Peatlands and REDD

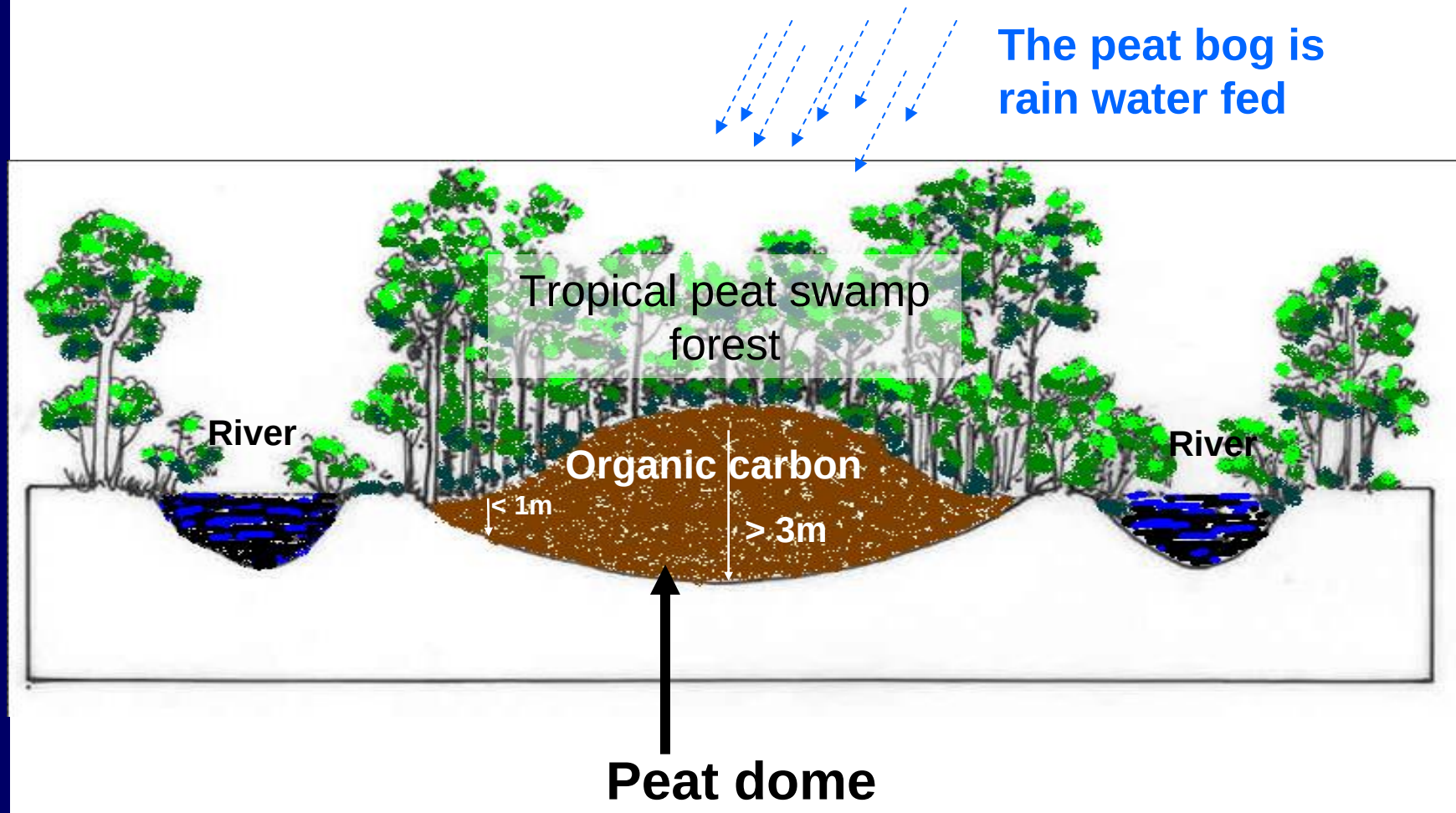
Wetlands International,
Susanna Tol,

COP16, Cancun, 2 Dec 2010

What are peatlands?

Peat:

Organic matter accumulated over thousands of years, storing concentrated carbon in thick layers



