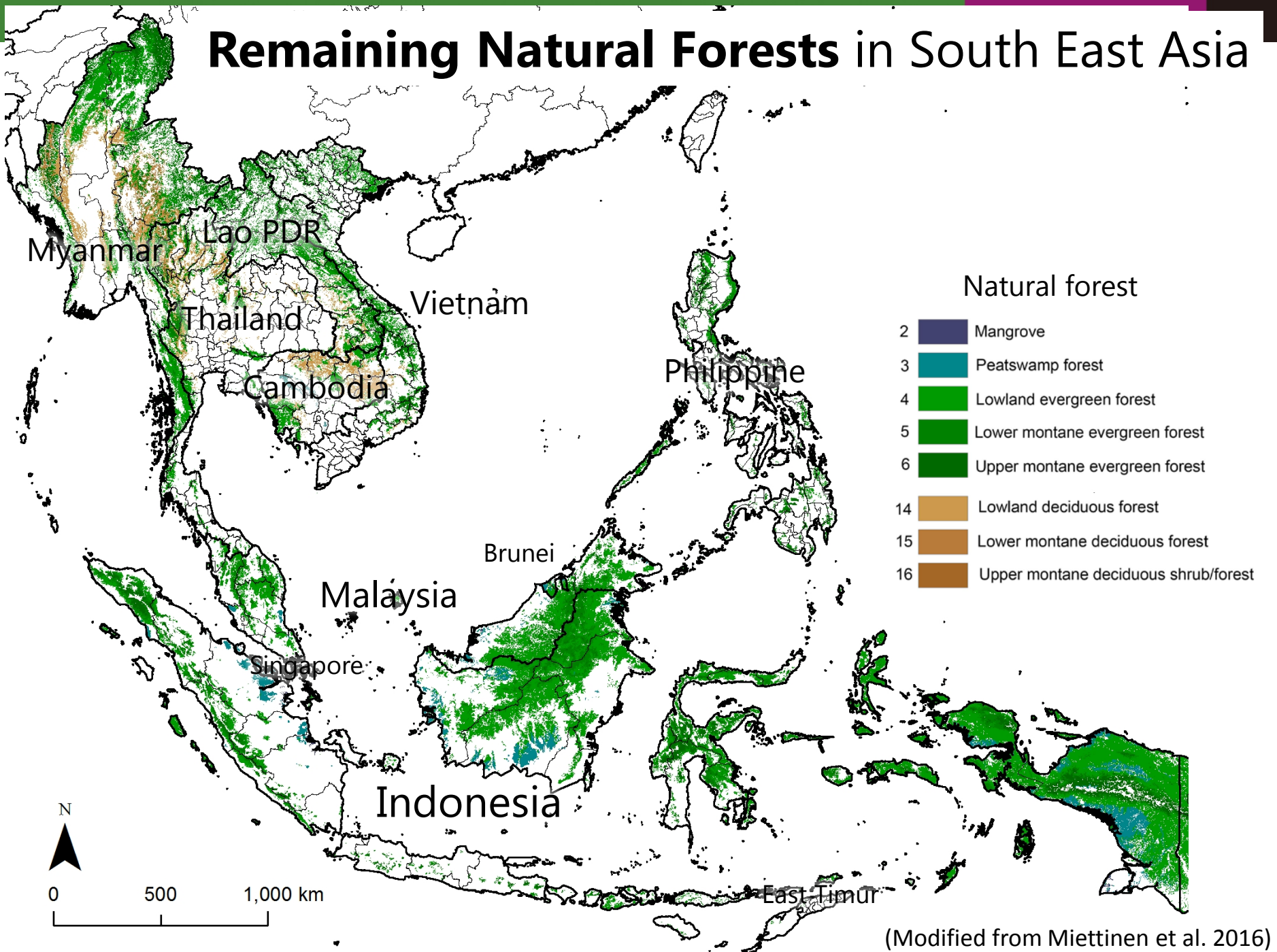
- Why sustainable management of production forests is important especially in Indonesia and Malaysia?
- How to archive the sustainable forest management? and how can earth-observation system contribute to it?

