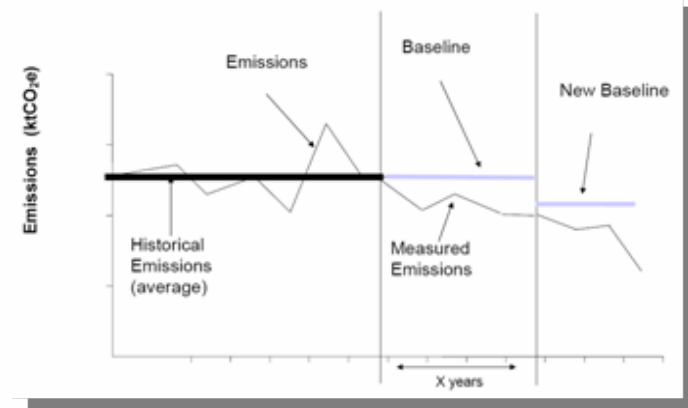


Introducing new initiatives to support implementation of REDD

Robin Matthews
Climate Change Theme Leader
Macaulay Institute, Aberdeen AB15 8QH

*Presentation at Forest Day 2 side-event, December 6, 2008,
UNFCCC COP14 conference, Poznan, Poland*

- **EU-FP7 REDD-ALERT** (“Reducing Emissions from Deforestation and Degradation through Alternative Landuses in Rainforests of the Tropics”)
- **Defra-REDD** (“Review of methodologies to support the implementation of reduced emissions from deforestation and forest degradation (REDD) in developing countries”)