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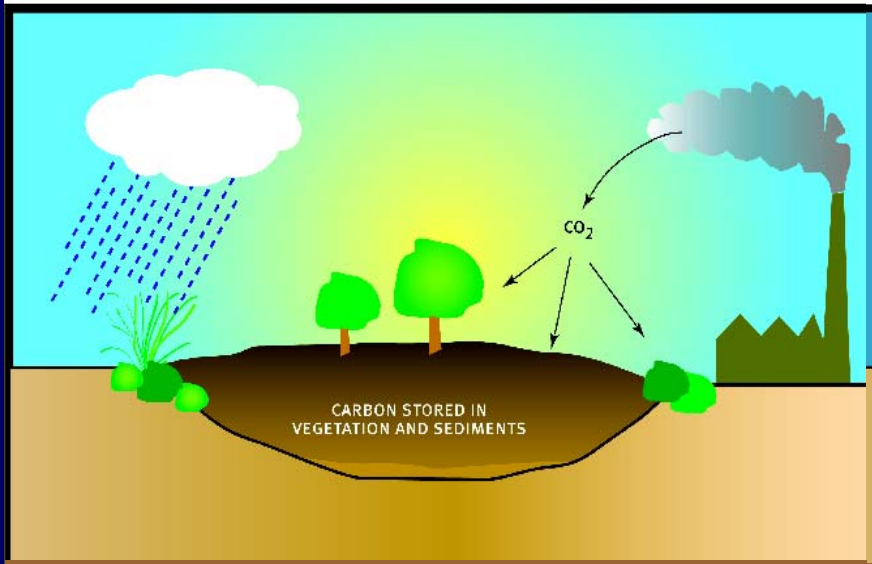
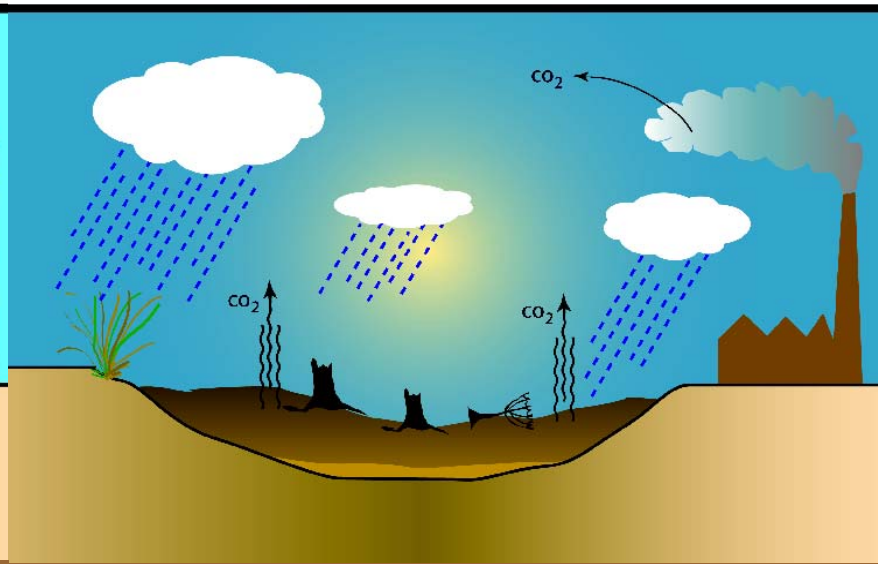
Peat, carbon and climate change

- **Globally peatlands store 550 Giga ton (Gt) Carbon**
- **Equivalent to 30% of terrestrial carbon**
  - twice the carbon stored in forest biomass
  - 75% of all carbon in the atmosphere

- **Global emissions 2 Gt CO2 / yr, ~6% of global CO2 emissions.**



Peatlands store large amounts of carbon



Peatland degradation leads to GHG emissions which contribute to global warming

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Drainage tropics: emissions of up to 100 t CO_2-eq ha^{-1} y^{-1}…that continue for many decades

