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# Indonesia:

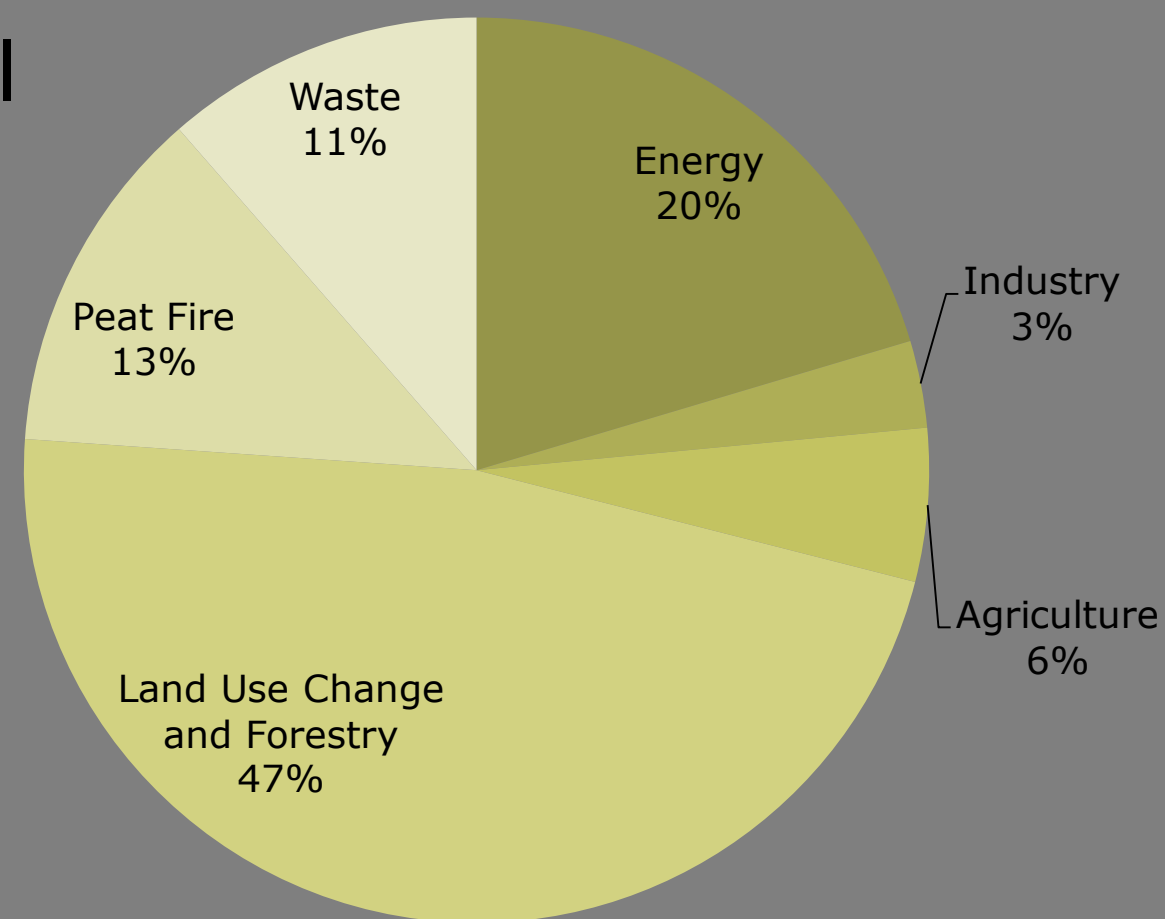
*New Opportunities for Climate Compatible Agriculture*

