

Environment, Conflict and Participatory Mapping in Indonesian Borneo



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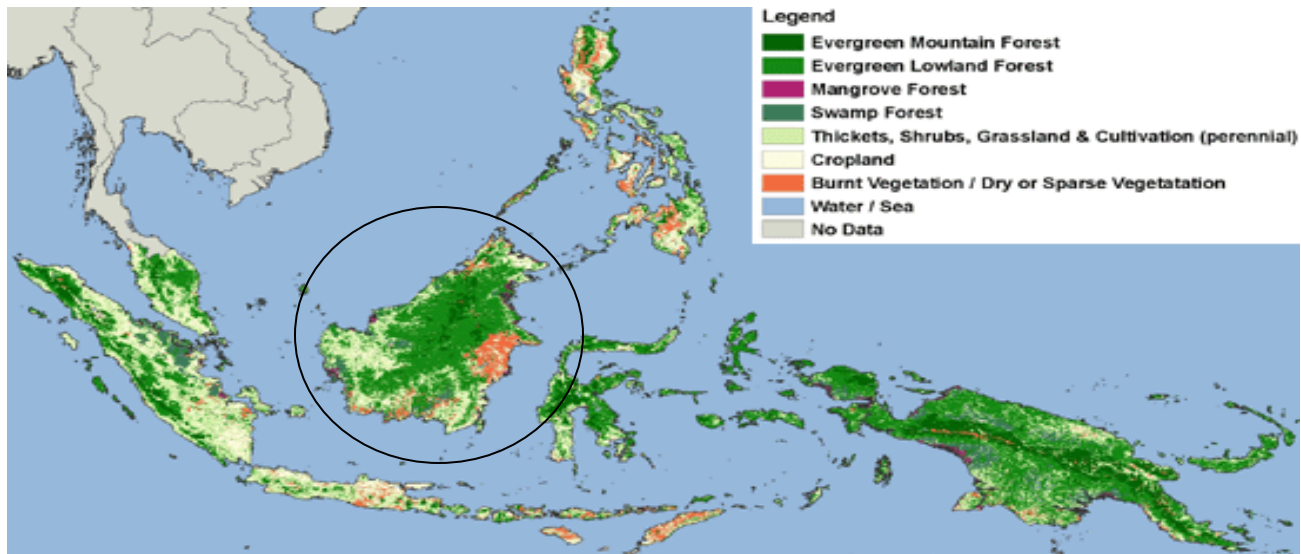
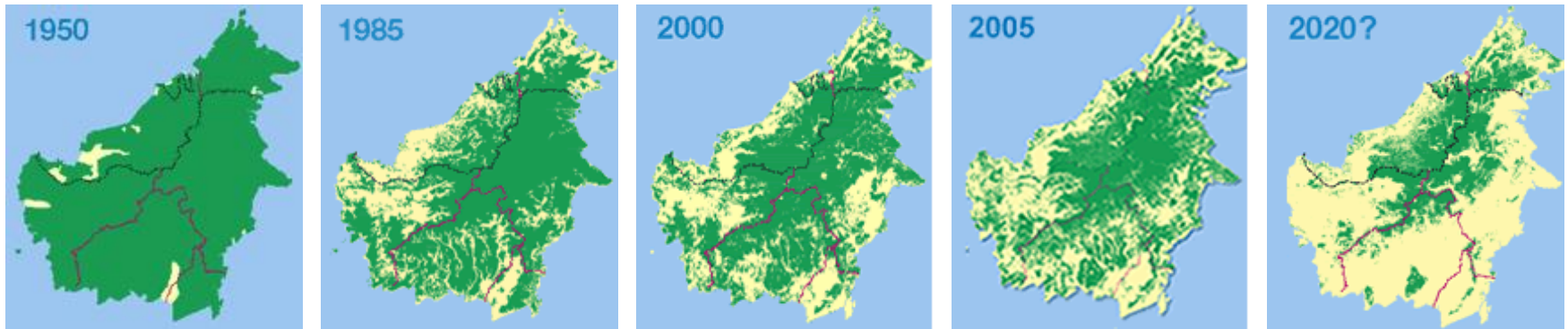
Based on Fieldwork in Indonesia (1999-2004)

Yale School of Forestry & Environmental Studies

In Collaboration with the Center for International Forestry Research (CIFOR)

Indonesia: A narrative of reform, a reality of deforestation

- Indonesia's forest loss continues despite global concern for and knowledge of the resource & forest dependent people.