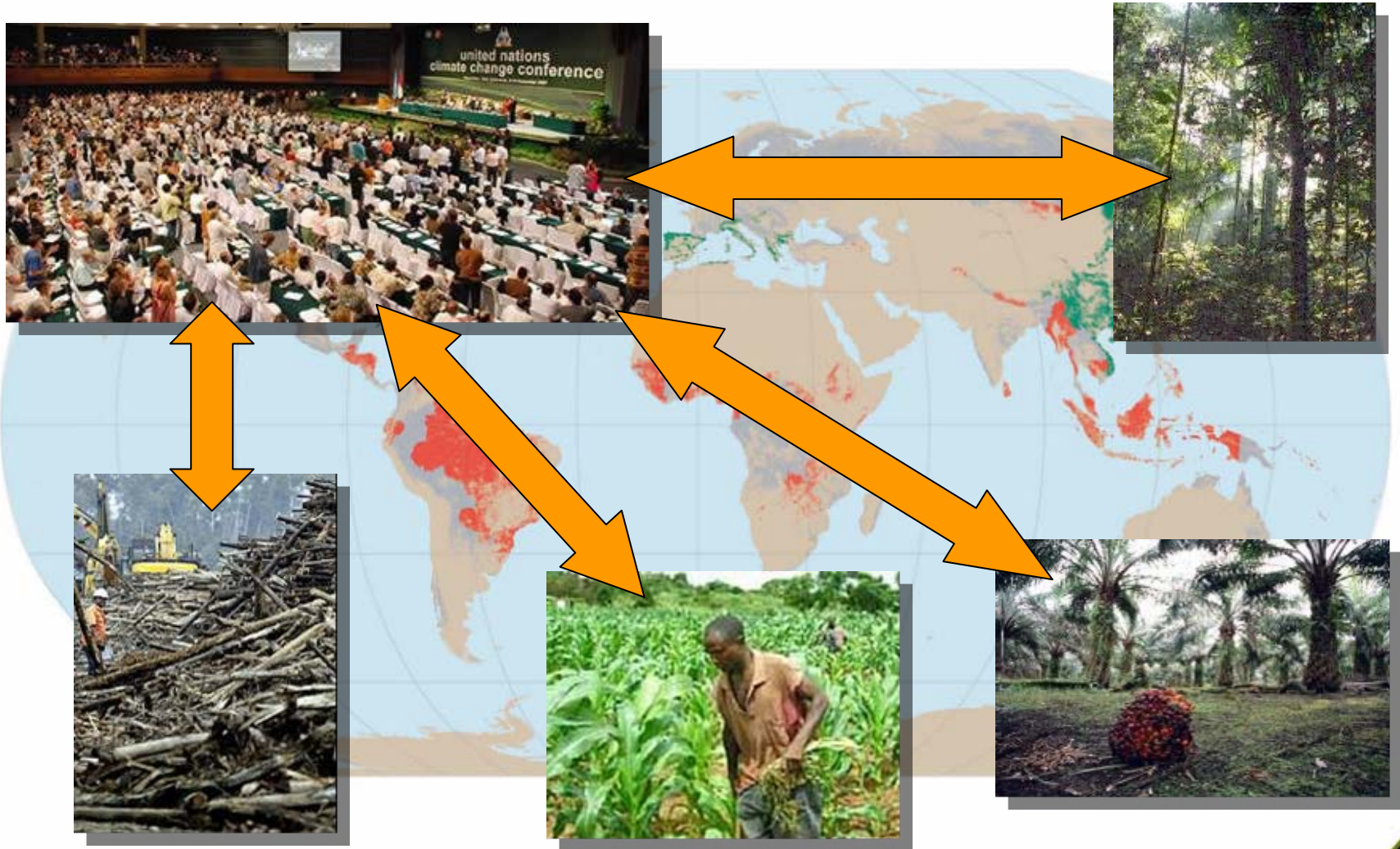


EU-FP7 Project REDD-ALERT

Reducing Emissions from Deforestation and Degradation through Alternative Landuses in Rainforests of the Tropics

- Macaulay Land Use Research Institute, United Kingdom
- Université Catholique de Louvain, Belgium
- Vrije Universiteit Amsterdam, Netherlands
- Georg August University of Göttingen, Germany
- World Agroforestry Centre, Kenya
- Centre for International Forestry Research, Indonesia
- International Institute of Tropical Agriculture, Nigeria
- Centro Internacional de Agricultura Tropical, Columbia
- Indonesian Soils Research Institute, Indonesia
- Research Centre for Forest Ecology and Environment, Vietnam
- Institut de Recherche Agricole pour le Développement, Cameroon
- Instituto Nacional de Investigacion y Extension Agraria, Peru