Current Vegetation in South East Asia

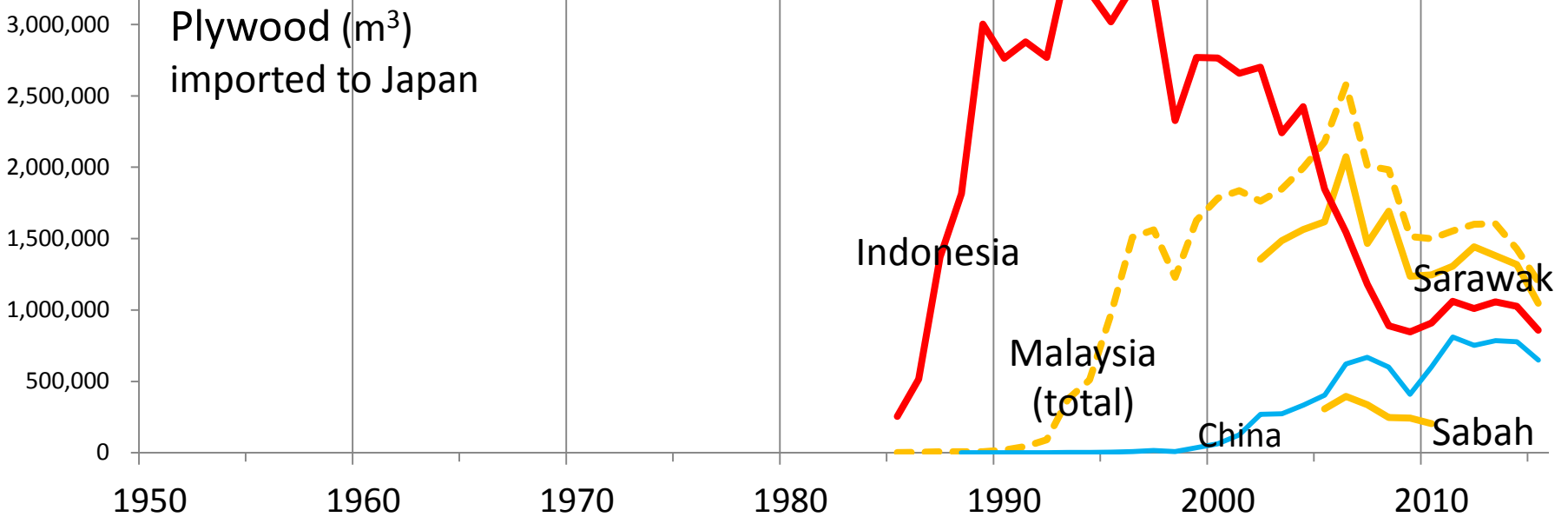
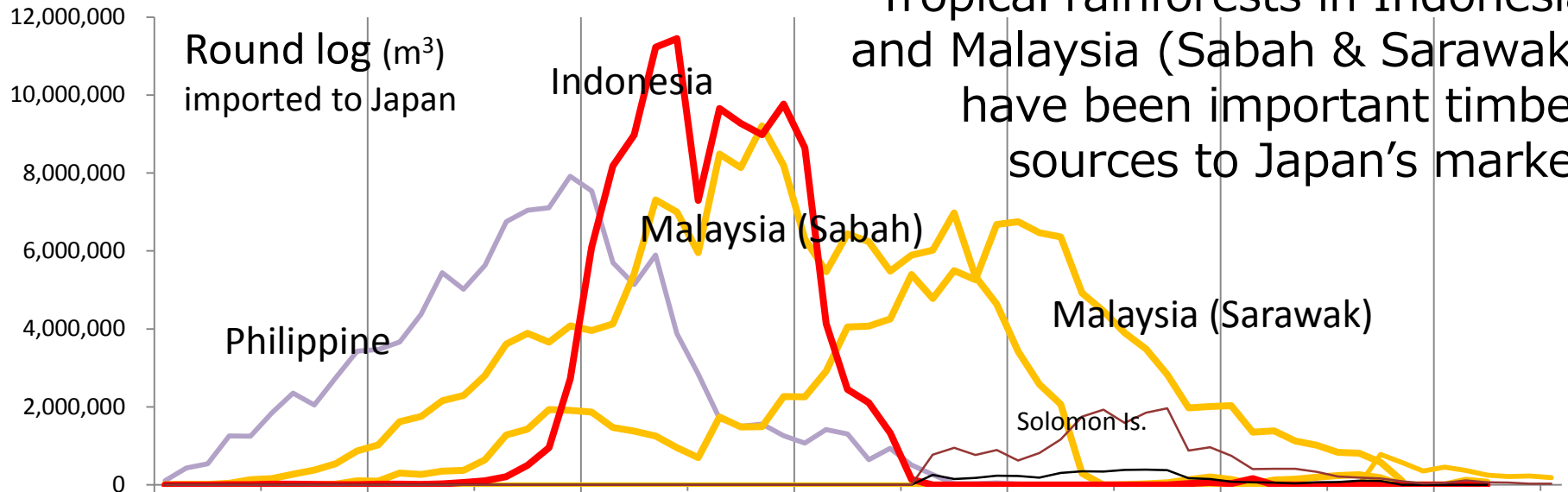


(Modified from Miettinen et al. 2016)

Remaining Natural Forests in South East Asia



Tropical rainforests in Indonesia and Malaysia (Sabah & Sarawak) have been important timber sources to Japan's market