**KEMEN AUSTIN | Research Analyst**



# Background – GHG emissions profile

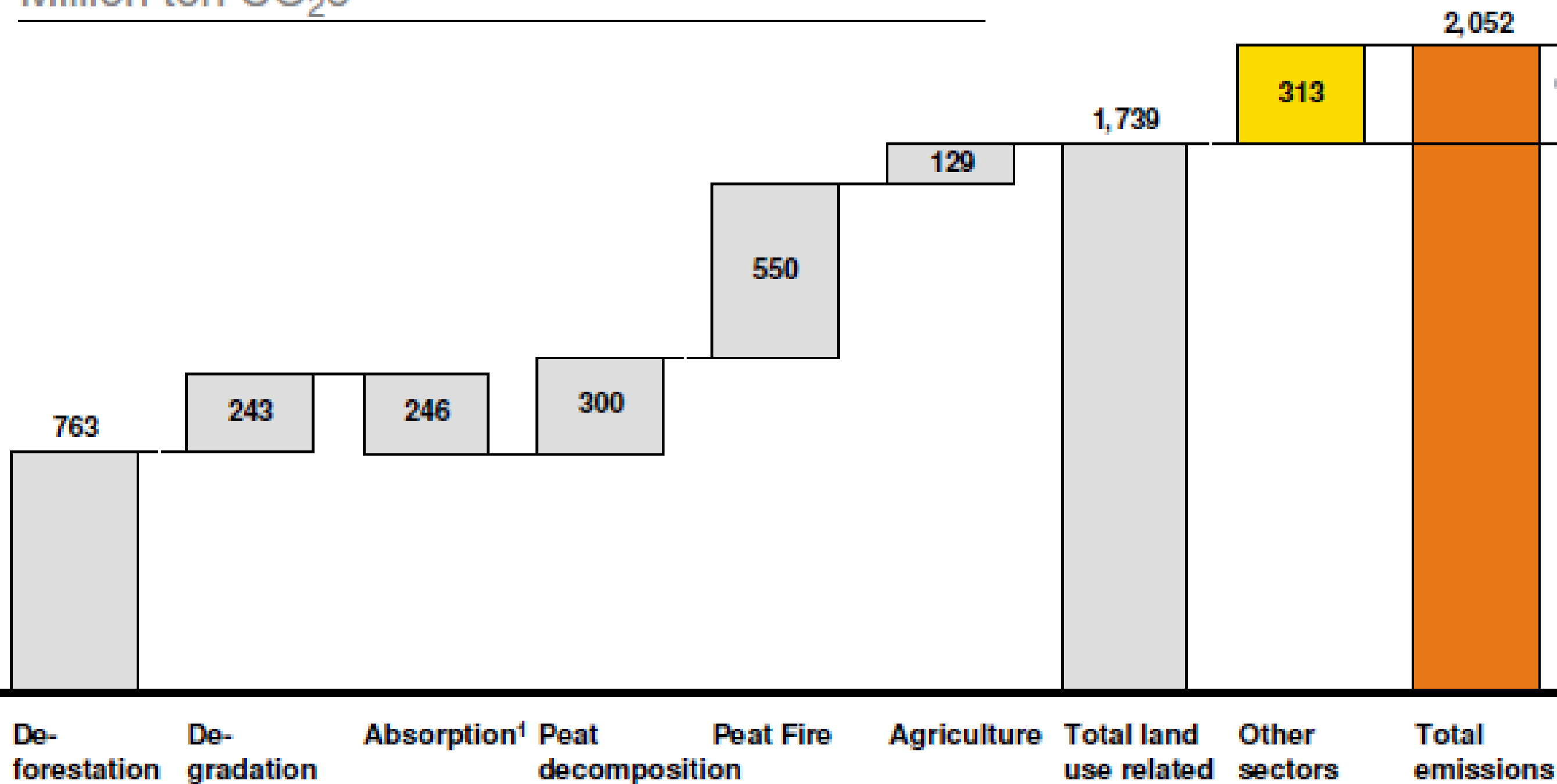
- GHG emissions from land cover change comprise 10-15% of global GHG emissions annually
- However in many developing countries, the share of GHG emissions from land cover change is much higher
- In Indonesia 60-85% of GHG emissions come from land cover change (including peat land conversion)



