

Responsible Cultivation Areas

Biofuel production with a minimum risk of Indirect Land Use Change

Ecofys

Bart Dehue
Sebastian Meyer

WWF

Laszlo Mathe
Arif Budimen
Fitrian ArdianSyah

Conservation International

Christine Dragisic

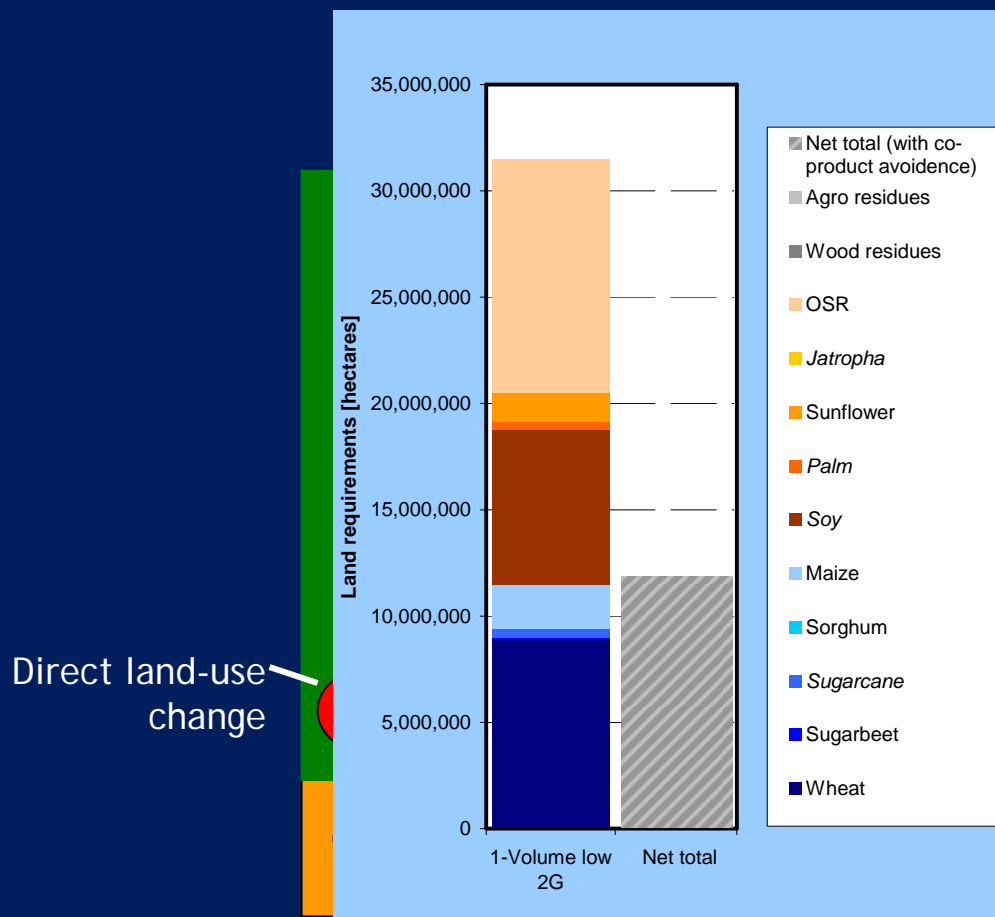
Content

- Why ILUC matters and what we can do about it
- The “Responsible Cultivation Area” Project
- Early results from Kalimantan

Why ILUC matters and what we can do about it

Background

- Biofuel targets
 - EU 10% = 34 Mtoe
 - US = 77 Mtoe
- Land requirements for biofuels from energy crops
- Direct LUC can be controlled
- But, concerns about Indirect LUC

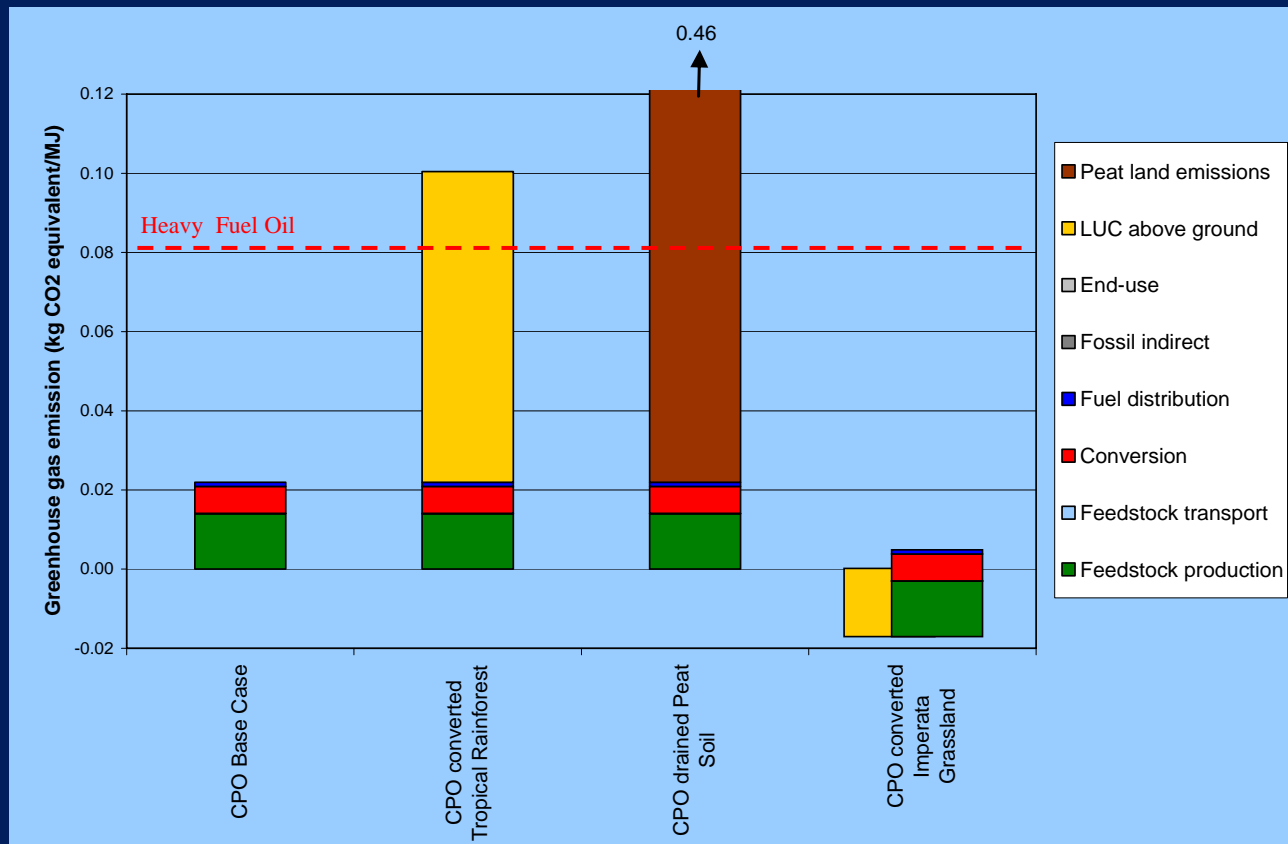


Direct land-use change

Expansion without indirect land-use change
Source: Ecofys (2008) - Contribution to Gallagher review

Background: Impacts of LUC on GHG-performance

LUC is a risk, but LUC can also *improve* GHG-performance



Source: Ecofys (2007) – GHG analysis oil palm for Commission Blok -Essent

Policy context



- US Renewable fuel standard
 - GHG-methodology includes emissions from ILUC: *significant*



- California Low Carbon Fuel Standard
 - GHG-methodology includes emissions from ILUC: *significant*



- EU Renewable Energy Directive & Fuel Quality Directive
 - Review of indirect effects by EC in 2010
 - EC may propose
 - measures to minimise negative impacts
 - Inclusion of emissions from ILUC in GHG-methodology
 - GHG-bonus of 35% for biofuels from 'degraded land'

-> strong interest for companies to demonstrate production with minimum risk of ILUC

ILUC – what can we do about it?

