-UNFCCC COP12

Climate Change Kiosk

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Peatland Fires and floods: combining adaptation and Minigation of climate change

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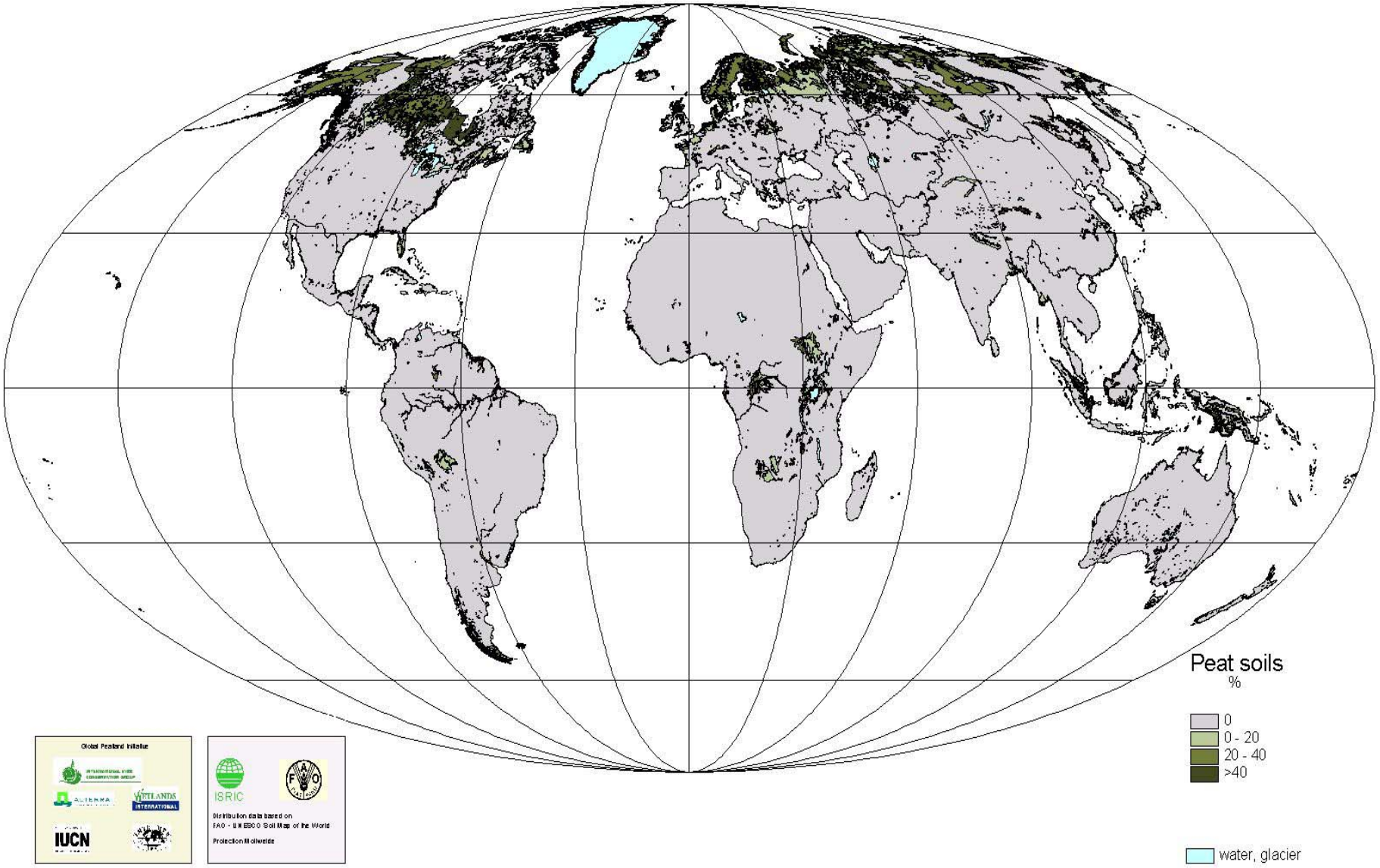
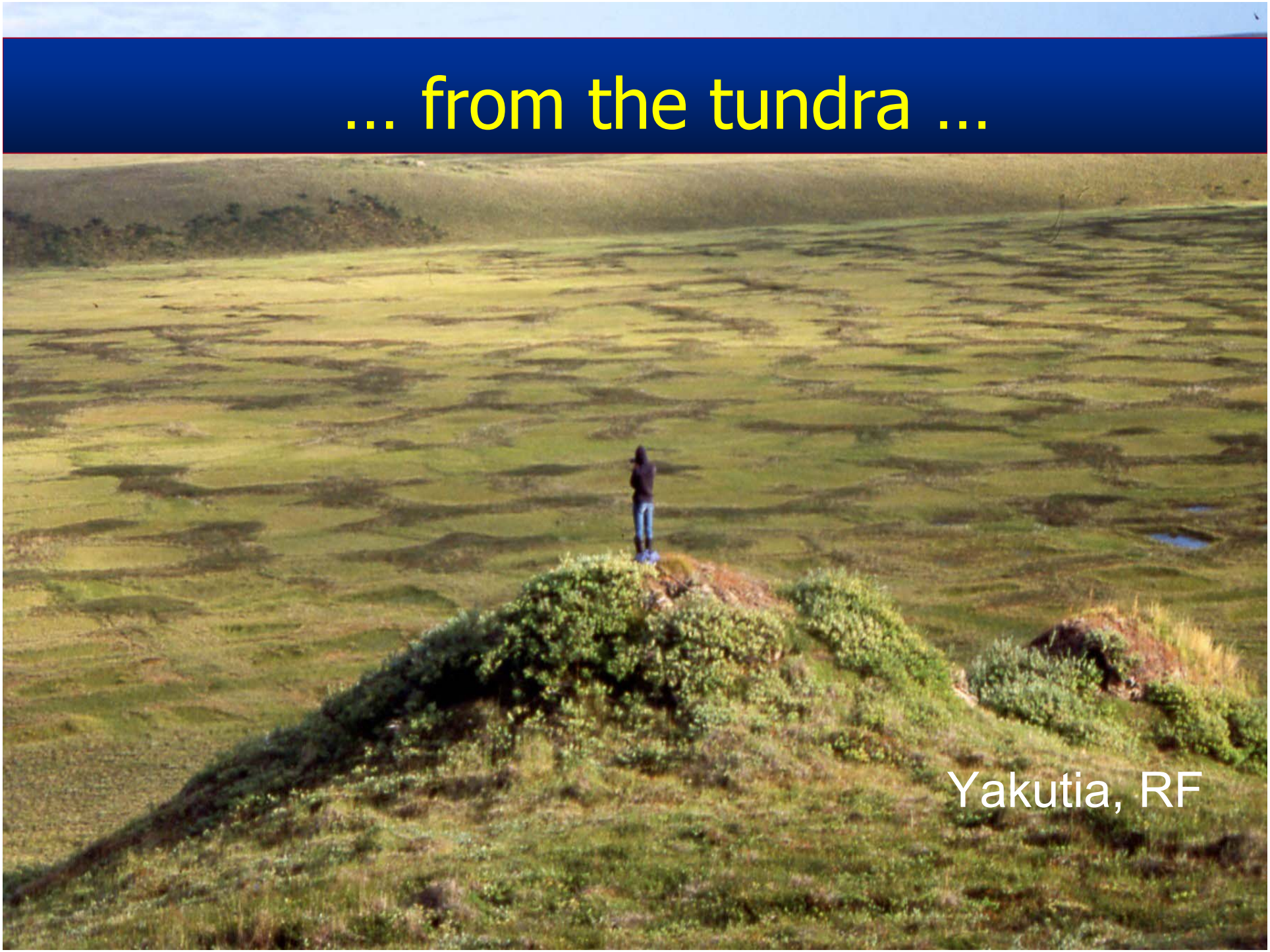
Presentation