*Source: Ministry of Energy (2009)*

# Breakdown of Indonesia's emissions into major sources

Million ton CO<sub>2</sub>e



Source: DNPI 2010

# Background – GHG emissions reduction goals

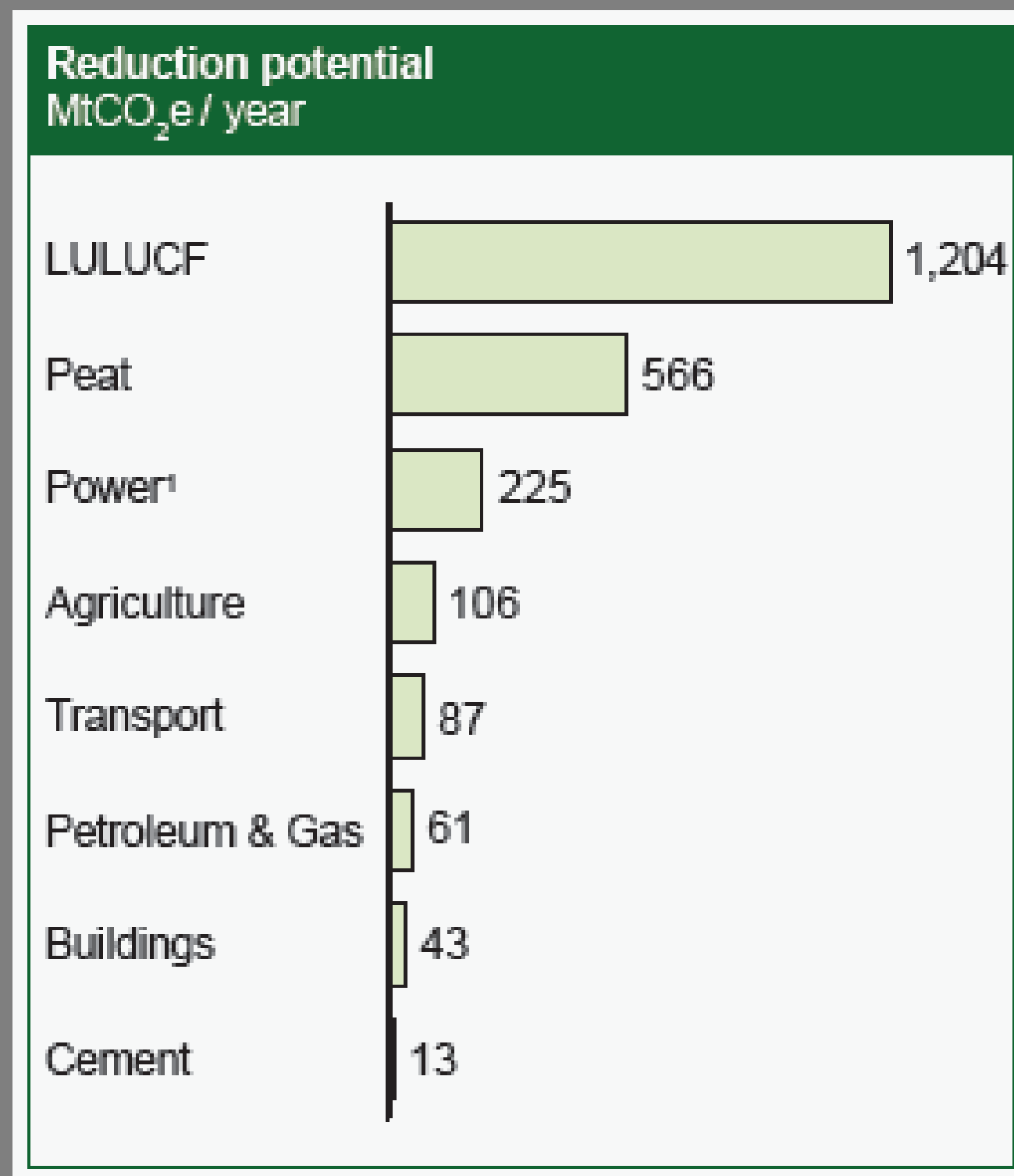
- Indonesia has committed to reduce the country's greenhouse gas emissions by 26 percent by 2020.



President Susilo Bambang Yudhoyono

# Background – GHG emissions reduction goals

- 87% of this goal is planned to be achieved via reducing deforestation and peatland conversion (DNPI 2010)





# Background -- Agriculture's contribution to GDP

- Agriculture comprises 15% of GDP in Indonesia, and is considered an important driver of economic growth and poverty alleviation, particularly in rural areas
- In response to increasing global demand, Indonesia aims to increase agricultural production of 15 major crops, including doubling palm oil production by 2020 from 2009 levels.





# Background – two competing goals?

- Even accounting for projected increases in yields, the anticipated growth in Indonesia's agricultural production will require expansion in planted area
- If past is prologue, much of this expansion would occur at the expense of forests and peatlands.