- Macro level
 - Globally control all LUC for all sectors
 - Increase overall land productivity such that 'no' expansion is needed to meet increase in demand
 - > medium-long term solutions
 - > reactive role for companies

- Company level
 - Produce biofuels in such a way that the risk of ILUC is minimised
 - Biofuel from true residues or algae
 - Biofuel on 'unused land'
 - (idle/marginal/degraded/abandoned/underutilised land)
 - Biofuel-induced additional land-productivity increase
 - > Short – long term solution
 - > Pro-active role for companies

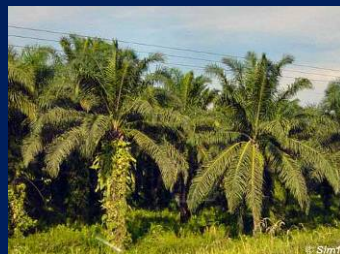
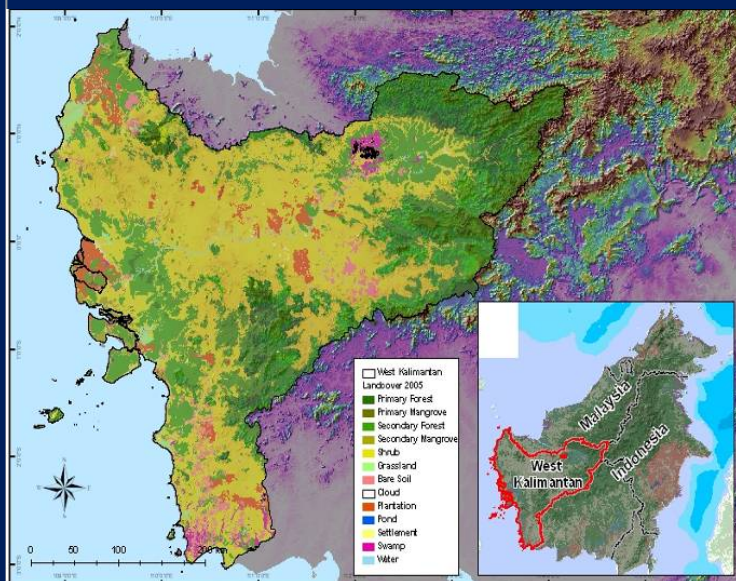
“Responsible Cultivation Area” Project

Project goals

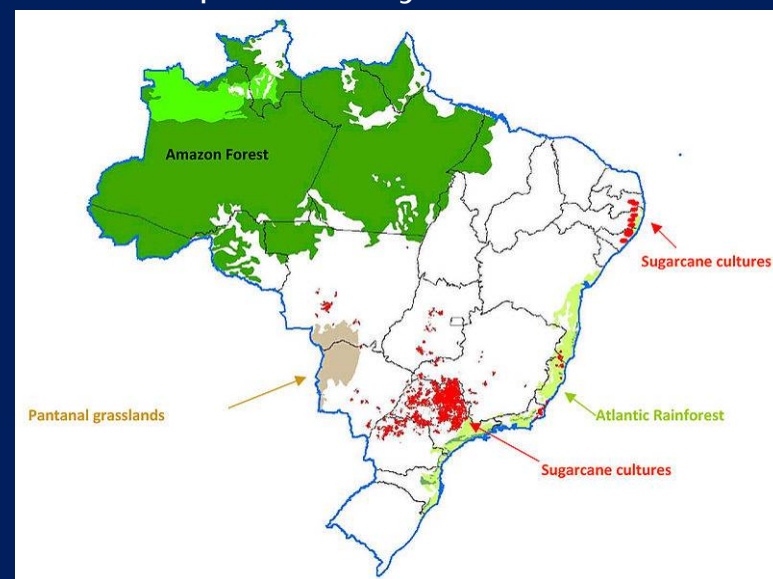
- Develop and field-test a practical definition and methodology for Responsible Cultivation Areas, where energy crops can be produced responsibly with minimum risk of ILUC;
- Understand the economic feasibility of bringing Responsible Cultivation Areas into production.

Pilot studies

- West Kalimantan
 - Focus on “land without provisioning services”



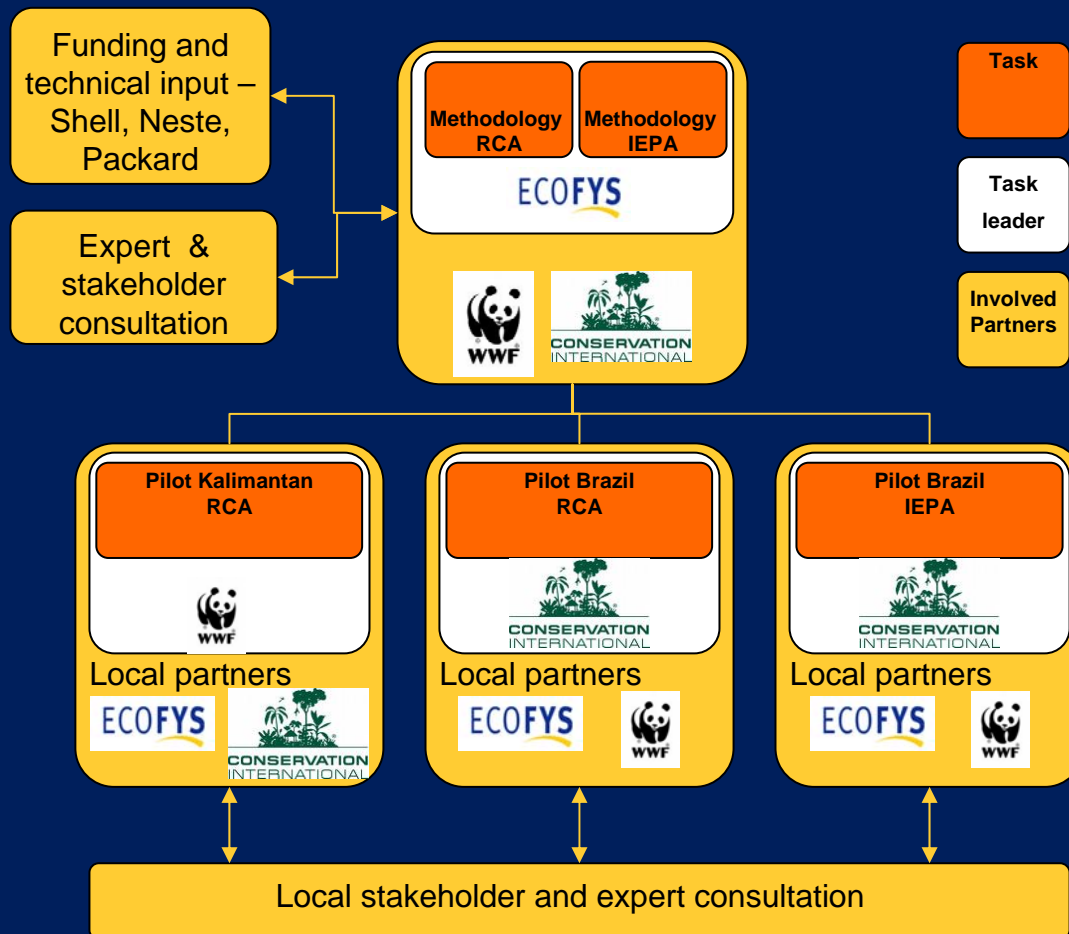
- Brazil
 - Focus on sustainable increase of land productivity