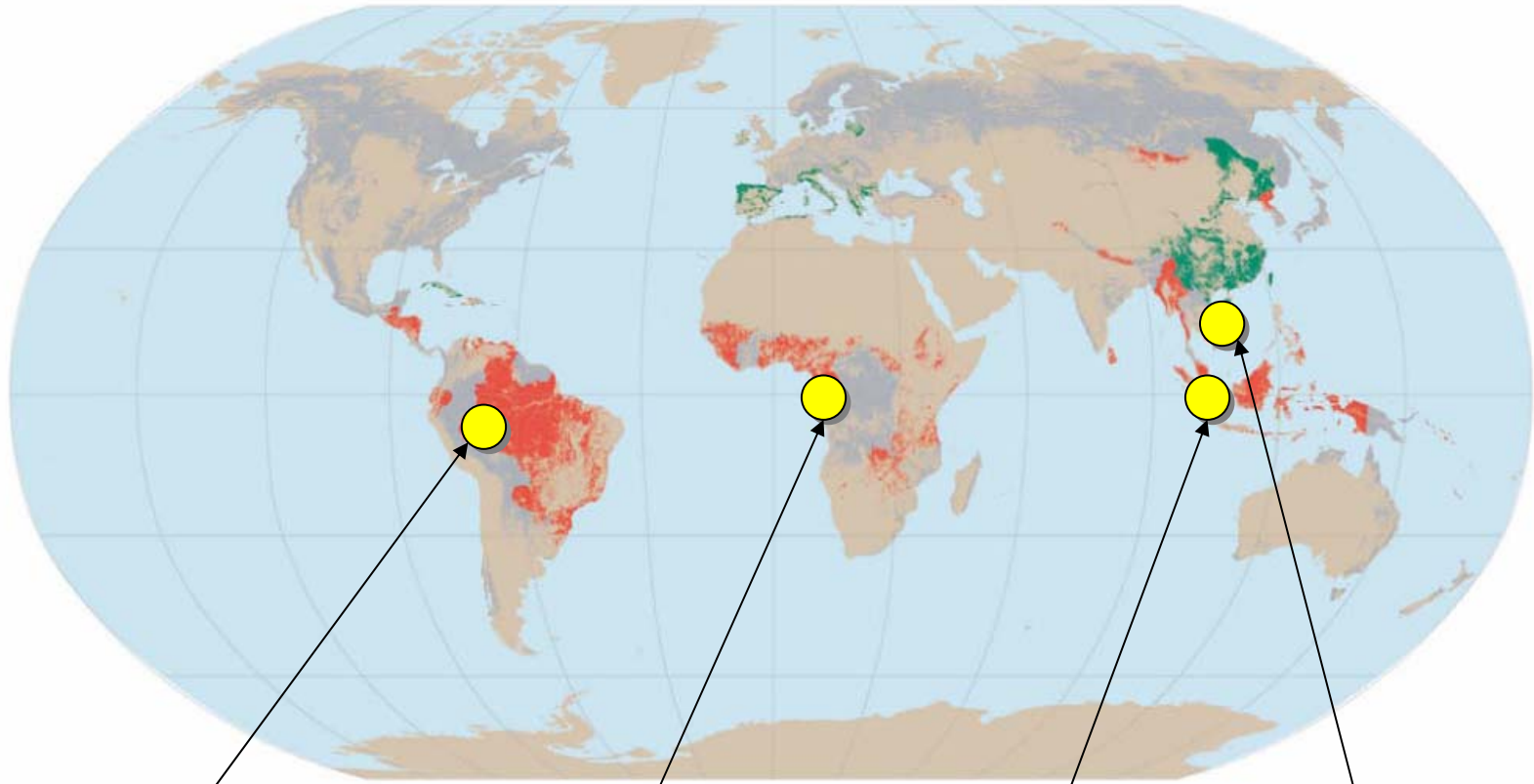
Linking global agreements to local action



Policy and governance issues

- Can we develop policies that are **beneficial for GHG emissions reduction** as well as local communities?
- How do we synthesise the interests of **different actors** at **different levels** into a coherent **multi-level policy framework**?
- How do we balance **trade-offs** between **CC policies** (e.g. biofuels, C sequestration) and other **ecosystem services** and the larger goal of **sustainable forestry**?

Site locations



Ucayali, Peru

Southern Cameroon

Indonesia

Vietnam

Drivers of deforestation

- **Humid tropics: combination of:**
 - commercial wood extraction
 - conversion to cropland
 - livestock development
 - extension of overland transport infrastructure
- **Southeast Asia**
 - timber concessions, plantations (paper, palm oil)
 - slash-and-burn agriculture
- **Latin America**
 - road building followed by migrant settlers practising S&B
 - pasture creation for cattle
- **Africa**
 - smallholder agriculture
 - fuelwood

(Geist & Lambin, 2002)

Measuring and monitoring D&D

- **How better to define a forest?**
 - Hierarchical object approach
- **How to ascribe more realistic C densities to these forest classifications?**
 - quantify root biomass to 3 m
 - quantify soil C to 3 m
- **Modelling dynamic aspects of GHG emissions**
 - time averaged C stocks