# You are the decision maker. What will you do?

1. What options are available to balance agricultural expansion and greenhouse gas emission reduction goals?
2. Which option(s) do you think is most promising and why? What strategy do you intend to pursue?
3. What challenges do you anticipate encountering?
4. What resources would you use to overcome challenges and ensure effective strategy implementation?



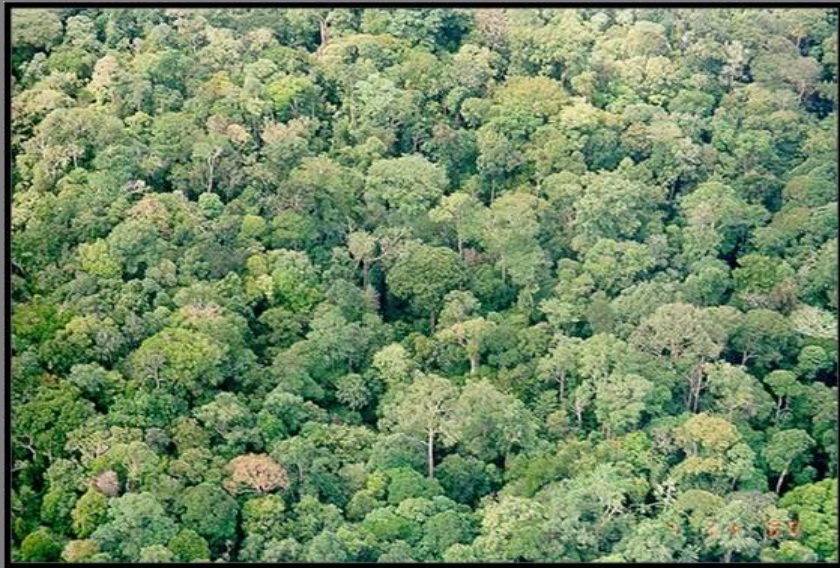


# The real story– Decoupling agricultural expansion and forest conversion





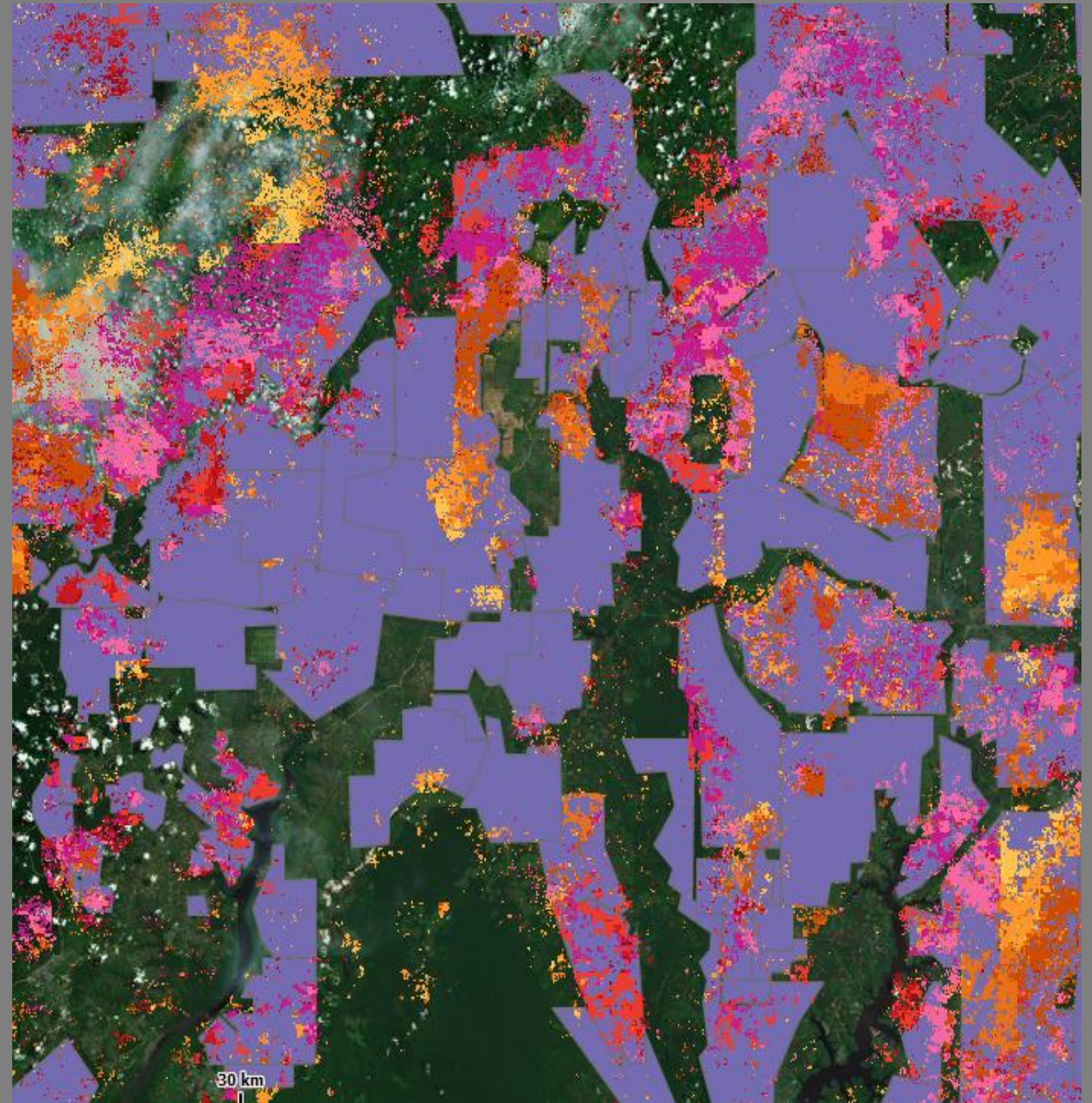
# The real story– Decoupling agricultural expansion and forest conversion