Central Principles in the project

- Methodology should be generally applicable
 - For different regions and crops
- Methodology should at least comply with RES Directive
- Make maximum use of existing tools
 - Avoid causing duplication and reinventing the wheel
- Consultation with experts and stakeholders
 - Producers
 - Social NGO's
 - Environmental NGO's
 - Governments
 - Experts
 - RSB

Main executing parties



Defining “Responsible Production”

For the RCA concept, an area is considered suitable for “responsible” cultivation if it:

- 1) does not cause unwanted displacement effects, and
- 2) complies with the sustainability criteria, that refer to site selection, of the following biofuel sustainability initiatives:
 - EU Renewable Energy Sources Directive (RES Directive)
 - UK Renewable Transport Fuel Obligation (RTFO)
 - Roundtable on Sustainable Biofuels (RSB)

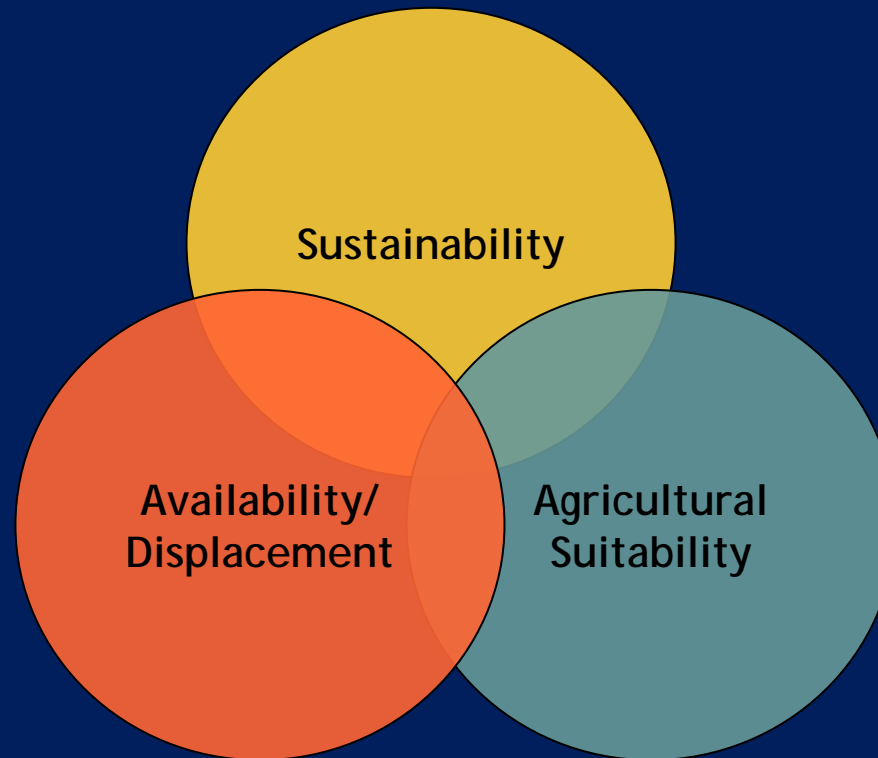
RCA Principles

This leads to the following principles for RCA's:

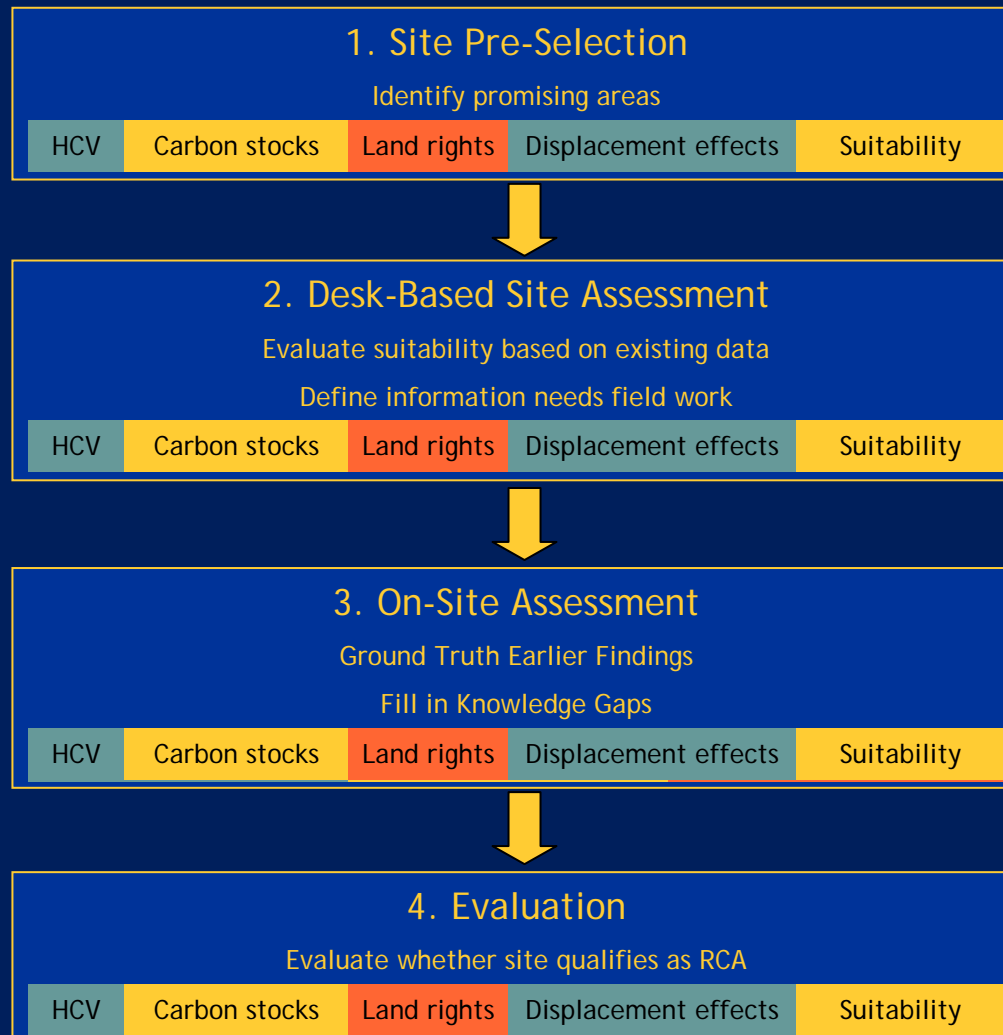
Establishment of energy crop plantations:

1. maintains or increases High Conservation Values
 2. does not significantly decrease above or below ground carbon stocks
 3. respects formal and customary land rights
 4. does not cause unwanted displacement effects
- Local food security and stakeholder consultation are implicitly included
 - Local food security = unwanted displacement effect
 - Stakeholder consultation = process (methodology)
 - Agricultural suitability included in methodology
 - Principles are worked out in more detailed criteria

Methodology for RCA's: integral approach



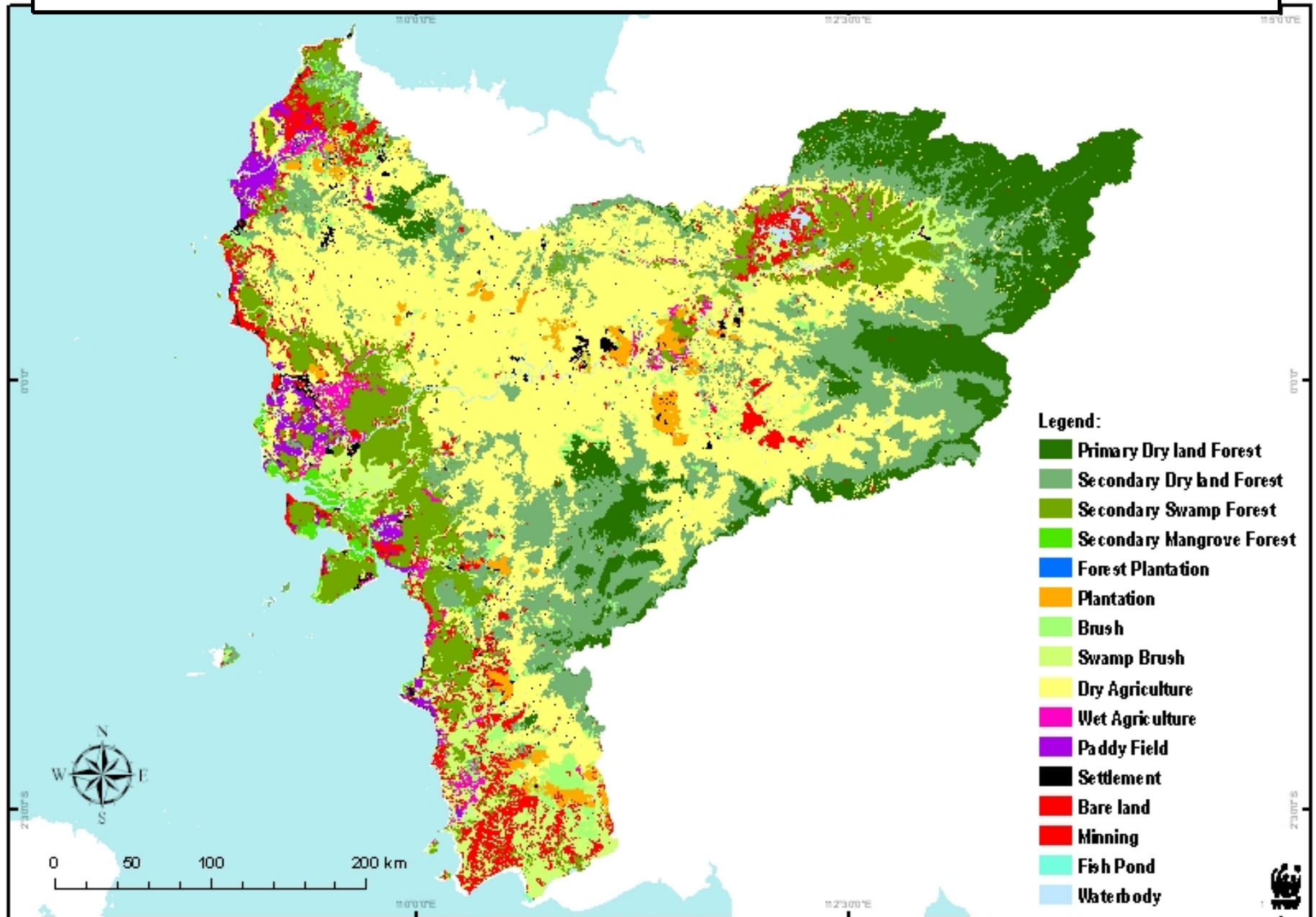
Draft-Methodology for RCA's: 4-step process



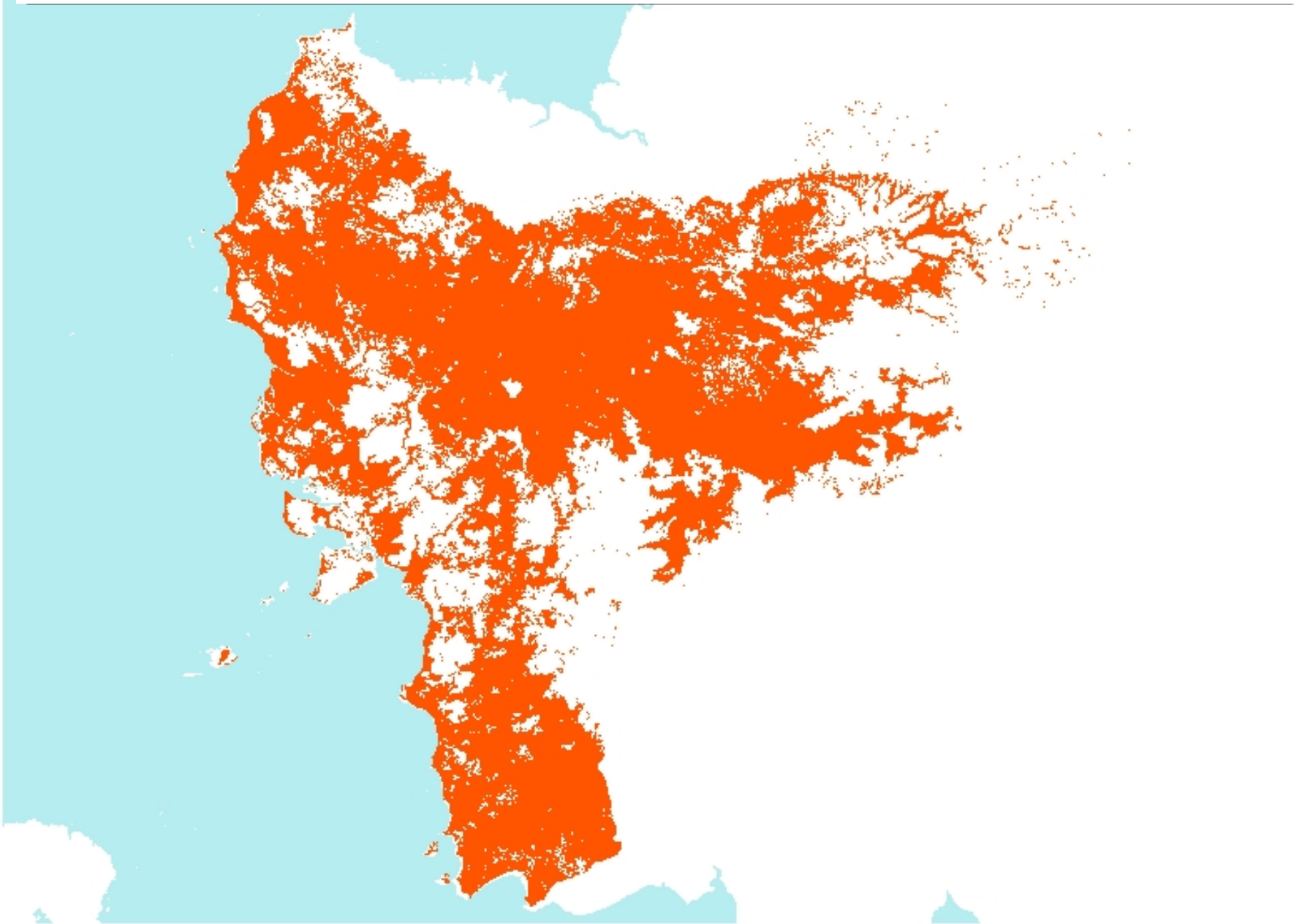
Pilot results: pre-selection in Kalimantan