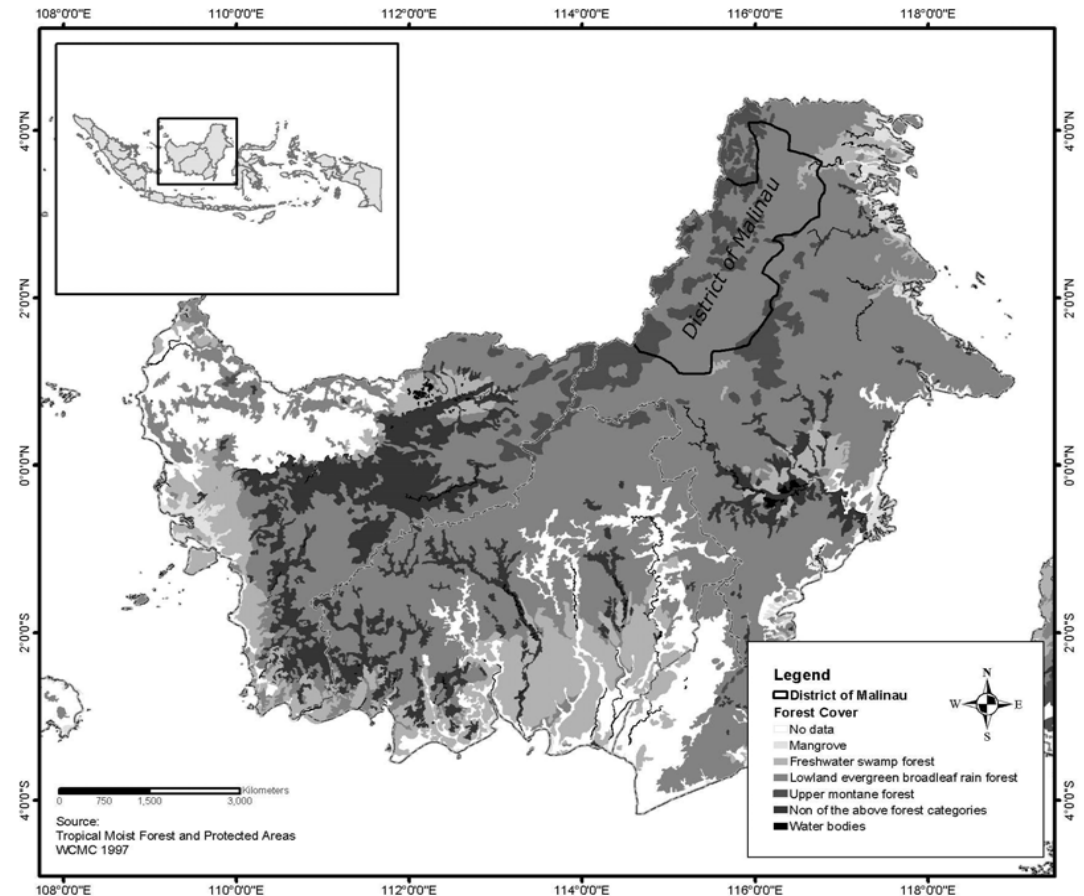
Indonesia: A narrative of reform, a reality of deforestation

- 40 million Indonesians depend on forests (1/5 of population).
- Indonesia is “megadiversity” – see NYT (4/20/09)
- \$300 million in international aid for sustainable and equitable management from c. 1997 to 2003 (c. \$60 million/yr for past 5-7 years).
- >\$4 **B**illion from wood-based exports in 2001.
- Description of problems in forestry aid now and 10 years ago are the same.
- Stakeholders rarely use research and knowledge.
- Forest loss increasing with an average of 2.4 million ha/year in 2003, from 1985 to 2000, 25 million ha -- the size of the UK.

