GEOSS Asia-Pacific Symposium
4th Parallel Session

Summary of
Mapping Forests and Tracking Carbon

April 15 (Tue)
Room 2

Chairs:
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National Inst. for Environmental Studies (NIES)
&
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European Commission JRC

Fate of Anthropogenic CO_2 Emissions

+

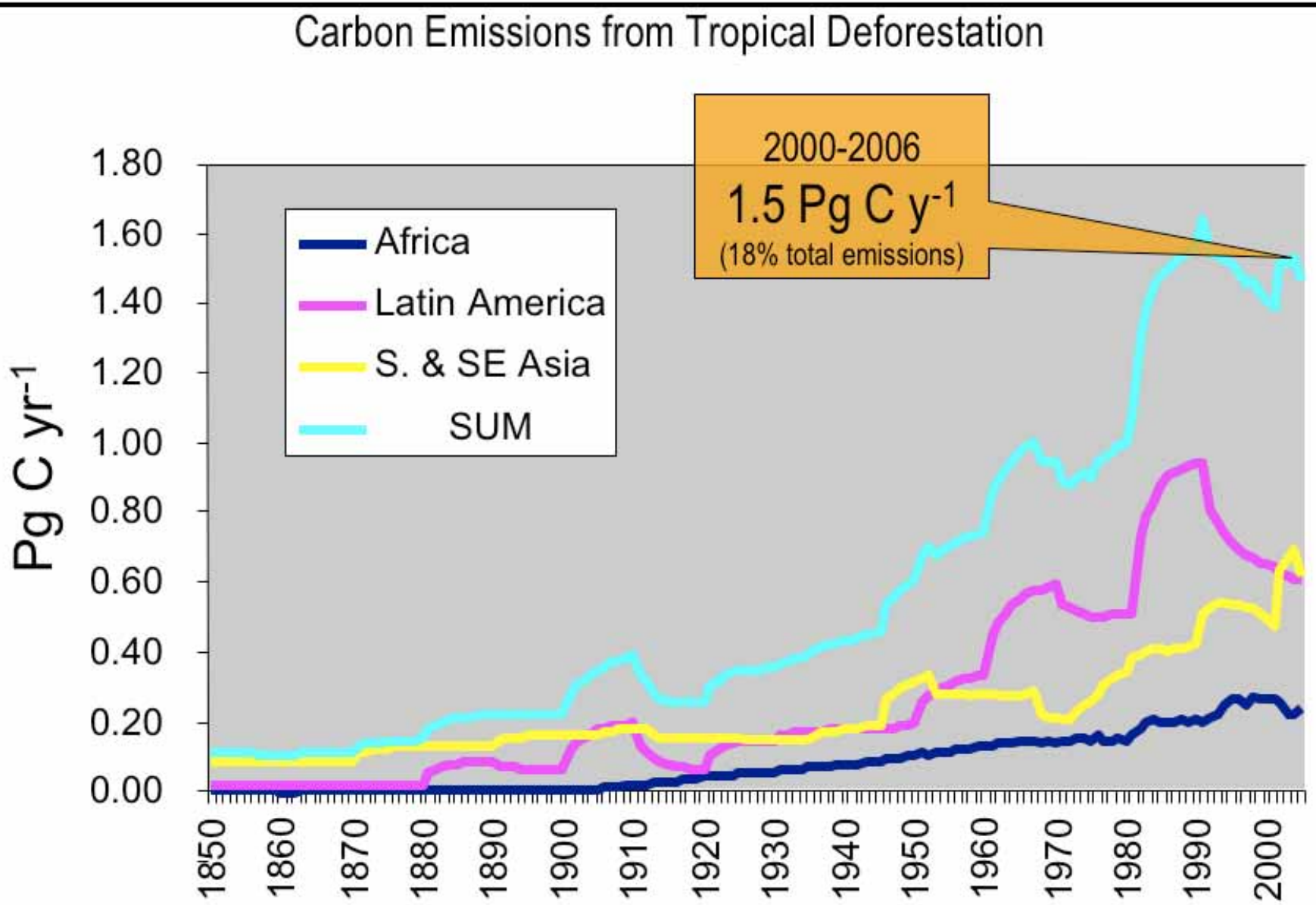
Atmosphere
45%

Land
30%

Oceans
25%

Canadell et al. 2007, PNAS