- With kind permission of WWF Indonesia

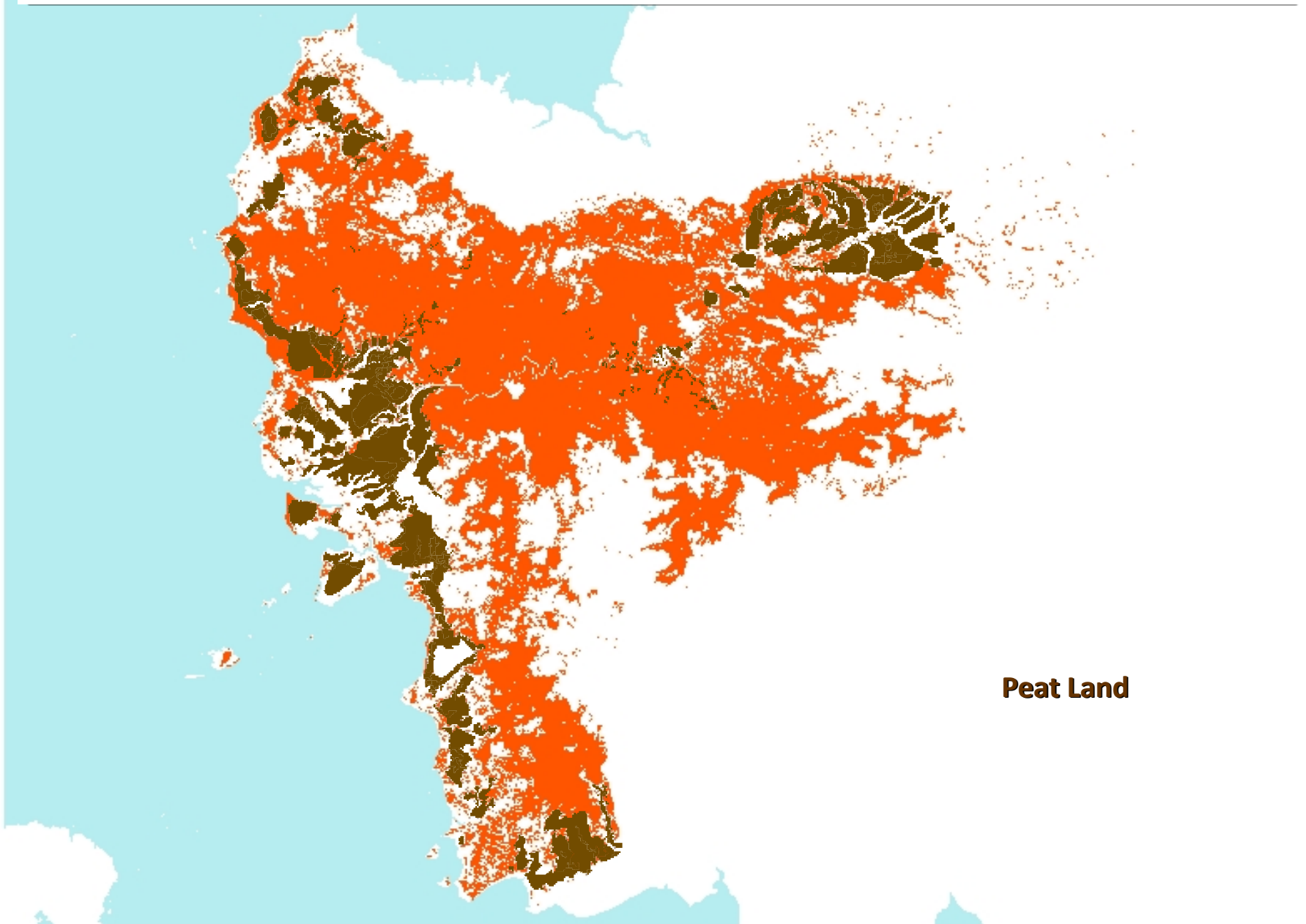
Land Cover of West Kalimantan



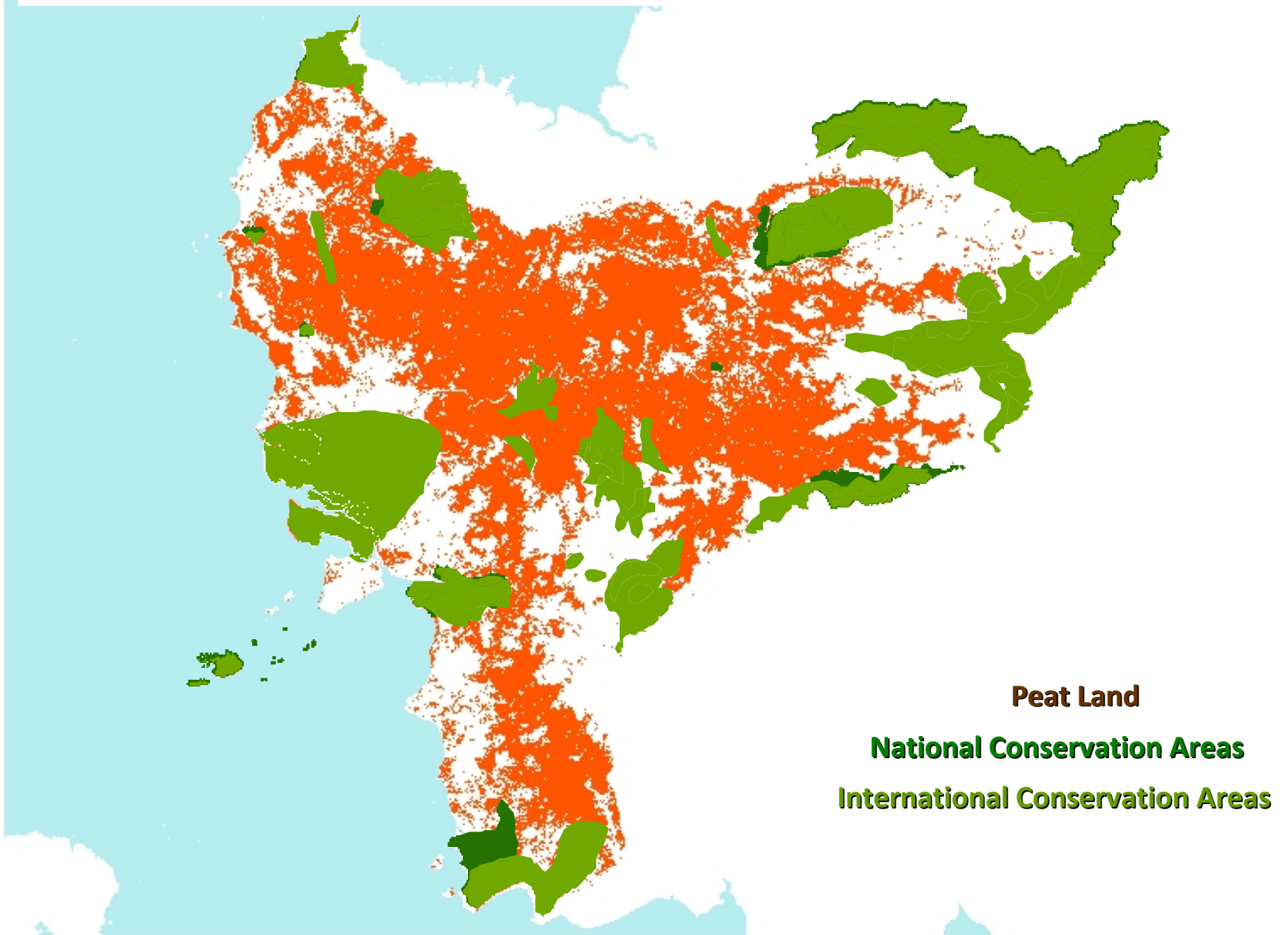