# Challenges to implementation:

- **Unclear definition of degraded land**
- **No maps of degraded land to guide implementation**
- **Existing land claims on degraded land**
- **Challenge of acquiring free prior and informed consent for expansion on degraded land**
- **No mechanism in place to review existing permits or change/revoke those permits that do not comply with goals**
- **No mechanism in place to ensure/require future permits on low carbon degraded land (no policy incentive or requirement)**



Oil Palm Permits and land cover change 2005 - 2010 in Central Kalimantan, Ministry of Forestry 2009, Hansen 2010

# Defining Degraded Land

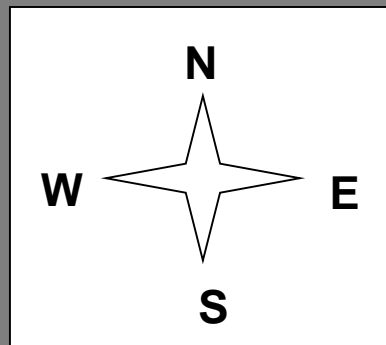
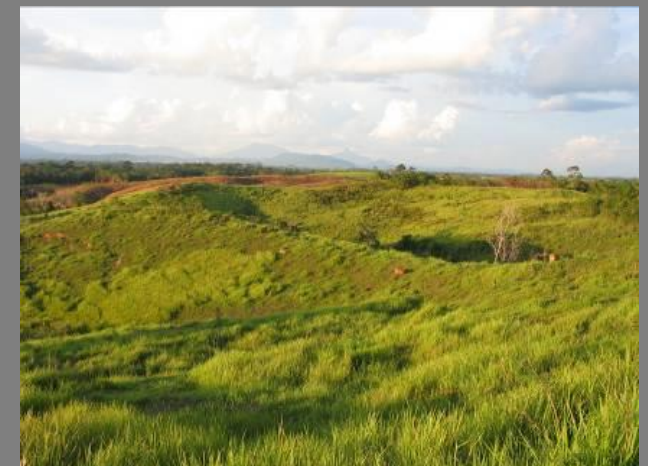
ENVIRONMENTAL	Carbon and biodiversity	Land cover
		Peat
		Conservation areas with buffer zones
	Soil and water protection	Erosion risk
		Groundwater recharge potential
		Water resource buffers
ECONOMIC	Crop productivity	Topography (elevation; slope)
		Climate (rainfall)
		Soil (depth; type; drainage; acidity; color)
	Financial viability	Size
		Accessibility
LEGAL	Zoning	Legal classification
	Rights	Concessions
		Active plantations
		Community claims/rights
SOCIAL	Land use	Land use dependence
		Manmade drainage
		Land history
	Local interests	Community perception of oil palm
		Community interest in planting oil palm
		Political interests