Anthropogenic C Emissions: Land Use Change



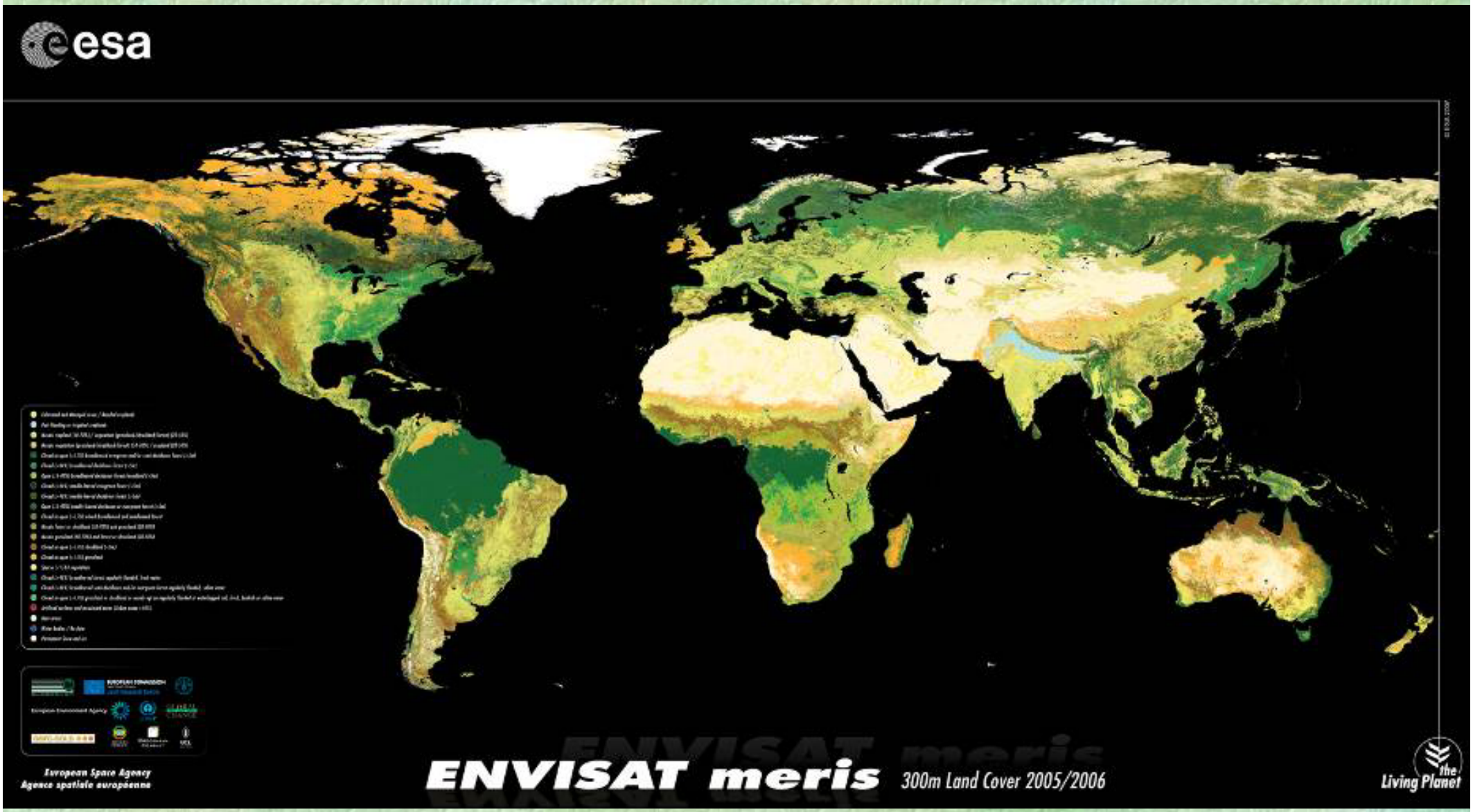
Houghton, unpublished; Canadell et al. 2007, PNAS

Mapping Forests and Carbon Session overview

- 18 presentations
- 70 participants
- GEO Workplan Tasks Working on Forest Mapping and Carbon Tracking
- Global Observations - Requirements and contributions
- Initiatives and research projects

- And, we had hot discussions at
- Round table: How GEOSS could support global forest carbon measurements