Primary forest (Roda Mas, East Kalimantan) certified by FSC



Natural forest just after harvesting



Just after 1st harvesting
Upper Baram, Sarawak



Many production forests were over-exploited
→ Converted to secondary forest

Cause

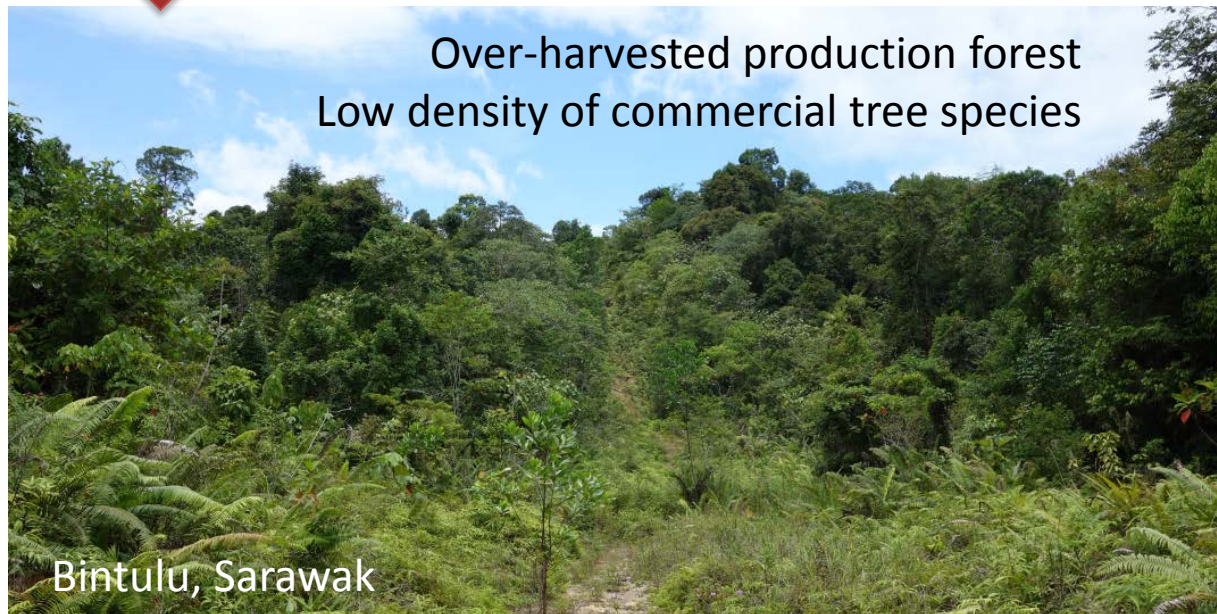
- Over-harvesting including small trees
→ Loss of next generation
- Disturbance of forest floor by bulldozers
- Short term rotation of harvesting
- Overlapping logging licenses
- Illegal poaching for timber or agricultural activities



Track of bulldozers

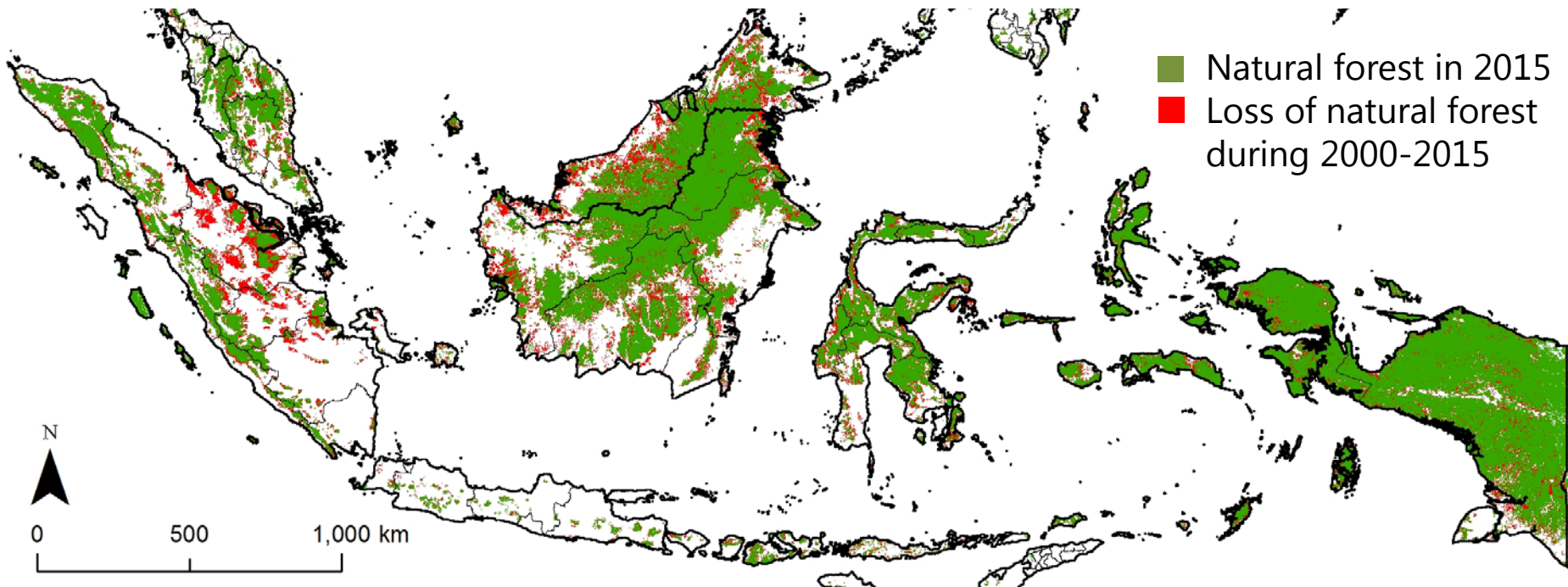


Over-harvested production forest
Low density of commercial tree species

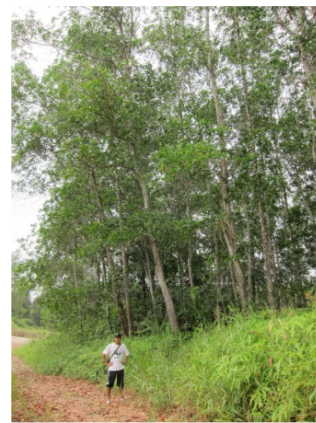


Bintulu, Sarawak

Current deforestation drivers in Indonesia and Malaysia: Clear-cutting to develop oil palm and fast-growing tree species