Malinau in Context

Indonesia:

- 2/3 of country considered “forest estate” but never gazetted. 120 million ha and 90% of Kalimantan
- All people living in that area are legally squatters. Many living there for generations.
- Historically villagers received very little, if any, compensation

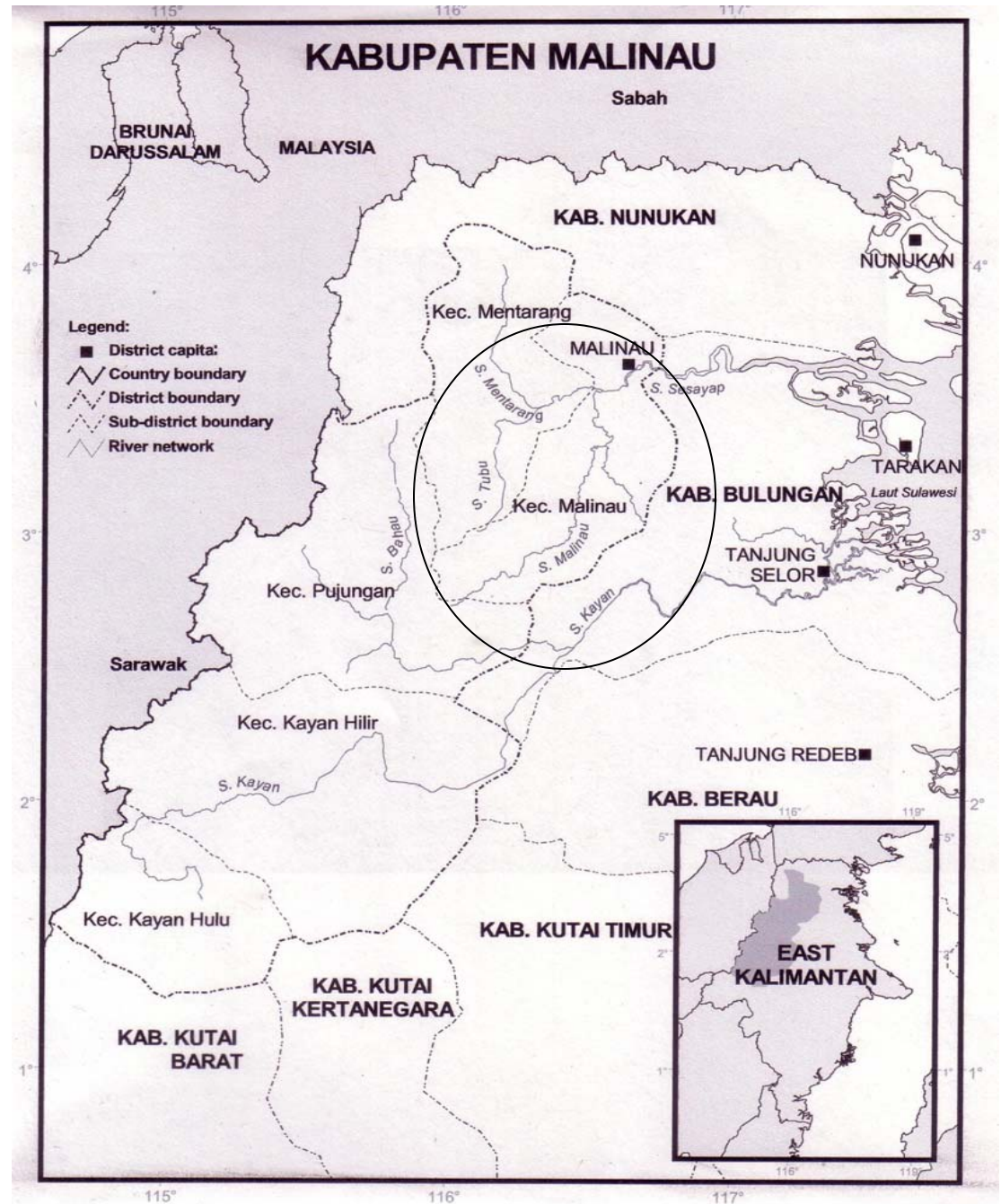


Participatory Mapping of village forest boundaries: a vehicle to resolve conflicts