- Peatlands and climate change
- Assessment on peatlands, Biodiversity and climate change
- Combining adaptation and mitigation in peatlands

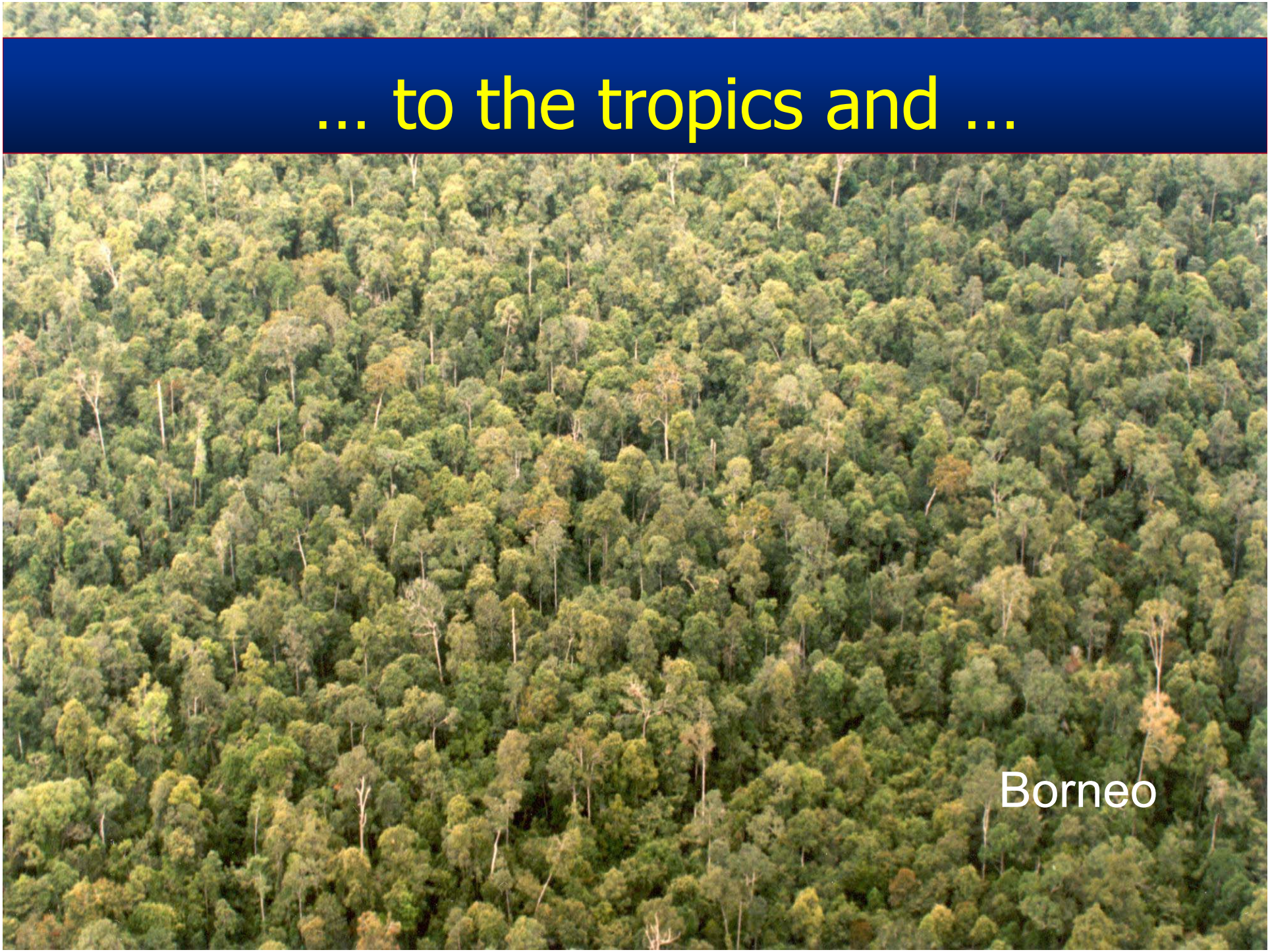
Peatlands are everywhere…



… from the tundra …



… to the tropics and …



…to the end of the Earth…

… from the mountains …

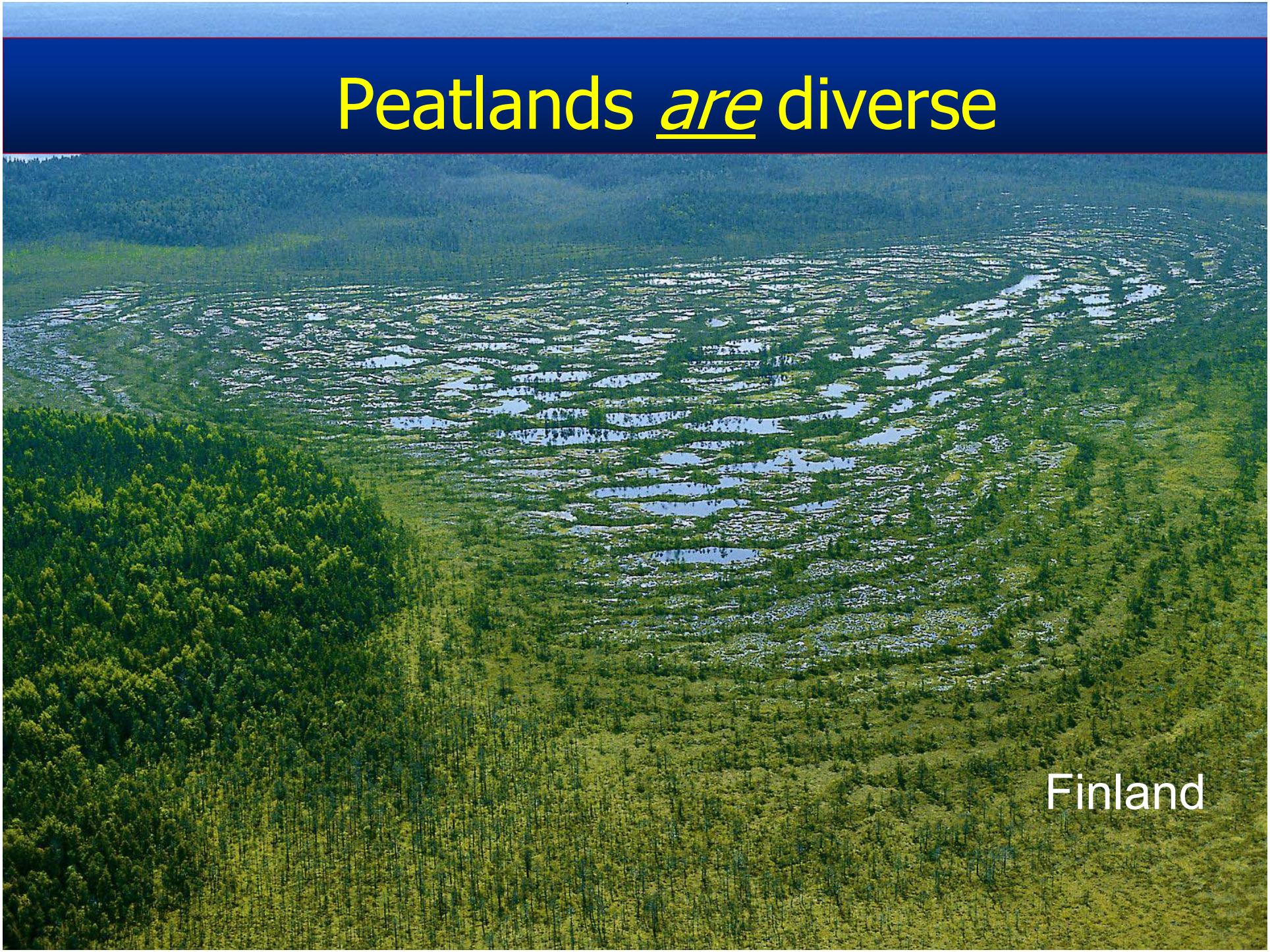
… along the rivers …

Ruaha River Tanzania

… to the sea …

Peatlands have biodiversity

Peatlands *are* diverse

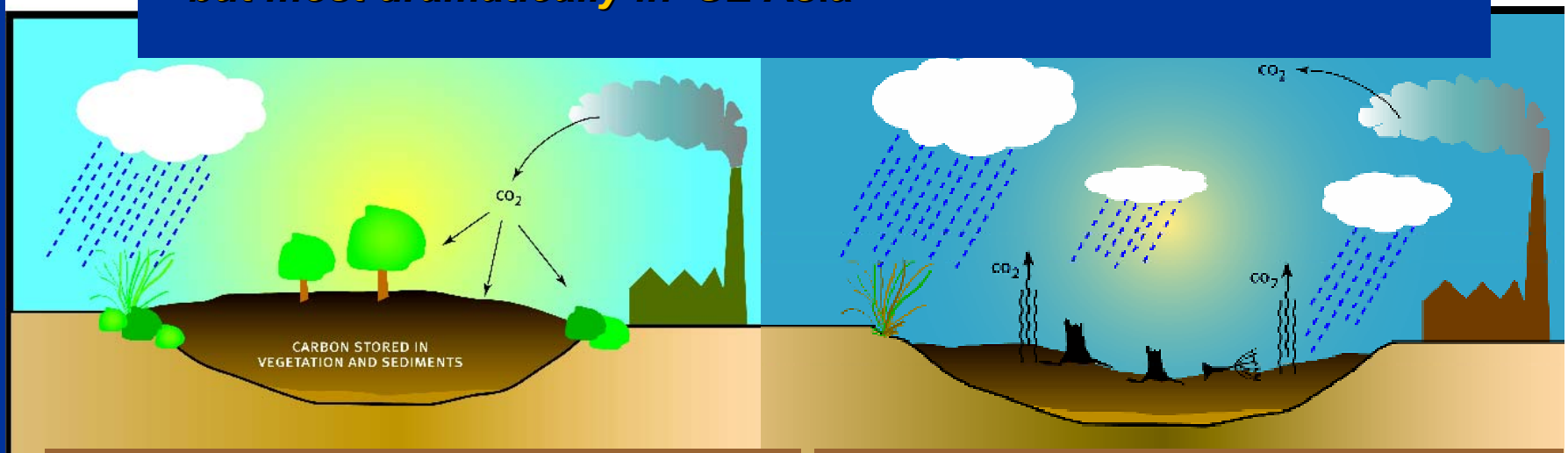


Peatlands support communities

Jelutong - Chewing Gum tree, Indonesia

Peatlands Store Carbon

- 550,000 Mton stored in peat
  - = 30% of terrestrial C equivalent
  - = 75% of all carbon (C) in the atmosphere
  - = 100% of all terrestrial biomass
  - = 200% of all forest biomass
  - = equivalent to 80 years CO_2 emission of fossil fuels
- Carbon storage in peat is very long-term
- ***All over the world the store is threatened by drainage and fire, but most dramatically in SE Asia***



Peatlands store large amounts of carbon

Peatland degradation leads to CO_2 emissions which contribute to global warming

Peatlands release carbon

Russian Peat Fires

Assessment on peatlands Biodiversity and climate Change

- Undertaken 2005-2007
- International team of experts
- Series of workshops and drafting meetings
- Initial findings released today at UNFCCC
- Findings related to:
  - peatlands and biodiversity,
  - peatland and carbon storage,
  - GHG emission,
  - Impacts and vulnerability to climate change
  - Integrated management options

Management options

- Options to combine management measures for:
  - Climate mitigation
  - Climate adaptation
  - Sustainable use and community development

Strict protection of intact peatlands is critical for the conservation of biodiversity and will maintain ecosystem functions and carbon stores/sequestration.