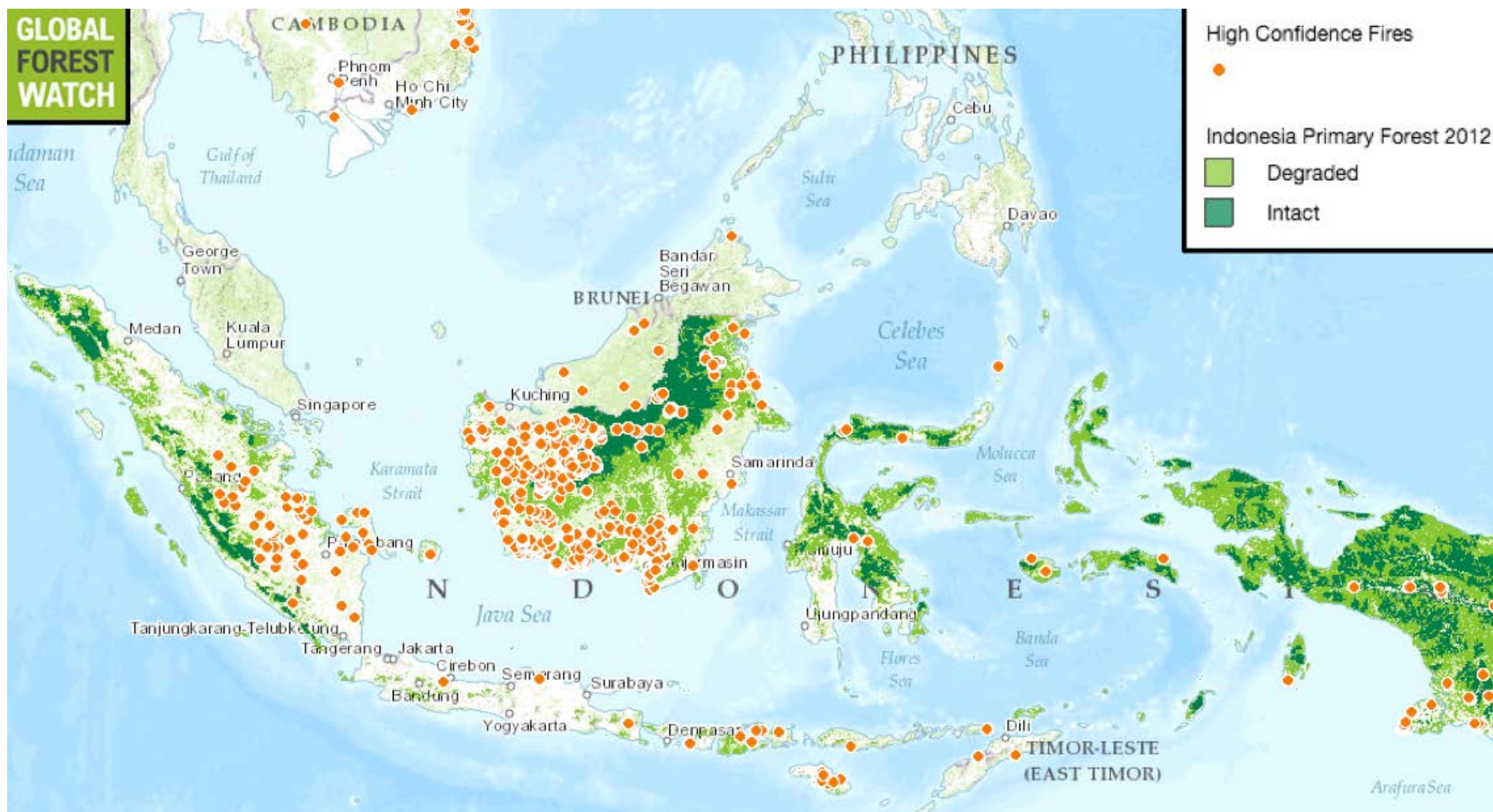
Clear cutting for oil palm plantation



Clear cutting for Acacia plantation



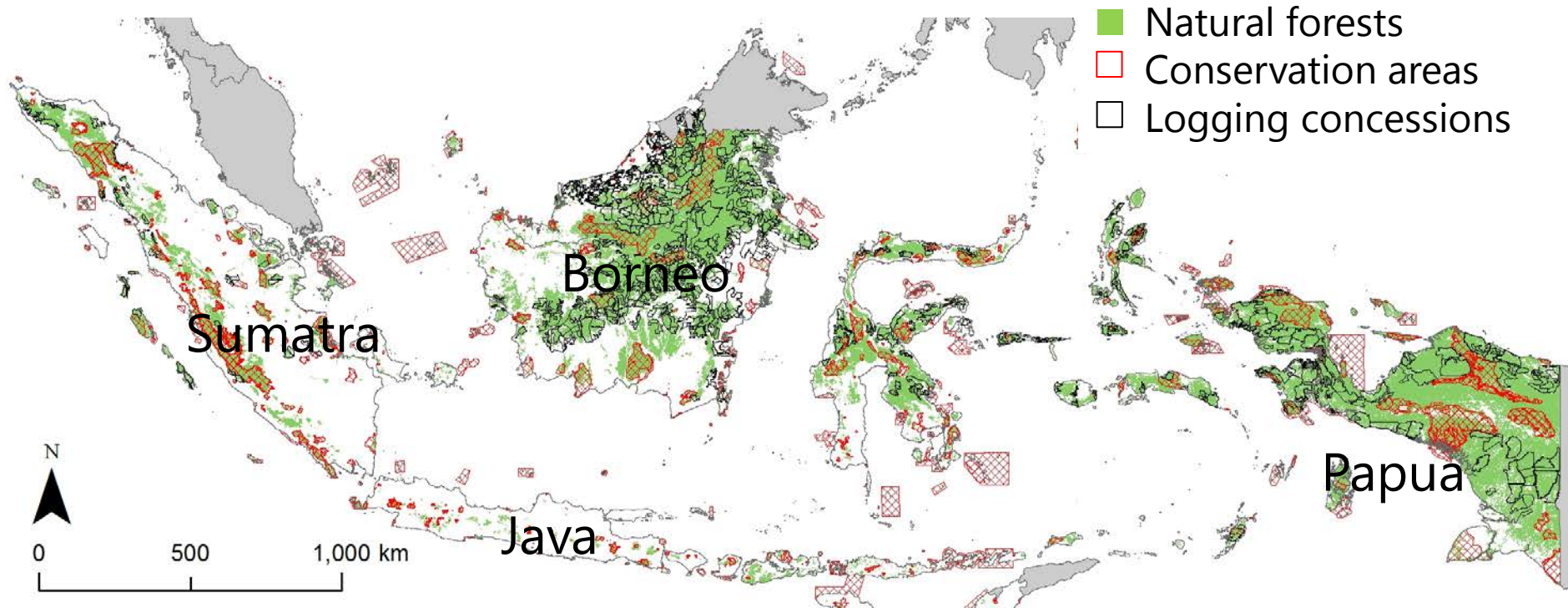
Degraded forests are vulnerable to forest fires



NASA data from Global Forest Watch shows fire activity during 2015/8/10 - 8/17
<https://news.mongabay.com/2015/08/haze-chokehold-fires-efforts-to-save-indonesias-forests/>

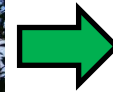
So, how can natural forests in Indonesia and Malaysia be maintained?

System managing the remaining natural forests in Indonesia and Malaysia (Sabah & Sarawak)