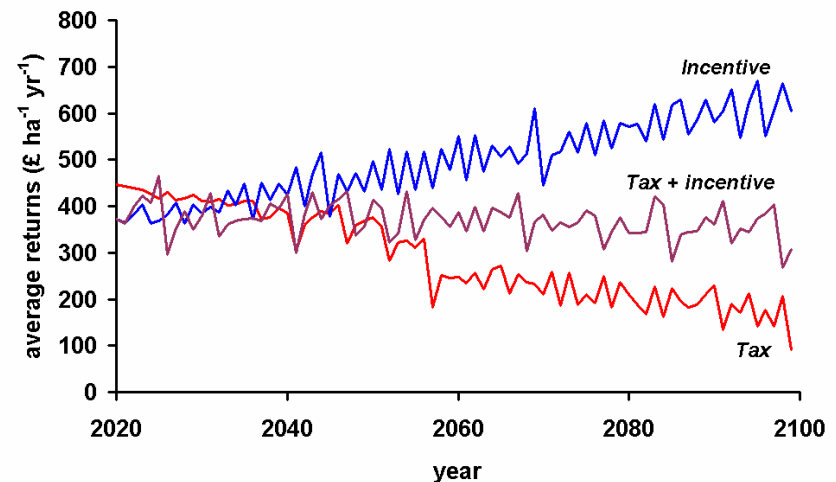
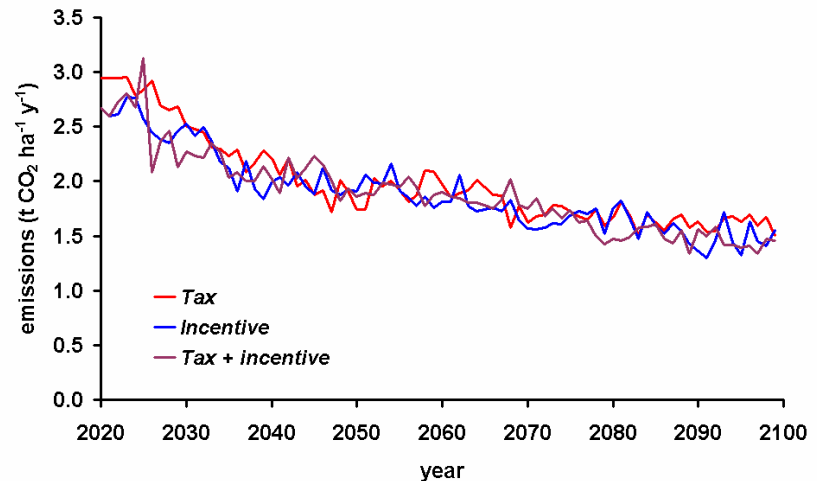


- **Significant CO₂ and N₂O released from soil following conversion of forest**
 - measurement of CO₂ and non-CO₂ emissions from 'hotspots': oil palm plantations, deforested peatlands
- **Modelling - methodologies to extrapolate to larger spatial and temporal scales**



Policy instruments

- Combining agent-based and biophysical modelling
- All instruments can encourage land managers to choose low emission options
- But
 - taxes reduce farmer returns
 - incentives require external money
- Combination of taxes and incentives may be cost-neutral
- Feasibility of carbon trading?