- Borneo and Dayaks: no legal rights to control/access to forest resources,
- Mapping of boundaries as a way for Dayaks to negotiate rights, compensation
- Center for International Forestry Research (CIFOR) initiated participatory mapping of boundaries of 27 villages in Malinau watershed in late 1999 at request of villagers.

District of Malinau

- 42,000 km² (Netherlands)
- 95% classified as state forest land
- Total population: 40,000, 20% of which lives in the district capital.
- Population self identifies into 20 ethnic groups, primarily Dayak
- >50% of the population is considered poor by national standards (housing, clothing, daily meals)



Malinau Watershed

500,000 ha

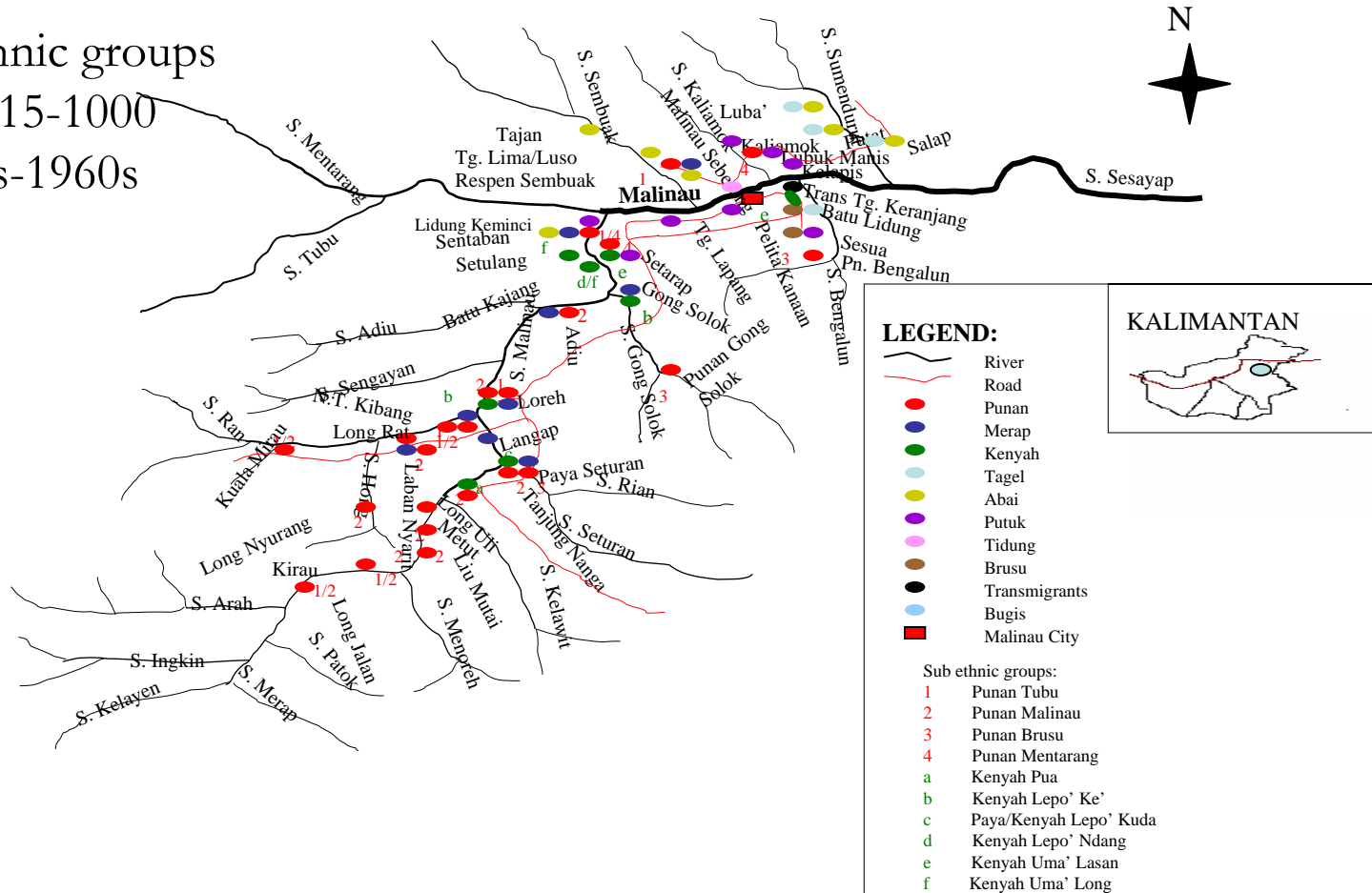
27 villages

6500 people

11 Dayak ethnic groups

Village pop: 15-1000

Settled 1850s-1960s



Dayak Villagers: Dependent on Natural Resources

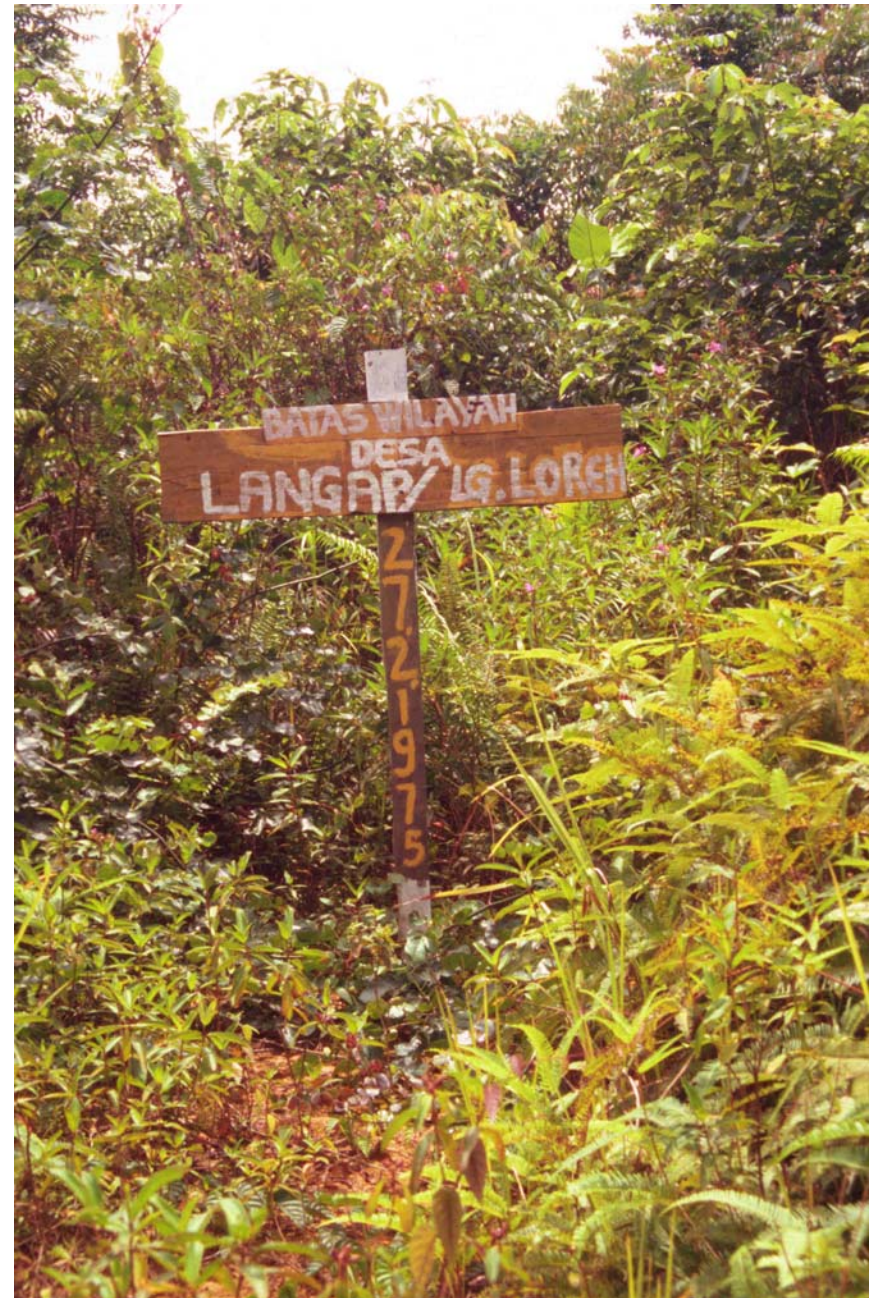


Extraction Companies: Dependent on Natural Resources



Boundary Conflicts in Malinau Watershed

- Between villages
- Between villages and companies
- 27 Villages and CIFOR both perceived that mapping was a useful tool for both process and product to resolve conflicts and help communities negotiate rights.
- Mapping preceded and coincided with decentralization.
- Authority shifted from Central to District Governments