Protecting remaining peatlands

- Peatlands cover less than 3% of the land surface but store more carbon than the vegetation of all the world's forests combined
- The protection of remaining peatlands is one of the most important and cost effective management strategies for minimizing CO2 emissions.

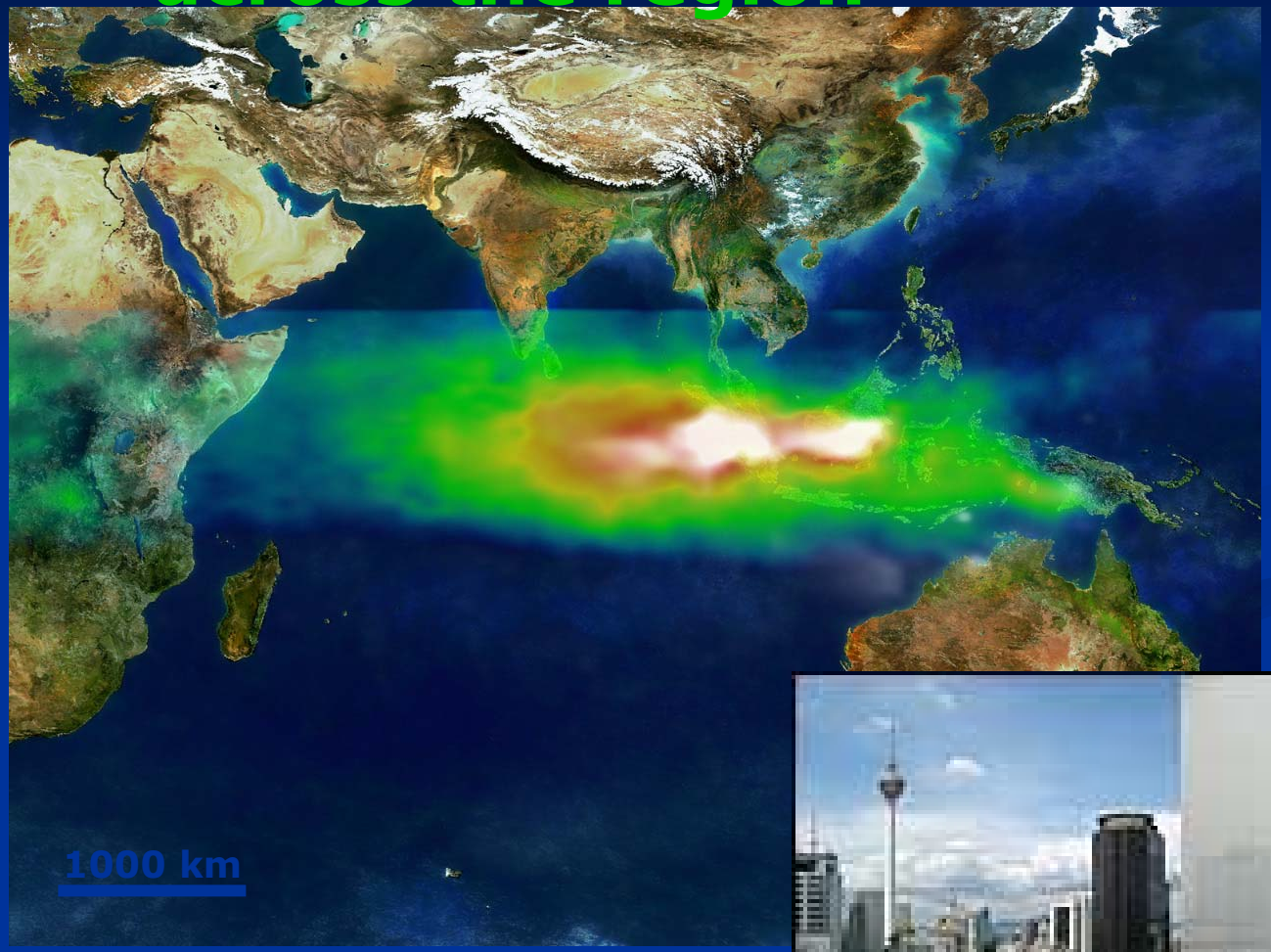
Toe Deang Peatland Narathiwat

Fire prevention and control

- Fires in peatland are one of the largest global point sources of greenhouse gas emissions
- The high intensity of wildfires can destroy both surface vegetation and litter as well as burning the peat layers, leading to a variety of environmental problems

South East Asia - Local Impacts

Smoke Haze spreads across the region



30% of children under 5 years:

- **Respiratory diseases**
- **Stumped growth**

Fire prevention and control

- Establishment of and training for local fire brigades
- Link firefighting with Livelihood support
- Protect restored areas



Linkage between Drainage and Fires

Rehabilitation of peatlands can be a cost-effective way to generate immediate benefits for biodiversity, climate change by reducing peatland subsidence, oxidation and fires.

Rehabilitation of degraded peatlands

- **Restoration or rewetting of peatlands reduces fire risk, CO2 emissions and generates benefits for biodiversity**
- **Rehabilitation of drained peatlands is often complex, expensive and takes significant time.**
- **Restoration of peatlands can generate important new sources of sustainable livelihood**

- Construction by local communities of dams to block abandoned drainage

Encouraging natural regenration

Simple changes in peatland management can improve the sustainability of land use and reduce its impacts on biodiversity and climate change

Improved water management

- **Improved water management is a fundamental step to support the sustainable management of peatlands (eg maintain water tables, prevent over-drainage, O&M etc)**