- Java, Sumatra: **Conservation areas** (e.g. National Parks) cover most of the remaining natural forests
- Borneo, Papua: **Logging concessions** for timber production are still dominants to manage natural forest

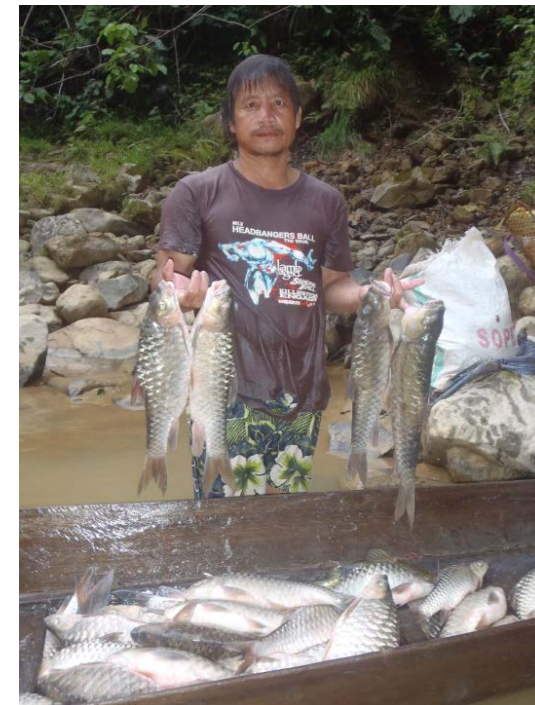
Logging concessions can maintain the natural forests as long as they can be managed properly



Sustainable management of logging concessions can archive both economic benefit and natural ecosystems



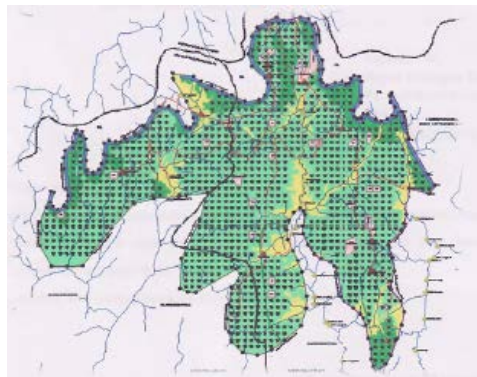
The forests in logging concessions also can still supplies various ecosystem services to local communities (Oil palm or fast-growing tree plantations can not)