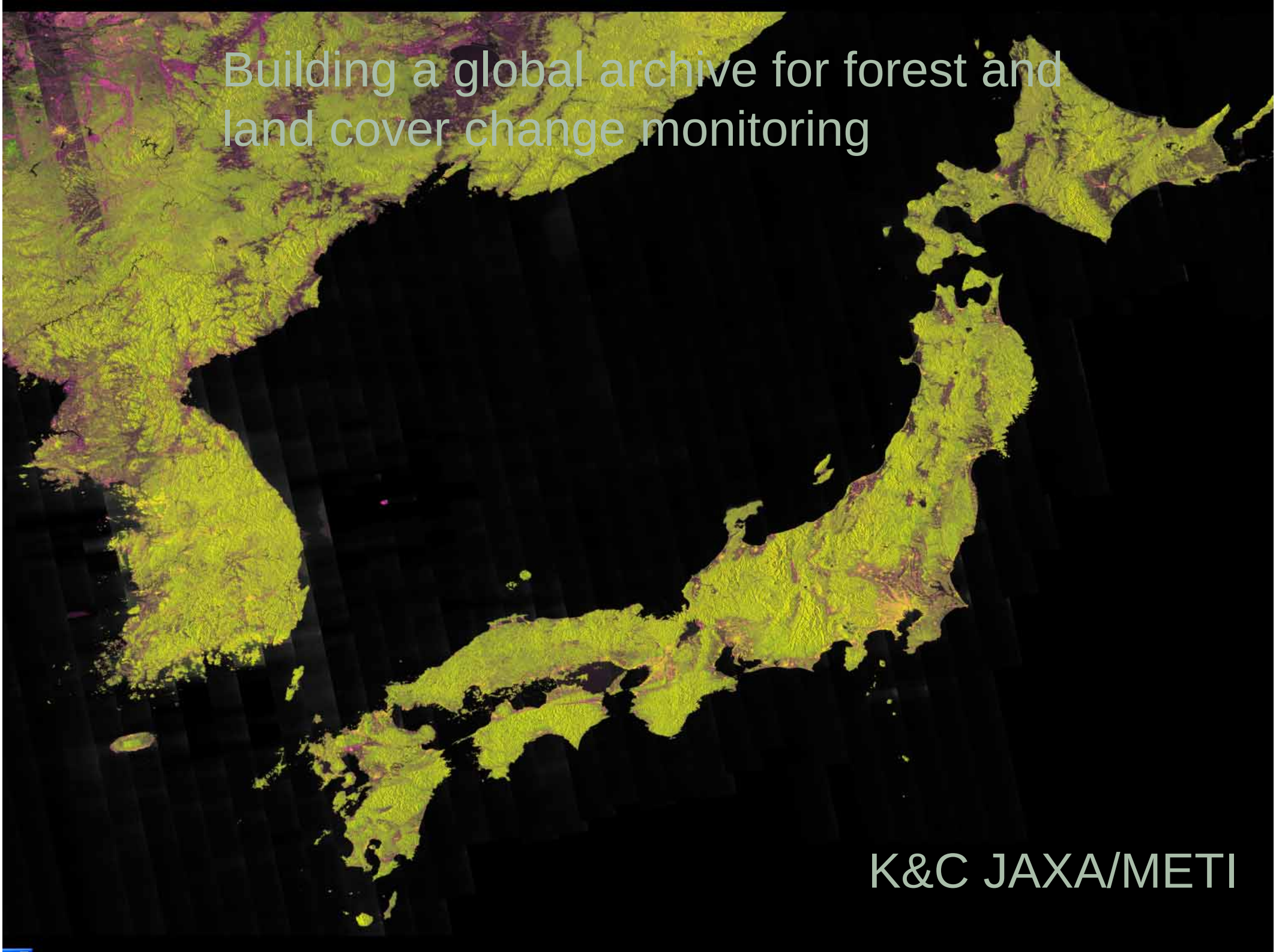
GLOBCOVER (2005/6)