- **While drainage has greatly improved the ability to farm land profitably, drainage leads to loss and subsidence of peat soils. A balance between drainage and conservation is needed in order to protect our peatland soils for future generations.**
- **Appropriate management is critical to maintain water pollution, flood control and water supply functions of peatlands**

Modification of livestock management on peatlands

- In many parts of the world, grazing-induced erosion is the main cause of peatland degradation.
- Grazing can have a major impact on peatland vegetation dynamics which can affect both carbon storage as well as biodiversity.
- Reduction and removal of grazing from peatlands can stop degradation and lead to recovery of peatlands, but other measures may be needed to restore peatland functions and vegetation
- Some low intensity management of livestock may locally enhance biodiversity

Possible solutions

- Reduction in numbers of livestock
- Improvement of livestock quality
- Restriction of grazing in degraded areas
- Restrict grazing density
- Provision of feed
- Development of industries to make better use of livestock

United Nations Framework Convention on Climate Change

Mitigation
Adaptation
National Communications
LULUCF
CDM
COP 12 Issues :

- Deforestation
- Financing
- Adaptation
- Post 2012 Regime
- Cooperation with other conventions

Reduced emissions from Deforestation in developing countries

- 75% of peatlands in developing countries are forested
- Emissions from degradation of peatlands in developing countries is the largest source of emissions from deforestation (over 2 GT/yr)
- Any new mechanism for deforestation should thus place special priority on peat forests
- Degradation of peat forests should be considered as well as deforestation
- Peatlands should be considered as a topic in the proposed workshop to elaborate this issue.

Adaptation

- Incorporate peatlands into Adaptation programme of work
- Develop pilot projects for mountain, permafrost and coastal peatlands to examine
- Explore synergies between mitigation of Land use change and deforestation with climate adaptation

Break the cycle of destruction


Thank you