



Intact/hinterland forest mapping in the tropical regions

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Background

Forest degradation - long-term reduction of forest productivity and carbon stocks due to the altered species composition and partial crown cover loss (based on IPCC definitions of forest degradation, 2003)

- ✓ changes in forest structure and non-stand replacement disturbances leading to forest degradation cannot generically be directly observed by remote sensing data

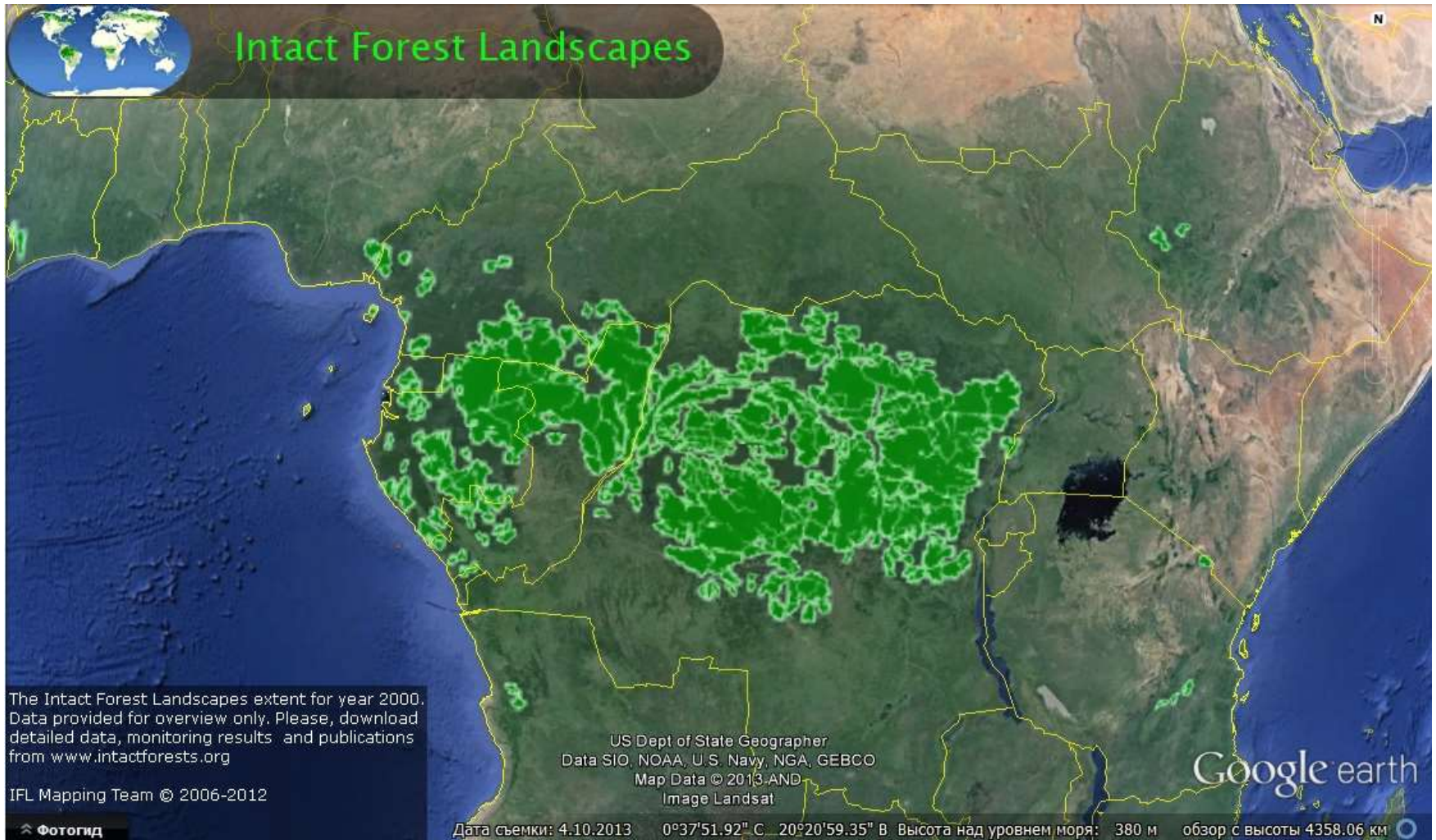


Alternative approach to assess forest degradation –
Intact/hinterland forest mapping:

synthetic use of GIS analysis and remotely sensed data to identify large unfragmented natural forested areas, without signs of human activity and remote from human infrastructure.

Forests outside of IFL/hinterland forest areas – **degraded forests**

Intact forest landscape (IFL) mapping



**Potapov et al.,
2008**

IFL criteria: 1) at least 1km away from settlements and infrastructure;
2) no signs of recent industrial activities and agriculture;
3) forest patch >500km²; max width - at least 10km,
maximal corridor width – 2 km.

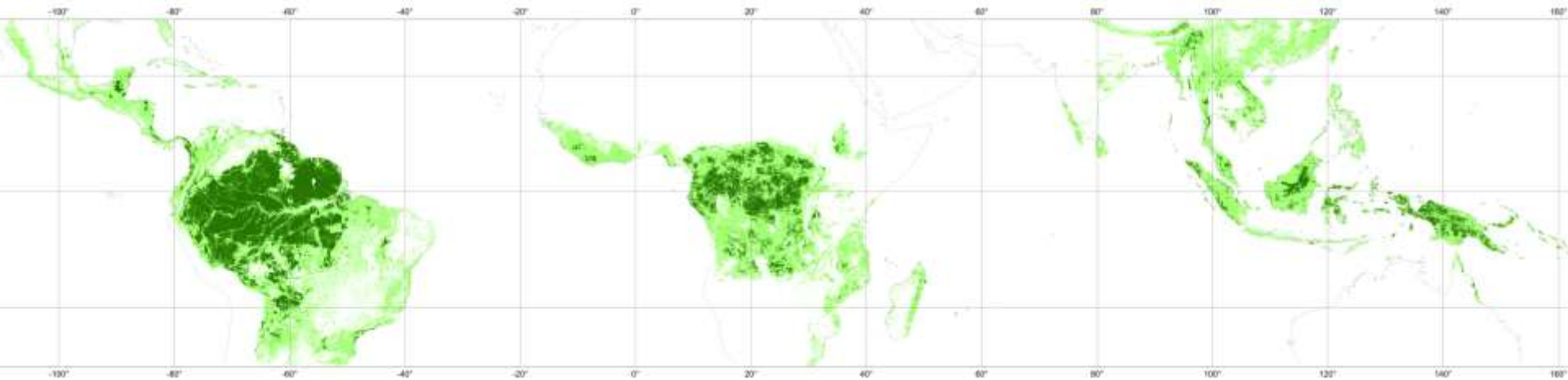
Hinterland forests (IFL 2.0)



Forest cover and forest cover change data from Hansen et

Hinterland forests (IFL 2.0.)

- recently undisturbed and unfragmented forests:
 - ✓ absence of forest cover loss (2000-2012, Hansen et al., 2013)
 - ✓ absence of forest regrowth (indicates prior disturbances)
- include both primary and secondary forests.

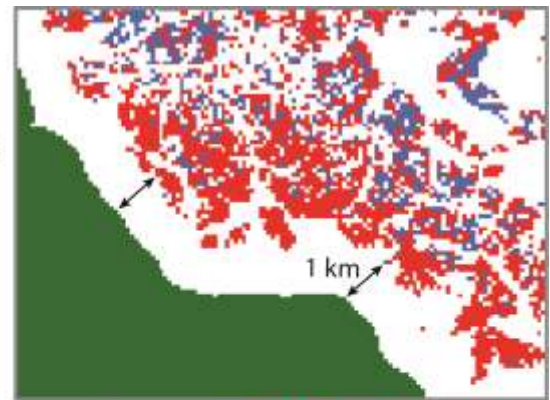


Dark green – hinterland forests, light green – other tree crown cover >25%

Hinterland forest criteria:

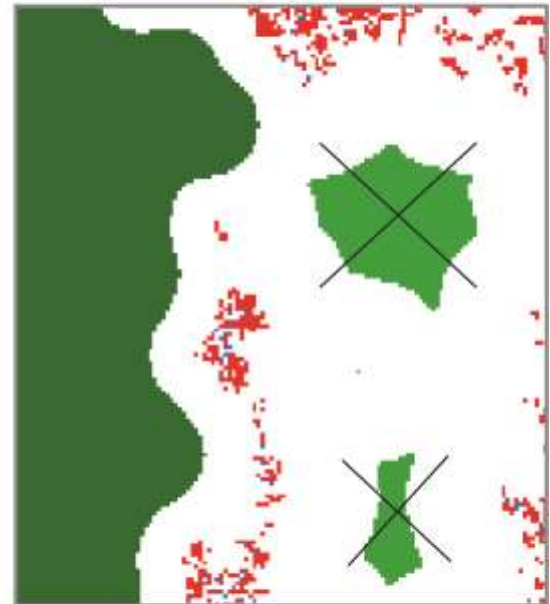
a) Distance to forest cover loss/gain

> 1 km



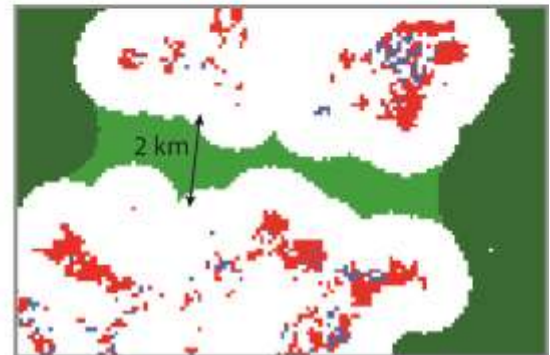
b) Minimal patch size

100 km²

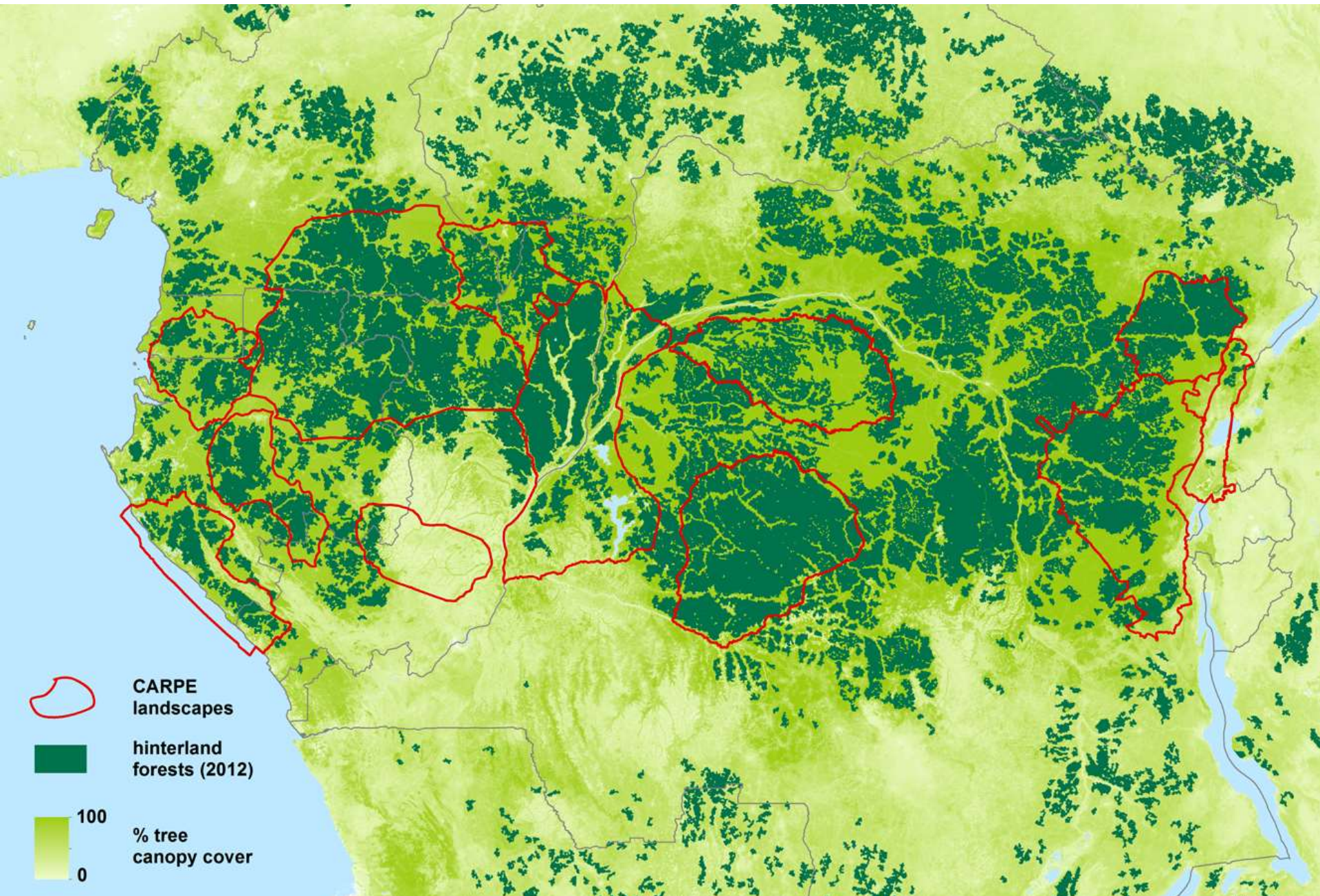