# Mapping Degraded Land

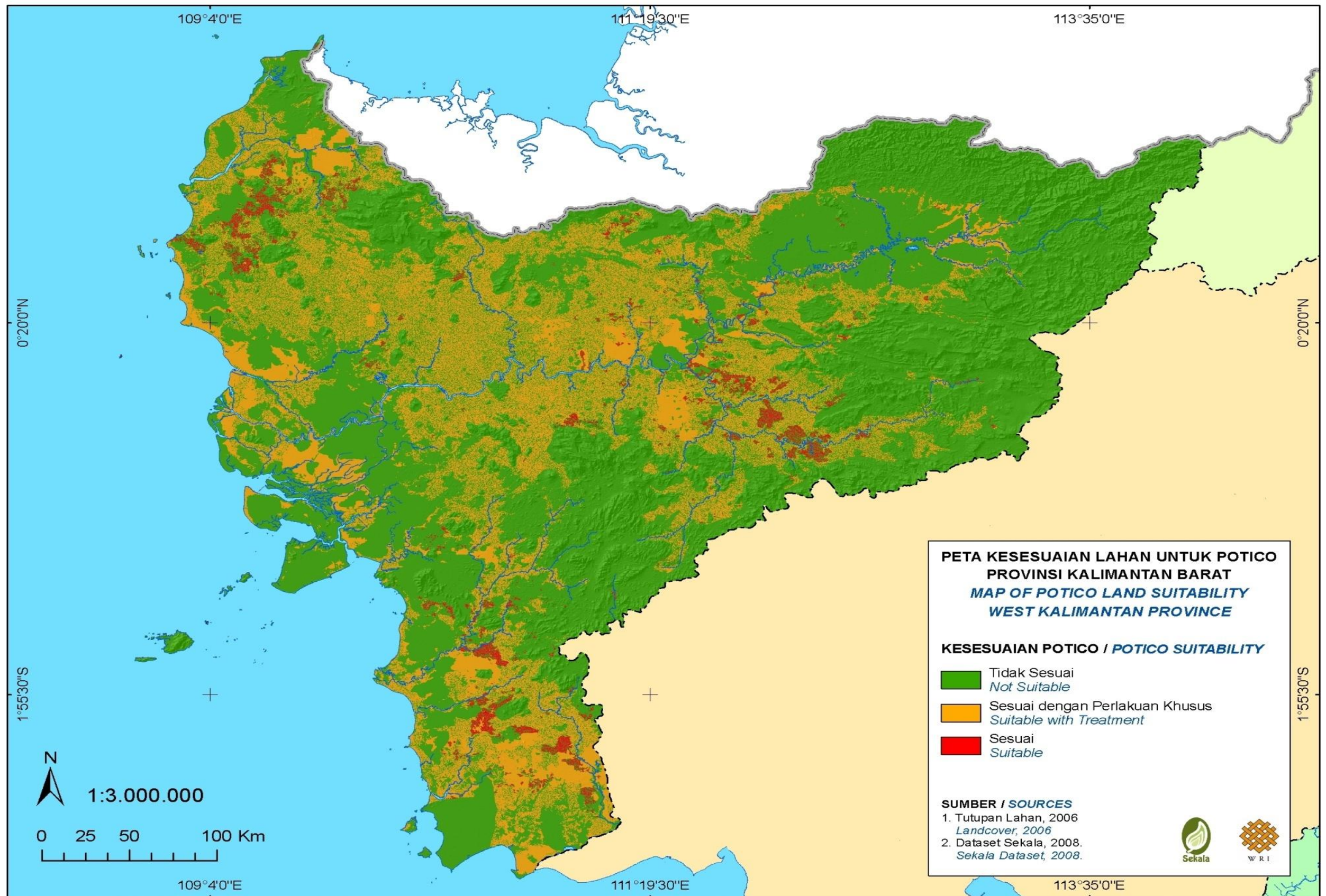


# Mapping Degraded Land



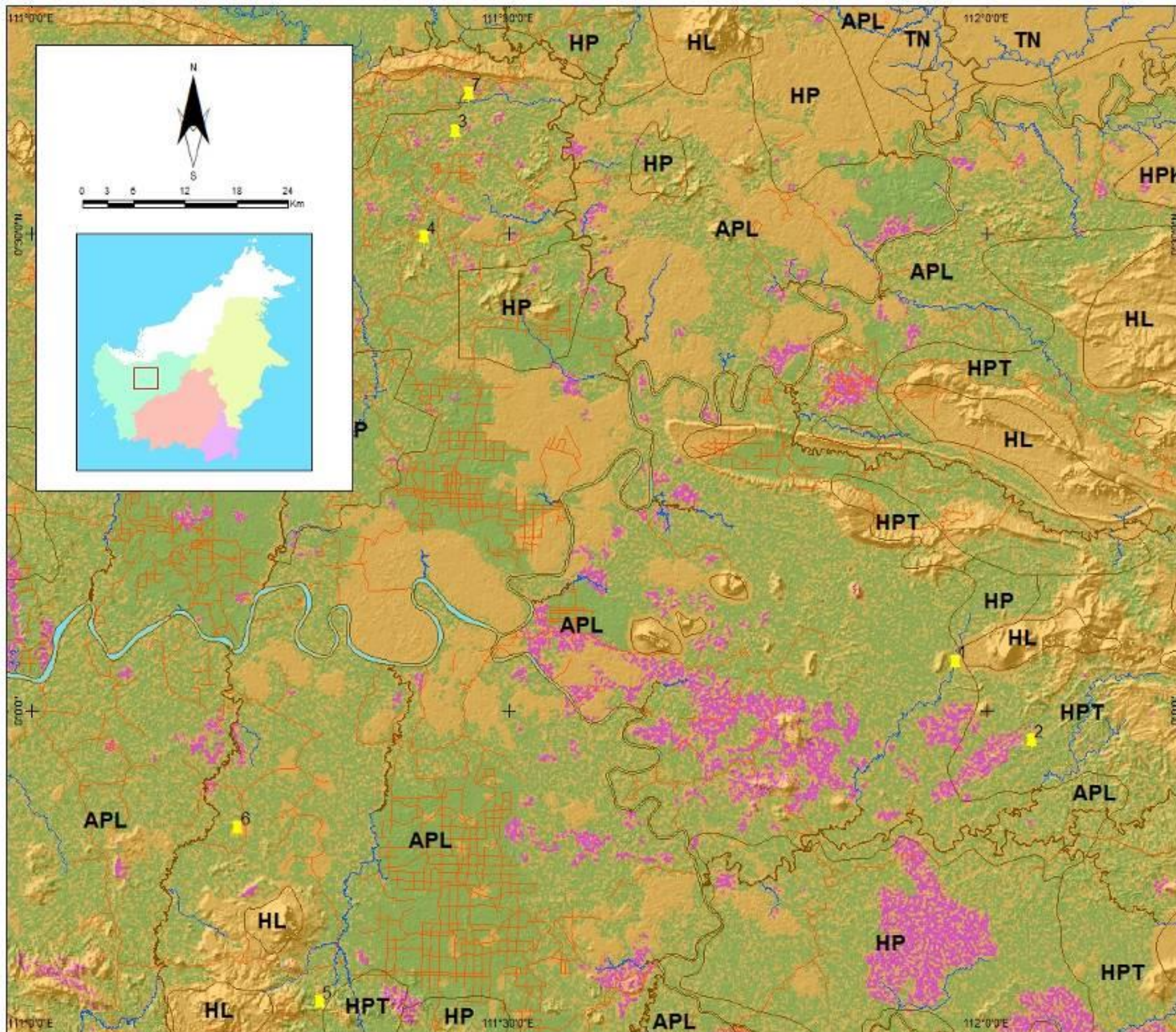


# Indicative Suitability Map





# Indicative Suitability Map



**Peta Survey POTICO - Daerah Sintang**  
**POTICO Survey Map - Sintang Area**

Foto - Foto / Photos :



Lokasi 1 / Location 1



Lokasi 2 / Location 2



Lokasi 3 / Location 3



Lokasi 4 / Location 4



Lokasi 5 / Location 5

**PENUNJUKAN KAWASAN**  
**FOREST LANDUSE DESIGNATION**

- SM** Suaka Margasatwa / Natural Reserve
- HL** Hutan Lindung / Protected Forest
- HP** Hutan Produksi Tetap / Production Forest
- HPK** Hutan Produksi Yang Dapat Konversi / Converted Production Forest
- APL** Areal Penggunaan Lain / Outside Forest Estate
- HPT** Hutan Produksi Terbatas / Limited Production Forest