Participatory Mapping in Malinau

- Facilitated by CIFOR and Indonesian NGOs
- Duration 1998-2002
- 27 villages (6,673 people) in Malinau watershed (500,000 ha)
- 3 village representatives from each village, selected by village. Trained in GPS. Used GIS to produce maps.
- Ground truth boundary together with team from boundary villages
- If conflict between villages, must resolve between villages first.

Reality and Unintended Consequences

- Decentralization started in 1999 and “cowboy” timber companies moved in. District gov’ts provide licenses, provided that villages claiming forest agreed.
- Maps produced in participatory mapping used to leverage position of certain villagers (elites) in certain villages at the expense of others.
- CIFOR made explicit maps were not legal/authoritative.
- 46 licenses provided (2000-1), from 100-5000 ha; total 60,000 ha.
- Duration of licenses: few months to 2 yrs in duration.

Reality and Unintended Consequences

- **Costs and Benefits for villages:**

- best case: 50,000 Rp/m³ (c. \$6/m³), worst case: not defined
- Seven villages: average \$1000/HH per year (vs. \$1500/village per year previously),
- Only 1.4% of gross value of timber harvested compared to prices in Malinau town.
- 19 of 22 villages reported concessionaires did not fulfill promises.
- Extra informal payments to village elite; up to \$7500 for individual district gov't signatures for licenses.

Reality and Unintended Consequences

- Inter-village and intra-village conflicts exacerbated
- Lack of village-level and supra-village level institutions with legitimacy and authority to make, validate and enforce decisions based on maps.
- Lack of local governance and accountability.

Questions for the International Community

- Current Conditions in Kalimantan
 - “Cowboy Logging” has stopped, but the “boom and bust” cycle have not.
 - Climate Change: The promise of compensation for the “Lungs of the Earth” through Reduced Emissions from Avoided Deforestation and Degradation (REDD)
 - Land Tenure remains unclear
 - Governance remains weak, particularly a functioning judicial system

Questions for the International Community

- Questions for Donors, NGOs, the Private Sector, Researchers: How do we engage to help ensure improved local livelihoods and well-managed forest ecosystems?
 - Policy Signals: Lacey Act Amendment, US-China/US-Indonesia Illegal Logging and Associated Trade MOUs
 - Market Signals: Certification, Walmart/Home Depot, GFTN
 - Capacity Building: USAID funded Responsible Asia Forestry and Trade Project (RAFT) working with concessionaires and through the supply chain

Thank You!

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