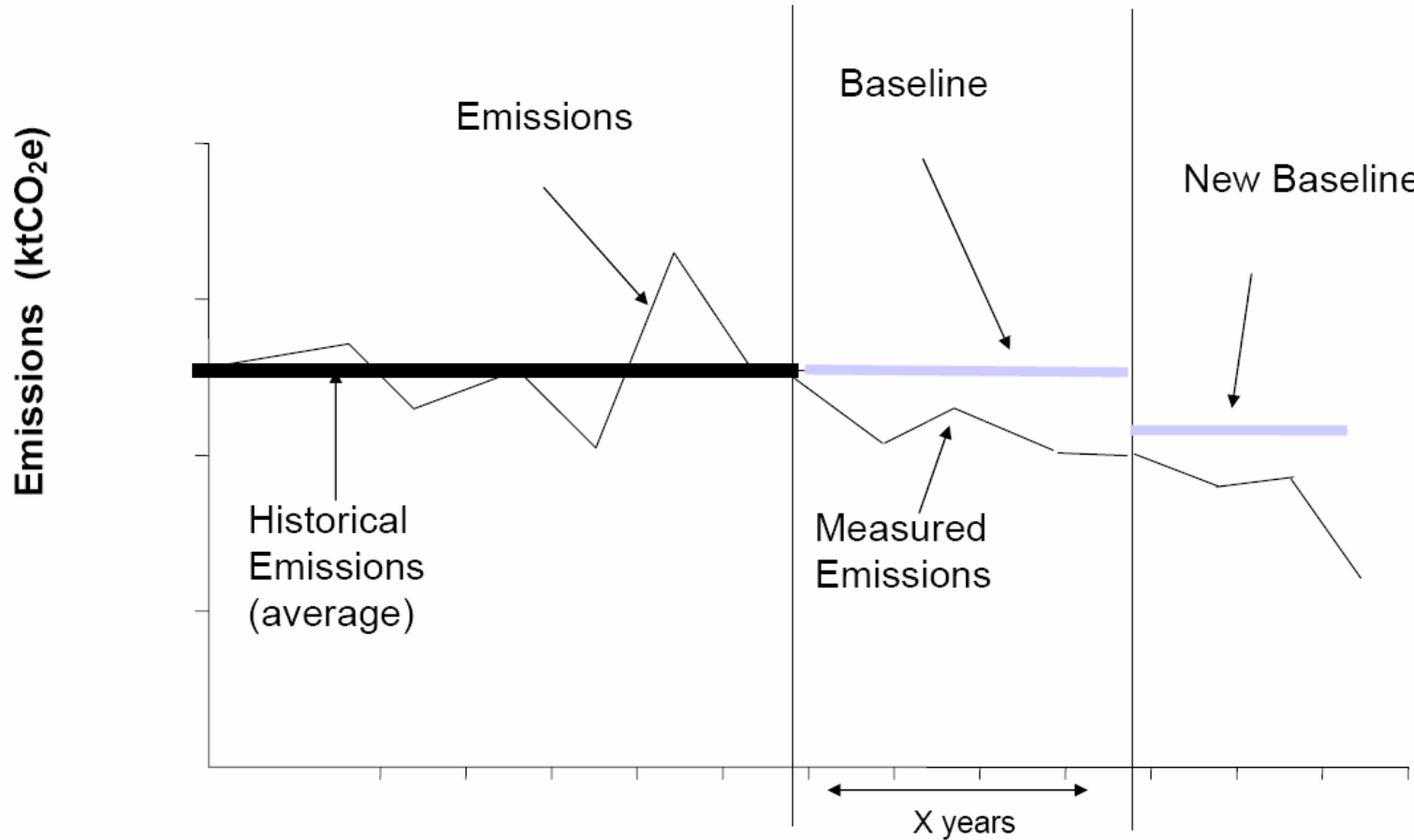


Influencing peoples' behaviour

- **Challenge: translating national level targets into behavioural change at the 'coal face'**
- **Salience (relevance)**
- **Legitimacy**
- **Credibility**
- **Fairness**
- **Other ecosystem services**
- **Role-playing games to explore benefit-sharing mechanisms**
- **Negotiation Support System (NSS) approach**