Sustainable Management of production forests has been promoted both in Indonesia and Malaysia

(3) CHECK

Whole area resource survey every 10 years (IHMB)



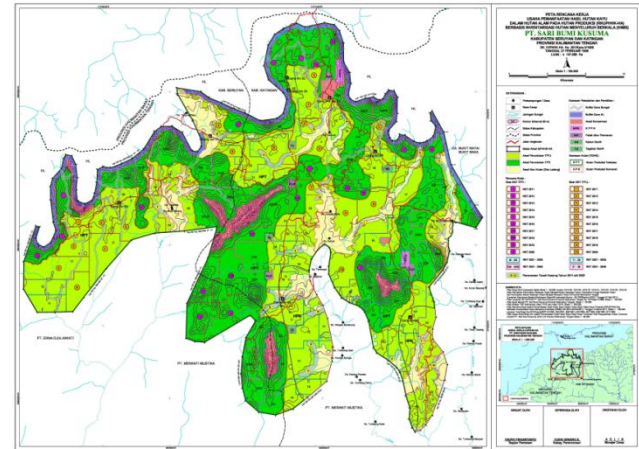
(4) ACTION



(1) PLAN

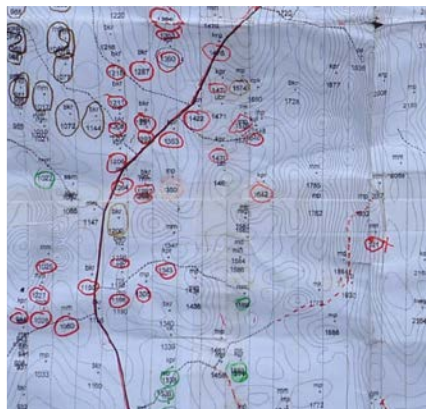
10 years management plan (RKU)

Harvesting plan 2011-2020



(2) DO

Reduced impact logging



Annual harvesting plan (RKT)
All harvestable trees are identified and mapped before harvesting

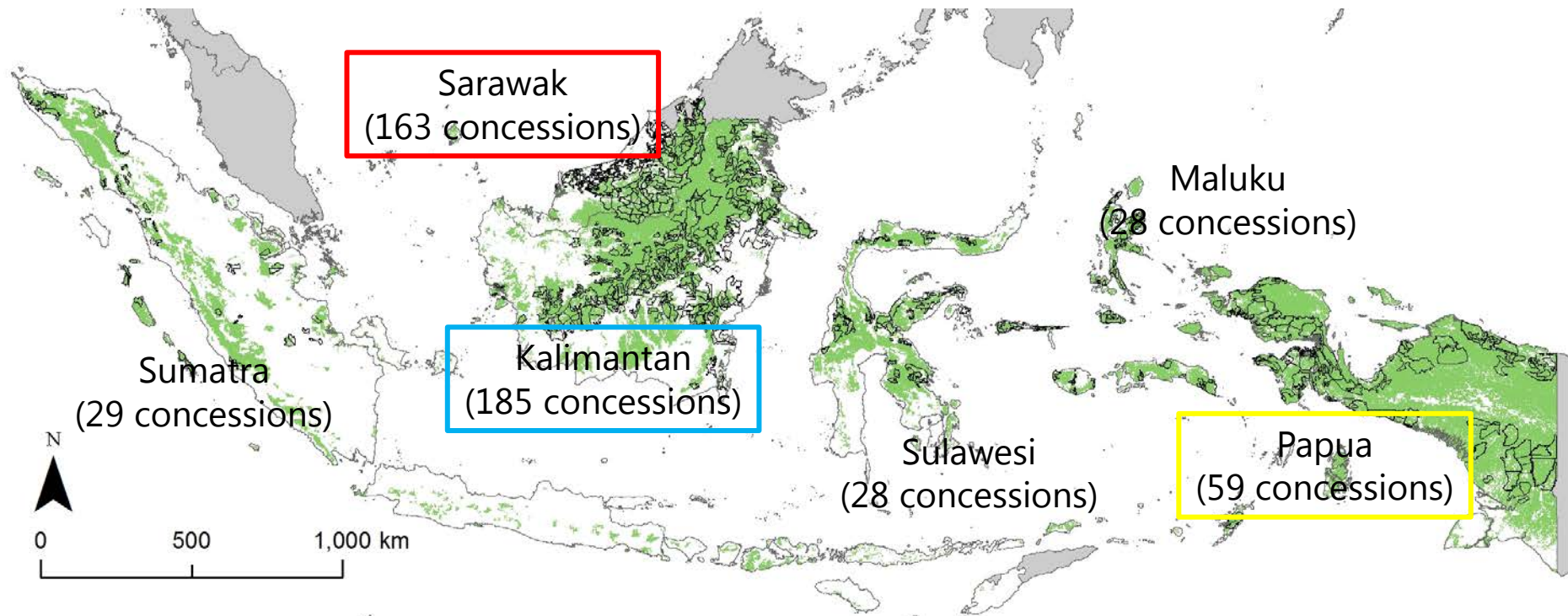


Mono-cable harvesting (TNC 2009)
Reduce forest-floor destruction by bulldozers

An example to use earth observation system for sustainable forest management of logging concessions