Kalimantan, Indonesia

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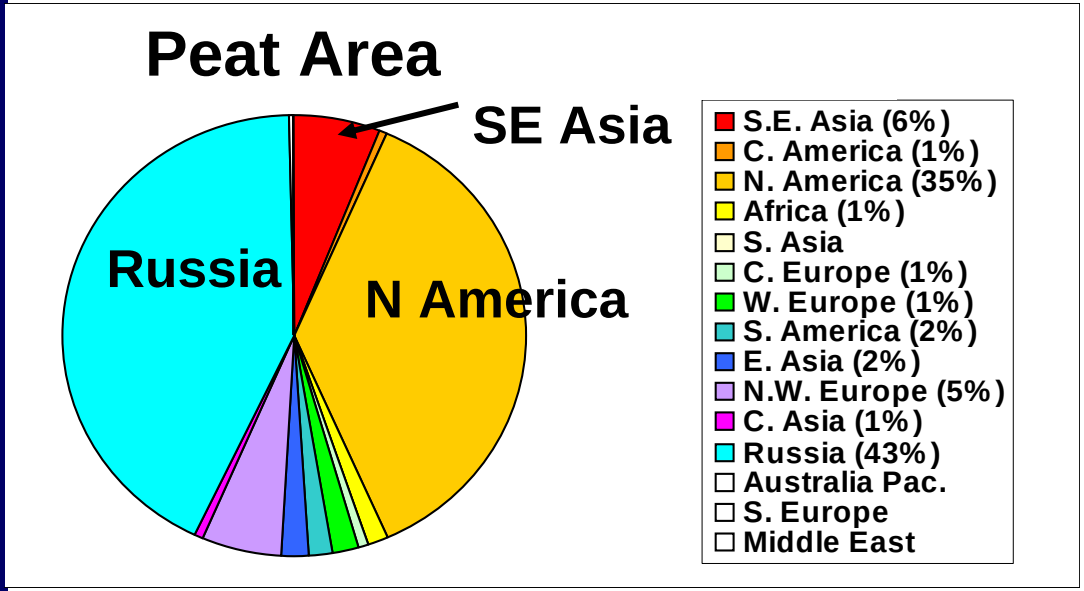
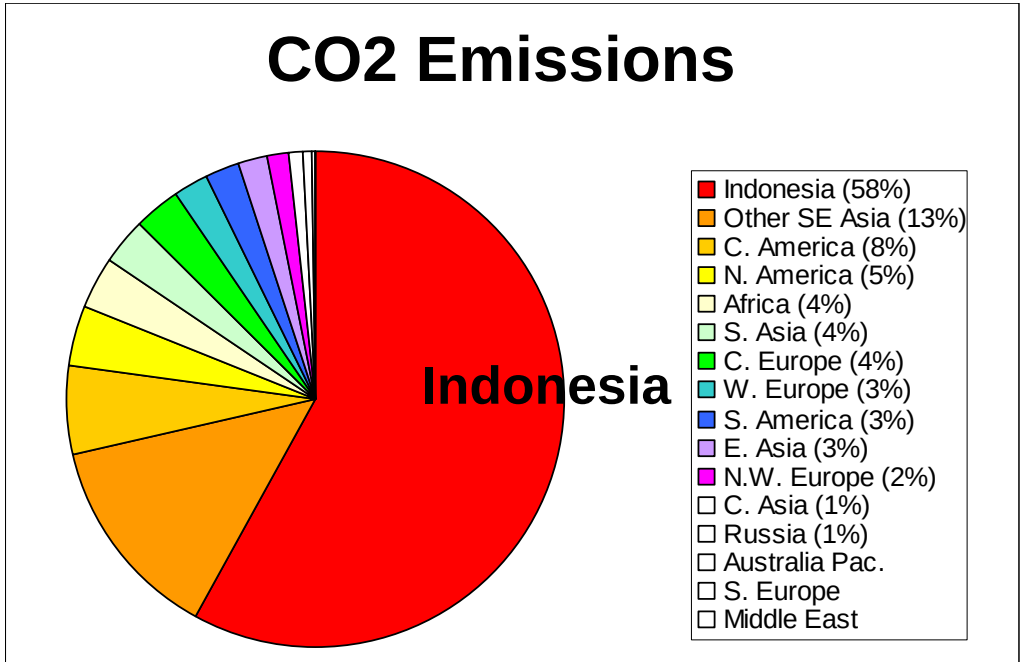
SE Asian peatland emissions disproportionately high



Emissions from peat in Indonesia:

~500 Mt from drainage
~400 Mt from peat fires

6% of global *peat* area = 50-60% of global peat emissions



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Peatland problems

- **Deforestation**
- **Degradation**
  - Drainage
  - Fires

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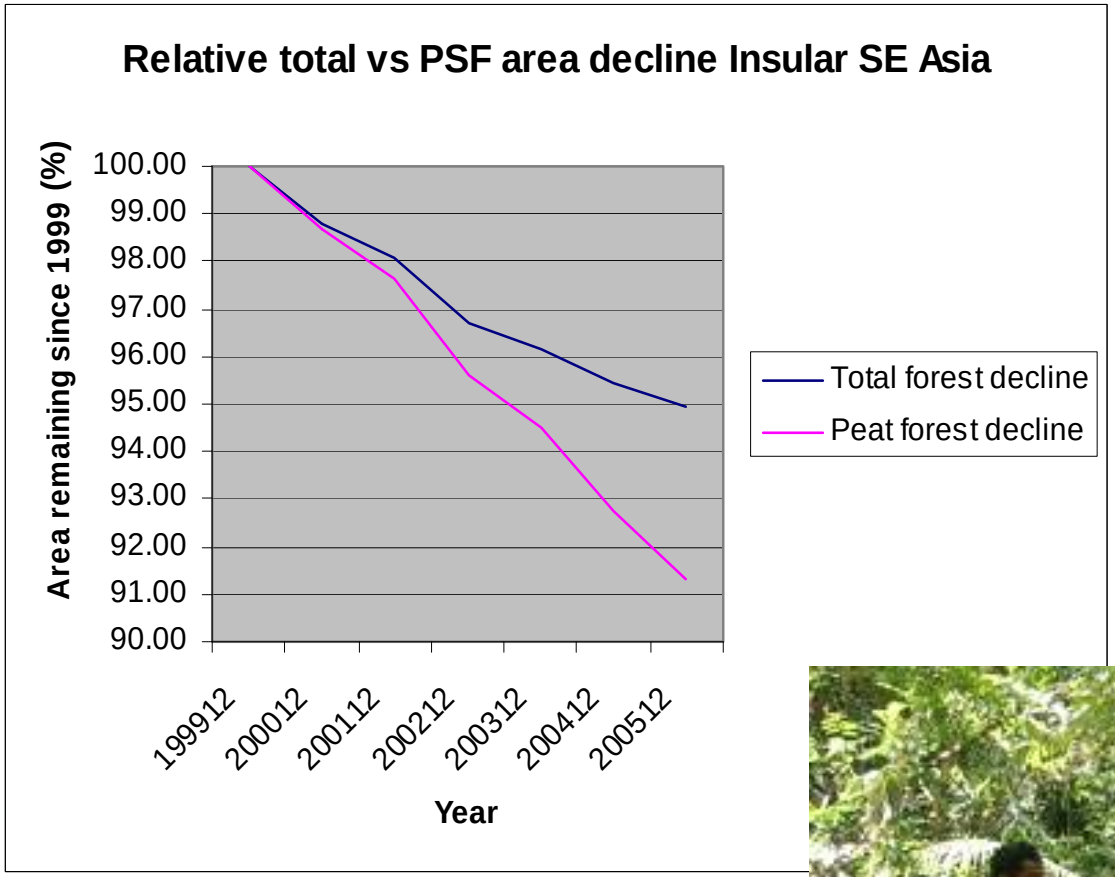
Tropical peat forest deforestation



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Logging and drainage 1

- **Channels used to transport equipment and logs**

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Logging and drainage 2

A total of about 13 million ha of SE Asian peat swamps have been drained for agriculture and plantations

Even when the rate of peatland conversion decreases, annual peatland emissions will continue to increase

This makes it a totally different ball game from forests

Stopping the rate of conversion is not enough. To decrease peatland emissions eco-hydrological restoration (rewetting & replanting) is necessary

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Peat drainage increases the risk of fires

Between 1997 and 2006: over 60,000 fires in peat swamp areas on Borneo
in 3 out of 10 years (1997, 1998, 2002)
Most affected were deforested and drained peatlands

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Rewetting

↓ CO_2 ↓ N_2O ↑ CH_4

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What if current ignorance continues

No incentive mechanism to address these emissions

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Peat in REDD

- Include all 5 carbon pools (IPCC 2006)
- Include protection of remaining undrained areas and restoration of degraded peat swamp forests (rewetting/revegetation)
- Also include peat forests that have no crown cover anymore (deforested) from past deforestation
- Exclude drained plantations from support
- Similar mechanism needed for non-forest peatlands

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Added value

Climate change mitigation

Biodiversity conservation

Poverty reduction

Reduced land degradation

A WIN^{4}all

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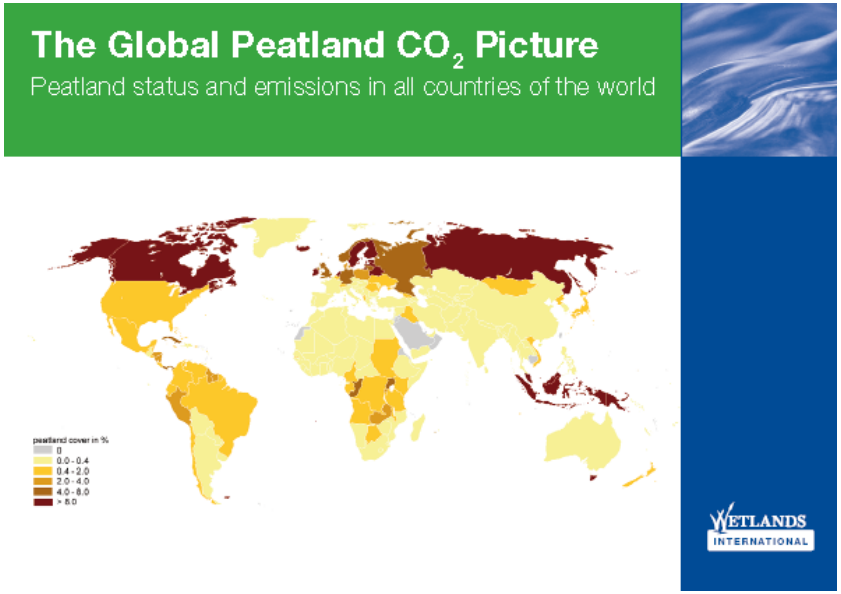
Further reading…



THANK YOU

Downloadable from

www.wetlands.org/peatclimate

and www.imcg.net

More information:

www.wetlands.or/peatclimate

www.wetlands.org/cancun

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