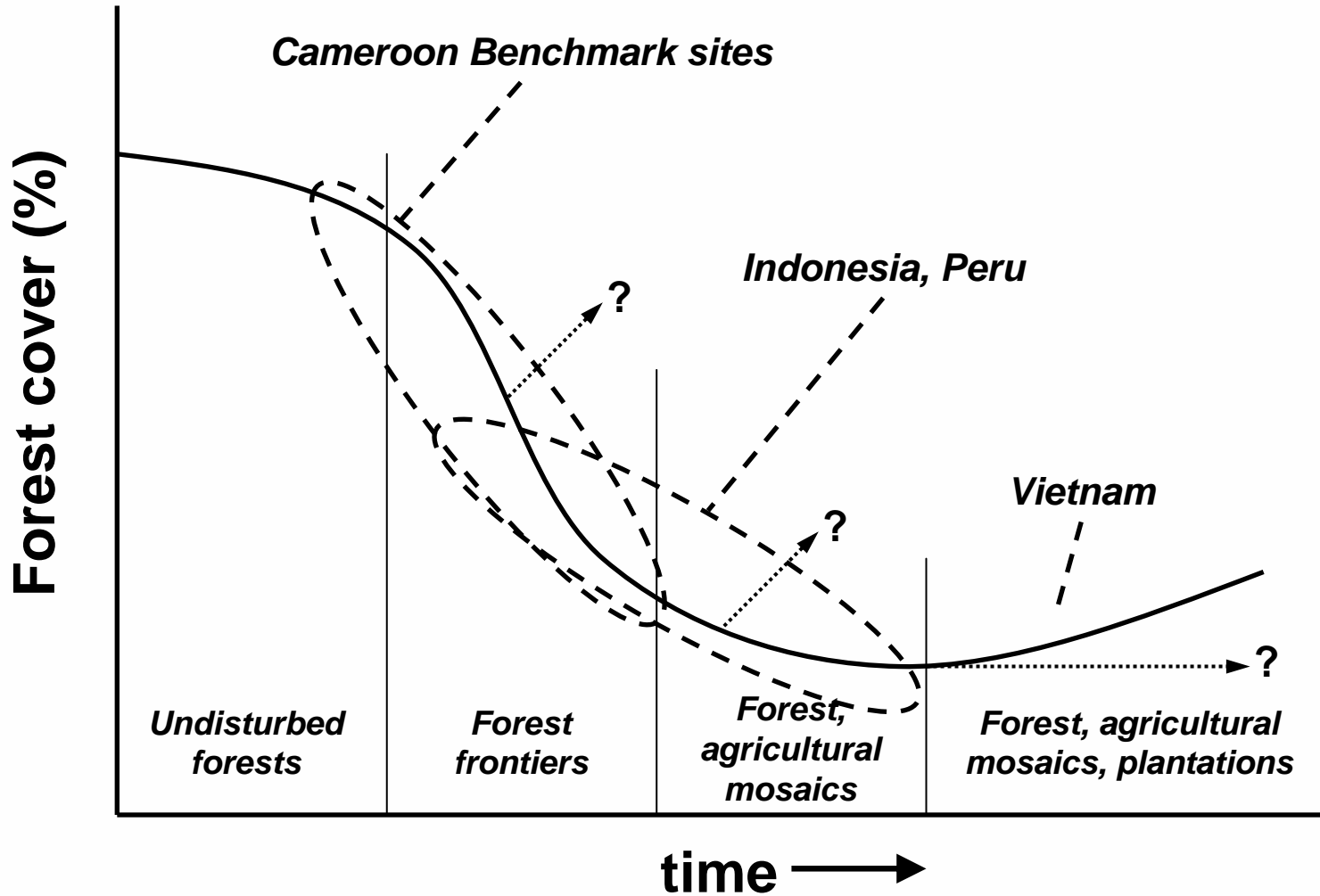


Proposed REDD approach



from Moutinho (2007)