C-stocks - exclude all forested areas



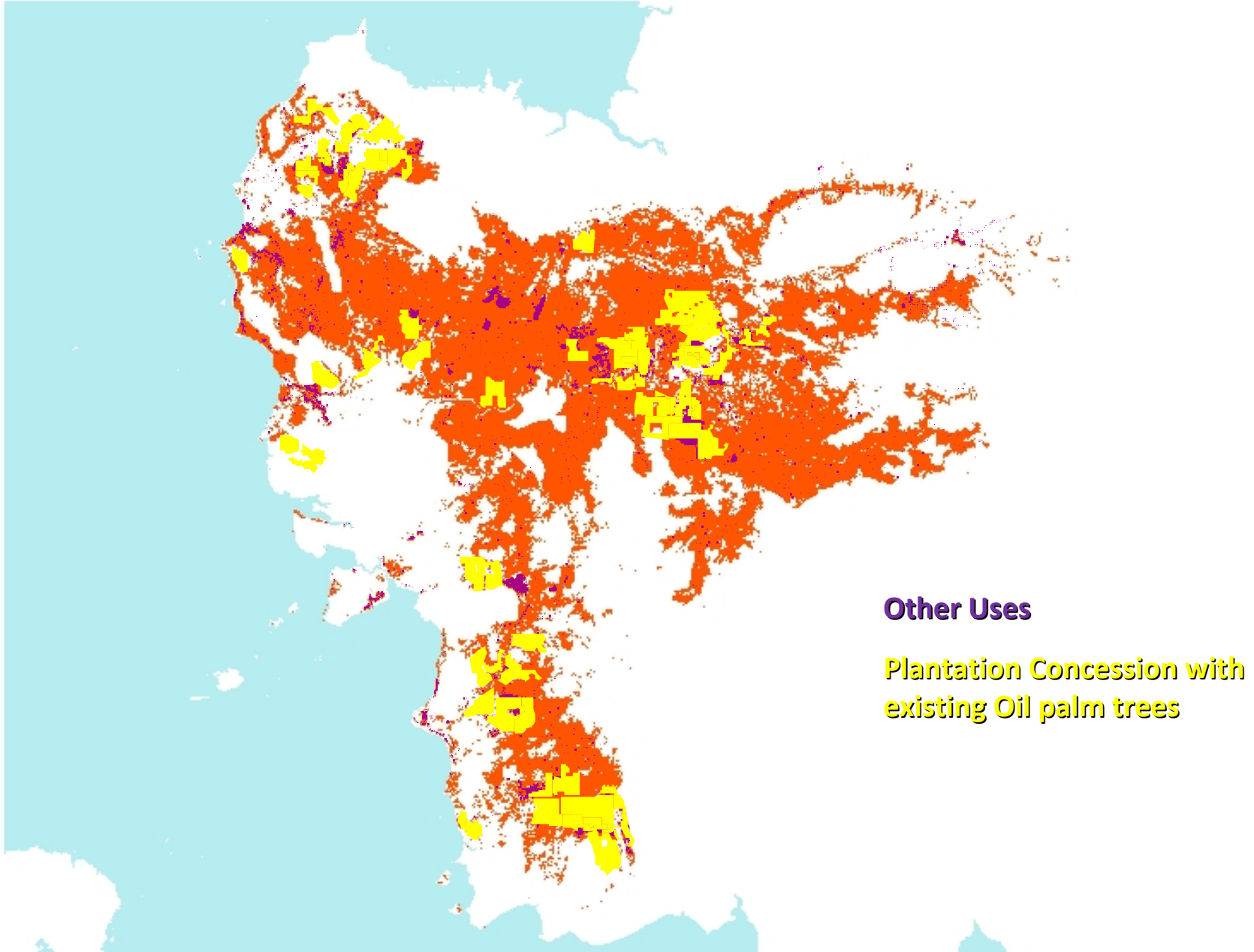
C-stocks - exclude all peat land



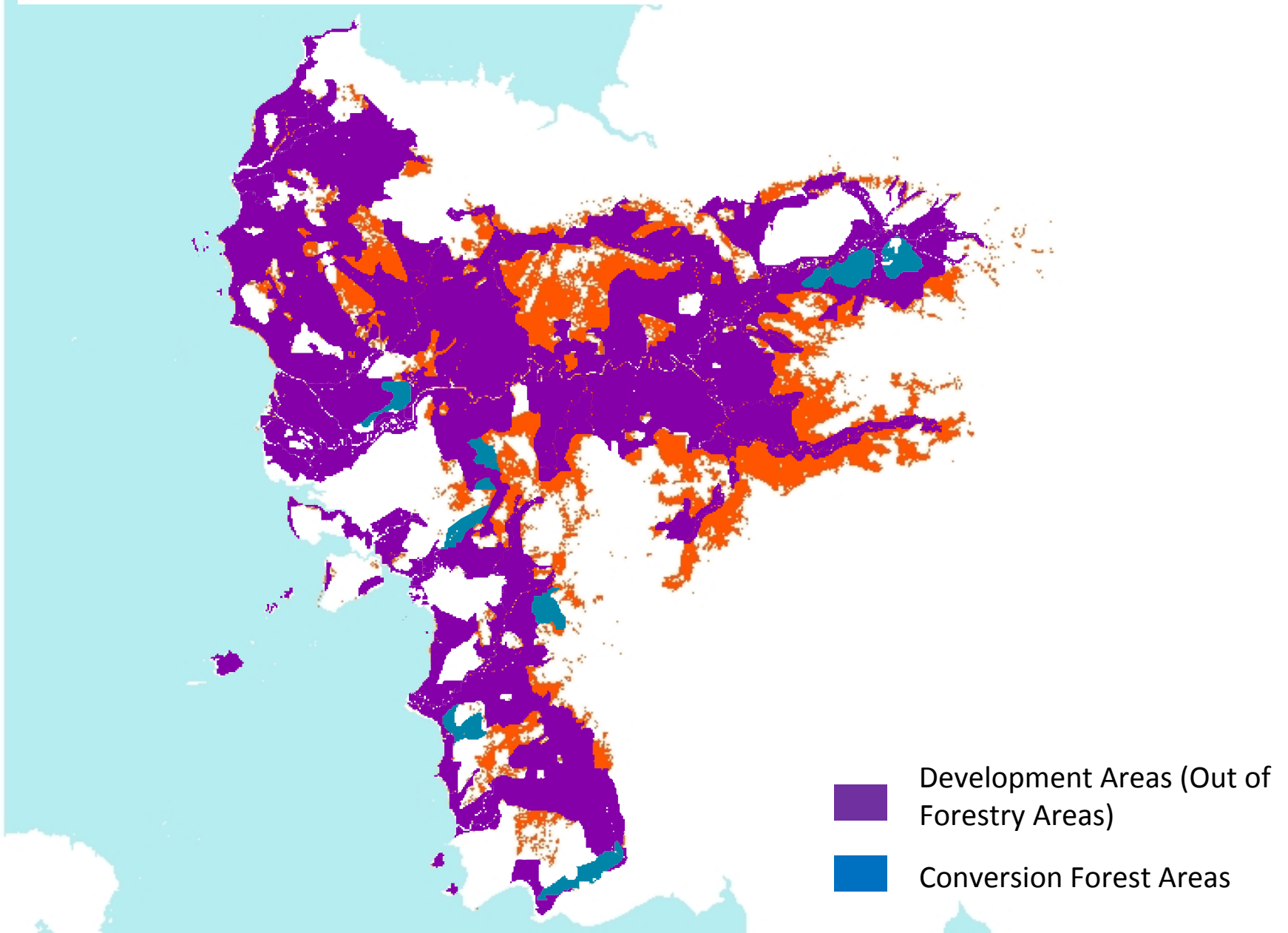