● Lokasi Survey / Survey Location

**KE SE SUIAN POTICO**  
**POTICO SUITABILITY**

- Tidak Sesuai / Not Suitable
- Sesuai dengan Perakuan / Suitable with Treatment
- Sesuai / Suitable





# Indonesia's moratorium opportunity

- A two-year moratorium on the award of new concessions for the exploitation of primary natural forests and peat lands
- It is designed to 'pause' business as usual to allow time for the government to implement key reforms:



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April 2012

## Key messages

- A moratorium on new licenses for logging and conversion in primary forests and peatland in Indonesia provides an opportunity for governance reforms. This includes improving licensing processes, creating better spatial data management systems, and strengthening relevant institutions to achieve low-emission development goals.
- The moratorium will need to be strictly implemented and enforced if it is to achieve its objectives. This will require continued political will and enhanced data transparency.
- Buy-in from the private sector is key to the successful implementation of the moratorium, especially in the case of Indonesia, where the private sector is highly influential in land-use decision-making.
- Coordination and cooperation between national, provincial and district governments – key actors in land-use planning and issuing of permits – are significant challenges to implementation.
- Improved land-use planning can foster simultaneous achievement of both climate and development goals. The two-year moratorium period should be used to put mechanisms in place to support these dual goals.

## Authors:

Kemen Austin, Rauf Prasodjo and  
Fred Stolle  
World Resources Institute

## A new direction in climate compatible development: Indonesia's Forest Moratorium

In late 2009, Indonesia made a voluntary commitment to reduce its greenhouse gas emissions by 26% by 2020, or by 41% with international assistance, compared to business as usual.<sup>1</sup> The country aims to achieve 87% of this goal by reducing emissions from deforestation and peatland conversion.<sup>2</sup> In a step towards achieving these emission reductions, and in recognition of the importance of forests to the livelihoods of forest-dependent people, a forest moratorium has been declared. On 20 May 2011, Indonesian President Susilo Bambang Yudhoyono signed an instruction putting into effect a two-year moratorium on new permits for the use of primary natural forest and peatland.

Recent analysis by the World Resources Institute (WRI) found that the moratorium covers 43.3 million hectares of primary forest and peatland, and approximately 25.3 gigatons of carbon stocks.<sup>3</sup> Beyond protecting these forests and carbon stocks for the two year period, the moratorium reflects progress in several key areas:

**Data transparency:** A map of areas in which the granting of new licenses is suspended, known as the Indicative Moratorium Map (IMM), was published by the Ministry of Forestry in July 2011.<sup>4</sup> By law, this map must be revised every six months and the Ministry of Forestry has extended an open invitation for review and critical analysis of the map. In November 2011, a revised

version of the IMM was published. The map makes it easier for stakeholders to carry out monitoring, and thus is a strong tool in support of enforcement. This is the first time the government has made a spatial policy on forest resources transparently and publicly available in map form.

**Industry buy-in:** Industry associations such as the Round Table on Sustainable Palm Oil (RSPO) and the Indonesian Palm Oil Association (GAPKI) have publicly supported the moratorium.<sup>5</sup> Private sector support was achieved through compromises such as the exclusion of secondary forest, the exemption of existing permits from the moratorium, and the potential to extend existing permits or grant new permits

# Key challenges to be addressed during the moratorium period:

- Create a central spatial database of all types of permits granted across ministries
- Strengthen the spatial planning and permitting process to take into account on legal, biophysical, socio-economic, and cultural considerations
- Streamline and make more transparent the process of permit issuance
- Inventory degraded land and identify potential to issue new permits, or reclassify existing permits, to degraded land
- Inventory high conservation value land (focus on peat lands)
- Harmonize national land cover maps with regional/local maps



# Progress thus far:

- Horizontal coordination -- Ministries have begun sharing information (Ministry of Forestry, Ministry of Agriculture, etc)
- Vertical coordination -- Initiation of a process to collect district and sub-national data
- Data management -- Ongoing process to set up a centralized database of 'official' information on land cover, permits, infrastructure, etc
- Improving land cover data – setting up system to more accurately map land cover (including peat)



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# Thank you

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