Forest transitions

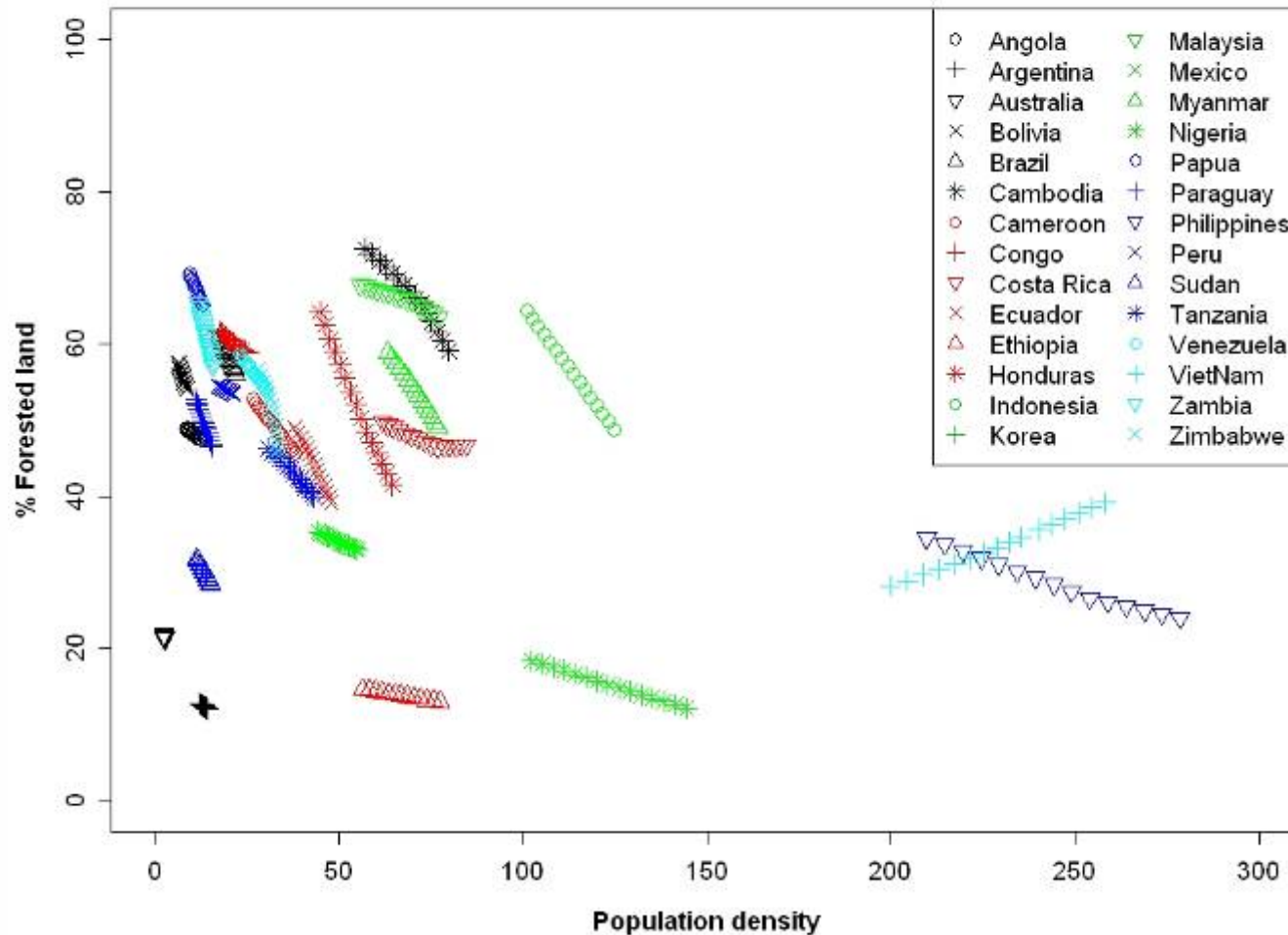


National-level baseline estimations

- **Simple linear extrapolation**
- **Need to account for socio-economic variables**
 - Population density trends
 - Stage of economic development
 - Population/arable land ratio
 - Per capita income
 - Lengths of roads
 - Level of corruption (Kaufmann *et al.*, 2007)
- **Subnational level?**
 - ACEU: Accessible, Cultivable, Extractable, Unprotected
- **Principle of ‘conservativeness’**

Initial results: FRA2005 data

Population density and forested land





Thank you!