HCV's - exclude protected areas



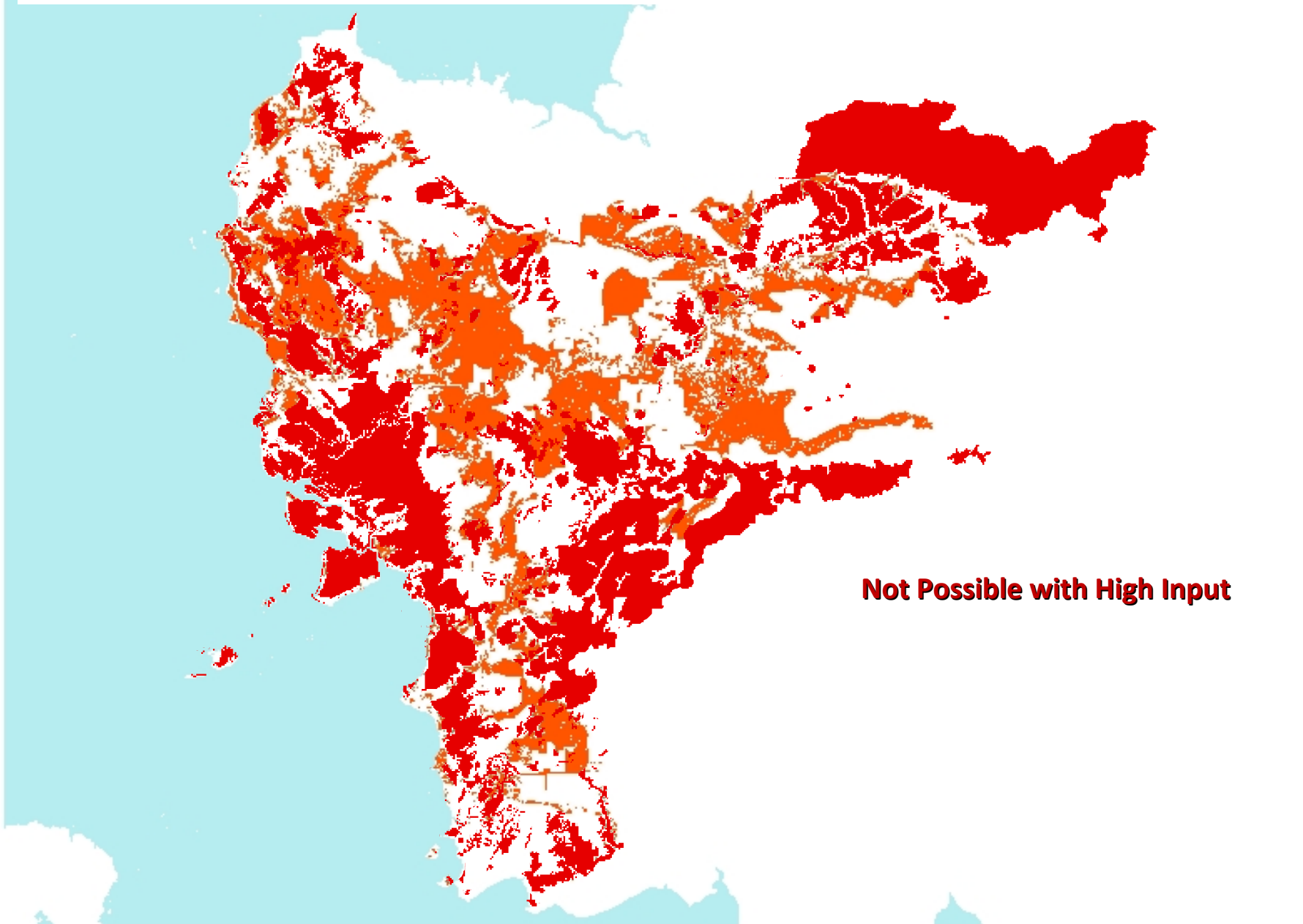
Displacement - exclude existing plantations and other uses