c) Minimal corridor width

2 km

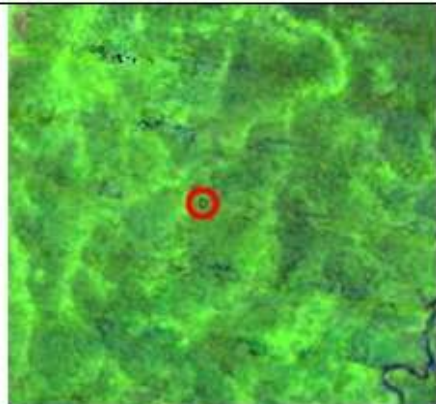


Hinterland forests – potential conservation areas:

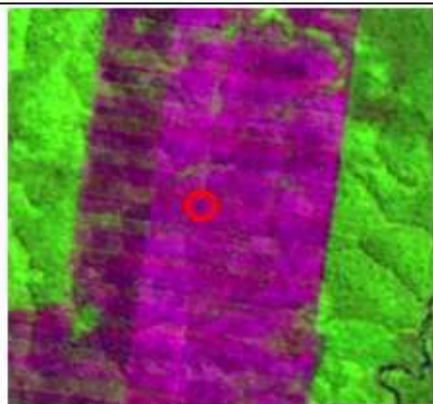


Hinterland forests – target areas for forest monitoring:

Point 1. Forest cover loss in year 2004

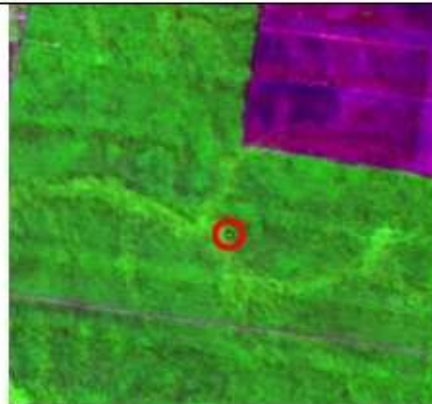


Year 2003 composite

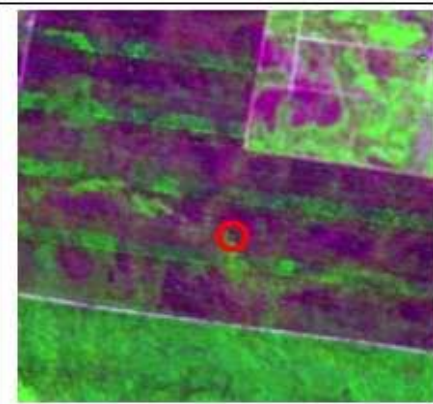


Year 2004 composite

Point 2. Forest cover loss in year 2007

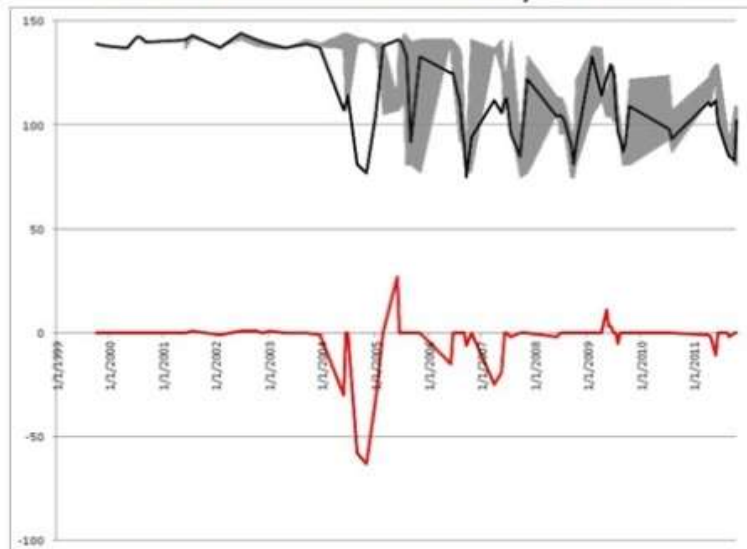


Year 2006 composite