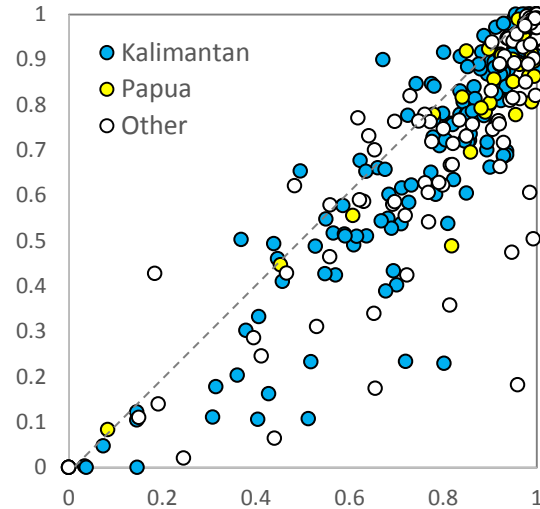
Change of natural forest are in logging concessions in Indonesia and Sarawak (Malaysia)

- (1) 2000-2010
- (2) 2010-2015



Sustainability of natural forests in logging concessions

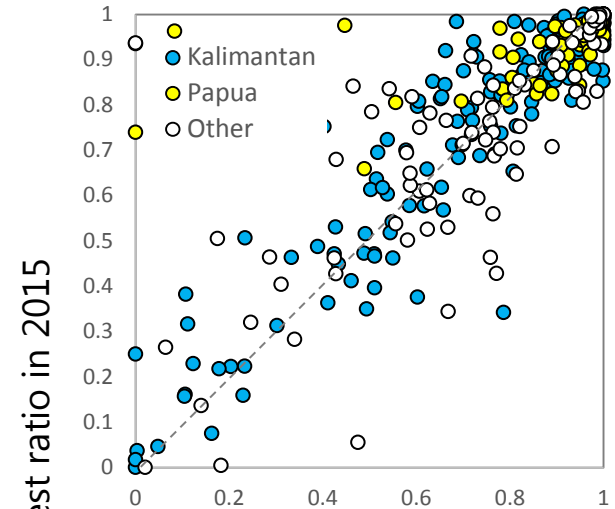
Change of natural forest ratios 2000-2010



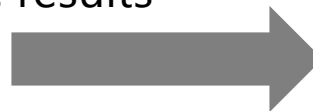
Sustainability of natural forests in logging concessions in Indonesia was well improved



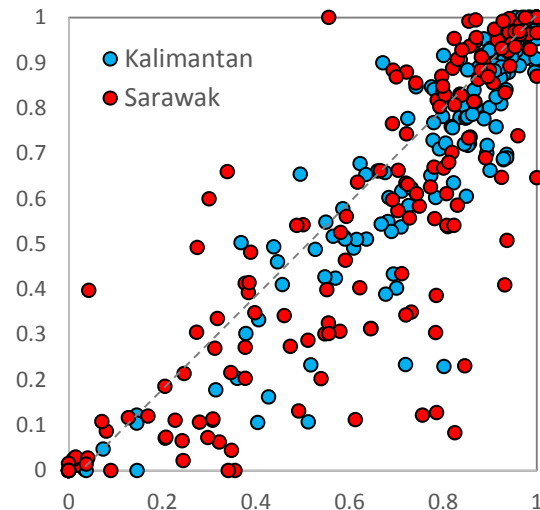
Change of natural forest ratios 2010-2015



Improvement of logging concession managements in Sarawak needs more time & effort to get the results