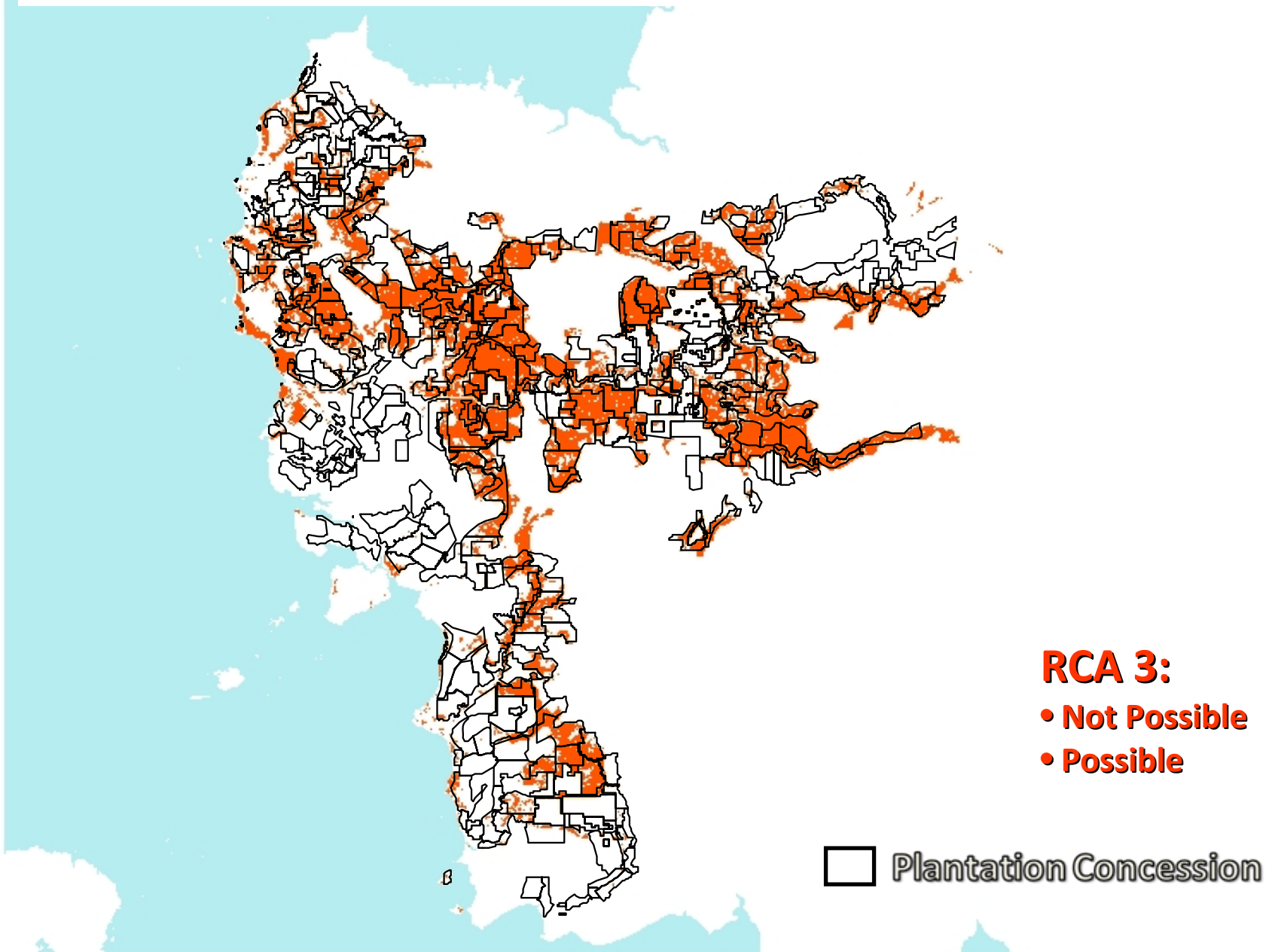
Land availability - Inside development areas



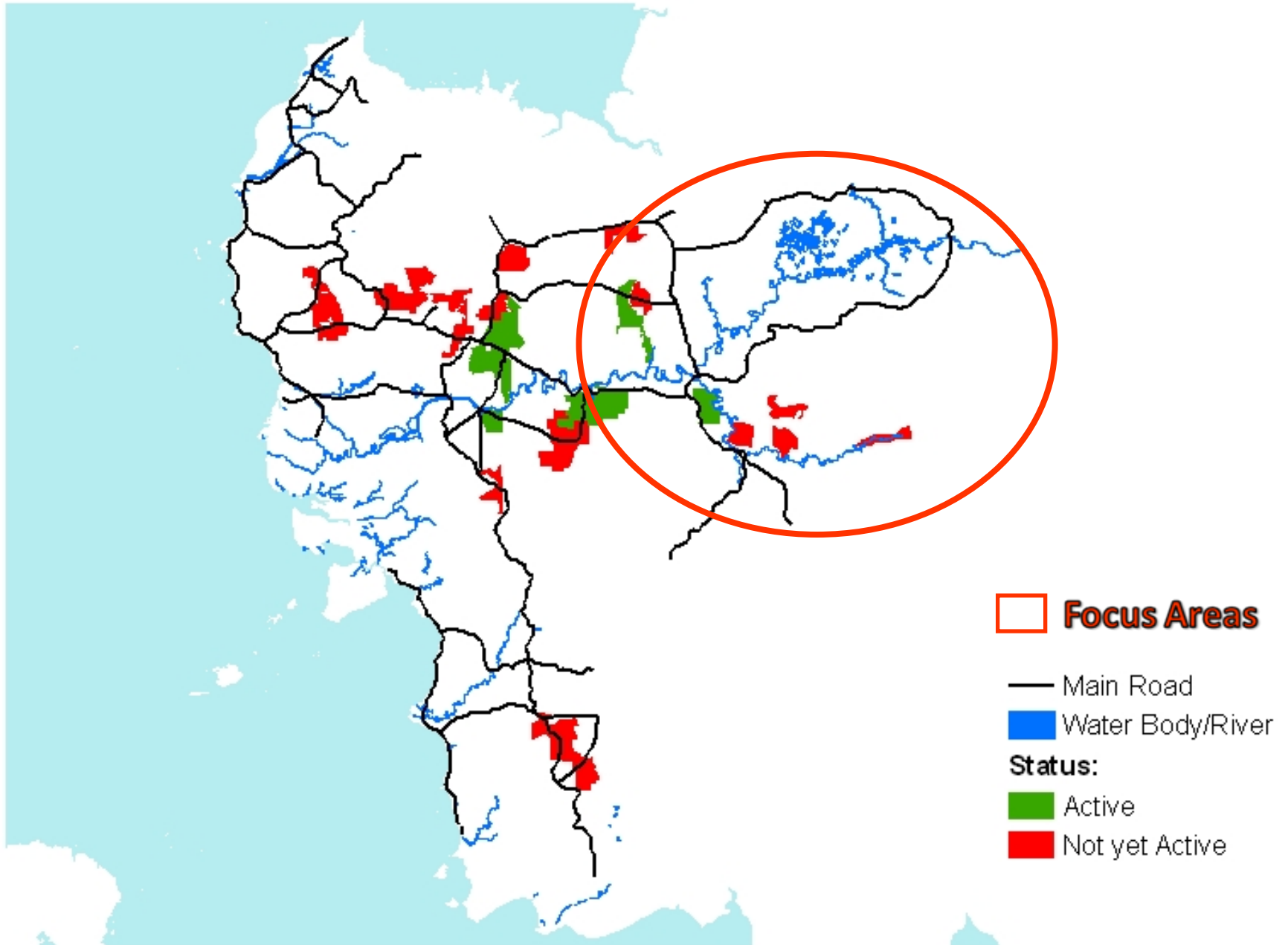
Agricultural suitability - exclude non-suitable areas



Remaining areas and concession boundaries



Concessions with RCA and Access



Next steps

- Methodology development
 - Extend methodology to include increased productivity options
 - Consultation with stakeholders/experts
 - Pilot methodology
- Pilot Kalimantan
 - Desk-based assessment of pre-selected areas
 - Refine pre-selected areas
 - Define knowledge gaps for field work
 - Field work
 - Ground truthing
 - Fill in knowledge gaps
- Pilots Brazil
 - Sugar cane – cattle integration
 - Oil palm

Thank you for your attention

- For more information please contact:
 - For Ecofys: Bart Dehue b.dehue@ecofys.com
 - For WWF: Laszlo Mathe Lmathe@wwfscotland.org.uk
 - For CI: Christine Dragisic c.dragisic@celb.org