Beta version in review by GEO task team

Dataset release: July 2008

GOFC-GOLD


Building a global archive for forest and land cover change monitoring
K&C JAXA/METI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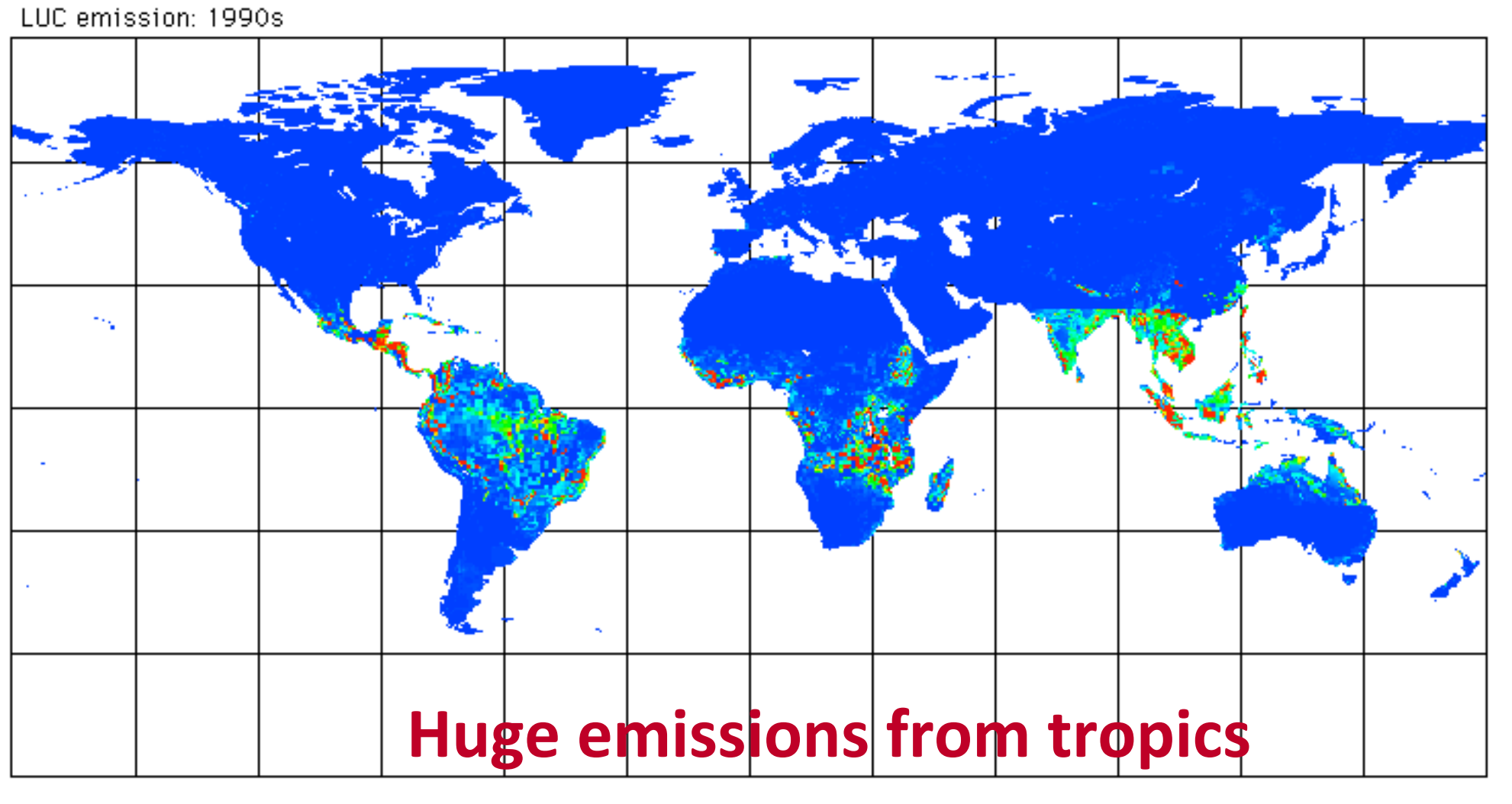
K&C JAXA/METI

CO2 emission from deforestation, 1990s



NIES

Recommendations to GEO

- A number of activities have been initiated by GEO Members and Participating Organizations on various aspects of forest mapping and carbon measurement. Nevertheless, forest carbon mapping and tracking are still not an integrated GEOSS activity.
- Therefore, GEO should ensure the adequate coordination needed to realize a common global forest carbon observation strategy using the best possible satellite, air-borne and in-situ measurements as well as models.

- Forest carbon mapping and tracking by satellite (including SAR, optical and LIDAR) has the potential to provide essential information for predicting climate change and taking measures for climate change mitigation. The estimates of carbon emissions from deforestation, degradation and other land-cover changes can be improved by integrating such measurements with in-situ observations and carbon models. In particular, GEO needs to initiate GEOSS activities on coordinating systematic observation strategies for existing and future SAR instruments.

- These activities should build on the following existing GEOSS Tasks:
  - Forest Mapping and Change Monitoring
  - Global Land Cover
  - Pilot Communities of Practice
  - Virtual Constellations
  - Key Terrestrial Observations for Climate
  - Global Ecosystem Observation and Monitoring Network