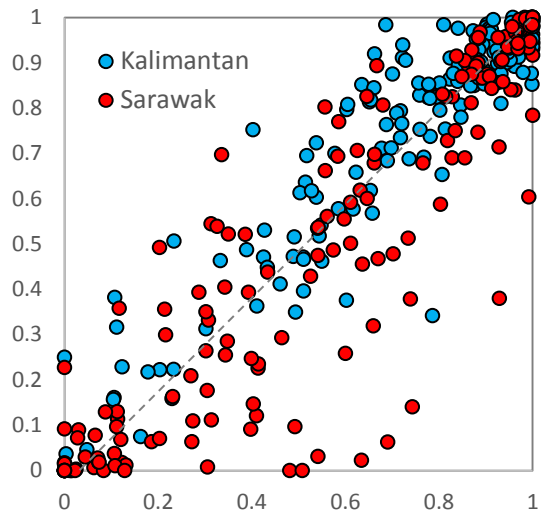


Natural forest ratio in 2010



Natural forest ratio 2000

Natural forest ratio in 2015



Natural forest ratio 2010

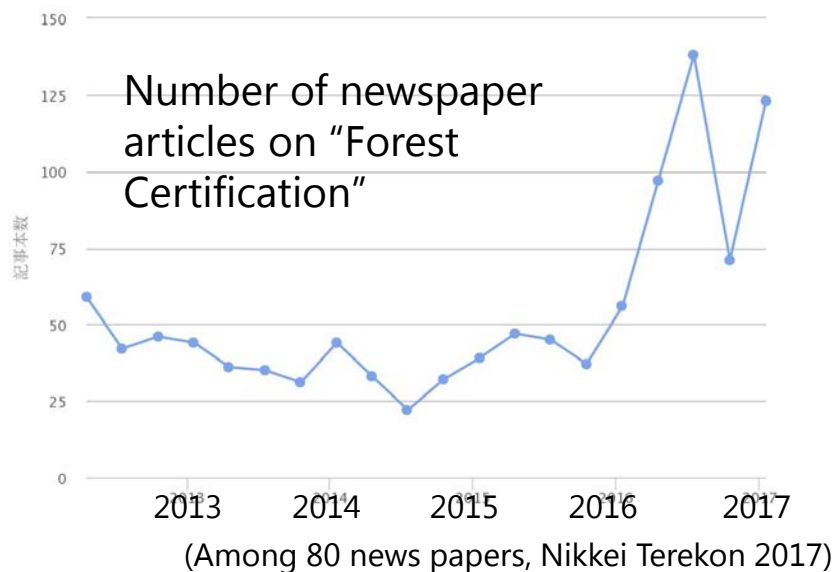
Recent change in Japan

① New "Clean Wood Act (2016)" for legal timber procurement

- National Diet approved "Clean Wood Act" in 2016, will issue May 2017.
- The New Law promotes timber producing, trading and housing companies deal with only legal timbers
- Japanese government has responsibility to provide status of forest management, including the legal enforcement in timber producing countries to private companies
- Detail information of the status of timber production forests will contribute to archive the purpose of Clean Wood Act

②Tokyo Olympic 2020

- Many buildings will be constructed by woods
- Procurement policy for timber produced through sustainable forest management
- Interests to forest certification for sustainable management has increased since 2016



Evaluation of performance of forest managements can contribute Japan's contribution for sustainable management of the production forests

Natural forest management is a double-edge sword

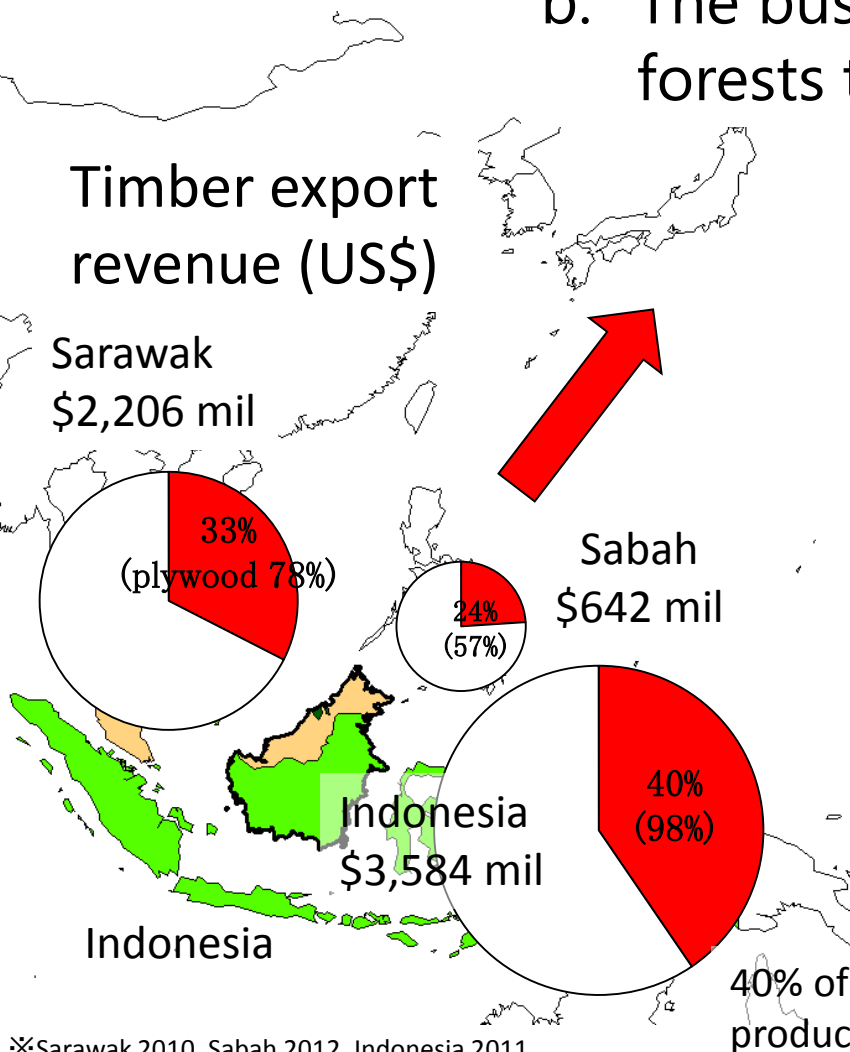
- The business can destroy natural forests
- The business can prevent the natural forests turn to agricultural lands

Timber export revenue (US\$)

Sarawak
\$2,206 mil

Sabah
\$642 mil

Indonesia
\$3,584 mil



Conclusion

Earth-observation system can help both Indonesia & Malaysia and Japan contribute to archive SDG Goal 15: Sustainable forest management through responsible timber production and trading