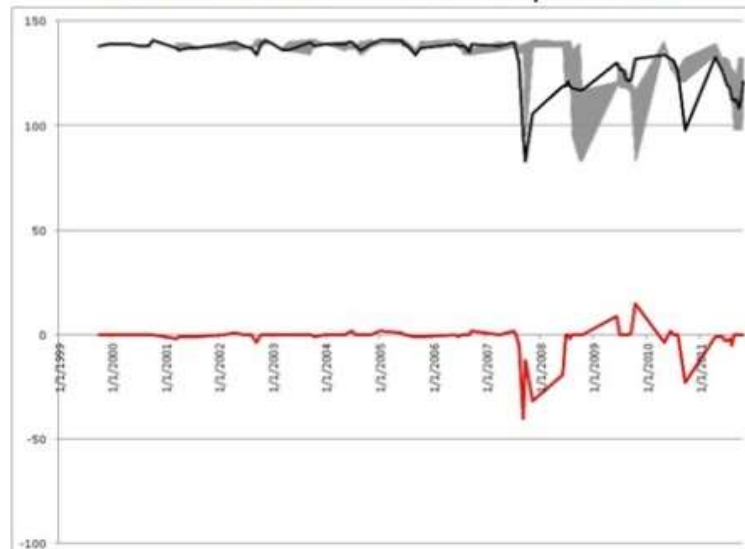


Year 2007 composite

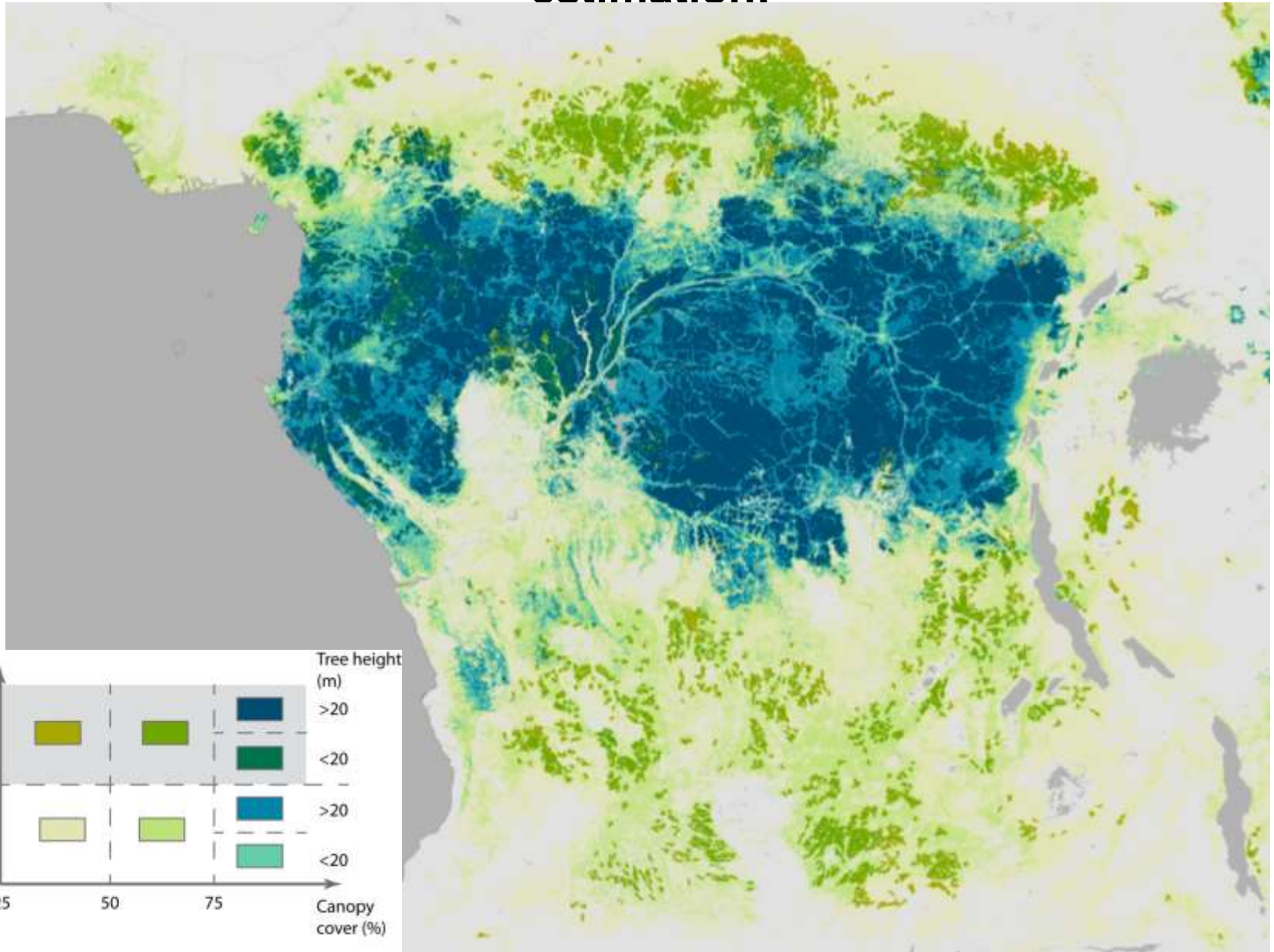
Point 1. Forest cover loss in year 2004



Point 2. Forest cover loss in year 2007



Hinterland forests – forest cover stratification for biomass estimation:



Thank you for attention!