

Mercator Research Institute on  
Global Commons and Climate Change gGmbH



THE LONDON SCHOOL  
OF ECONOMICS AND  
POLITICAL SCIENCE ■

# Restoration of degraded land, uncertainty & sustainability certification

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RESTORE+ Kickoff  
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# The Mercator Research Institute on Global Commons and Climate Change (MCC)

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- **MCC is a scientific think tank.** We are ~40 people located in Berlin.
- We assess **strategies for the sustainable management of the natural and social commons**
- The MCC aims to **identify synergies and trade-offs between different policy objectives** in the context of climate change and sustainable development
- We analyze solution options to **inform the public debate and policy making.**

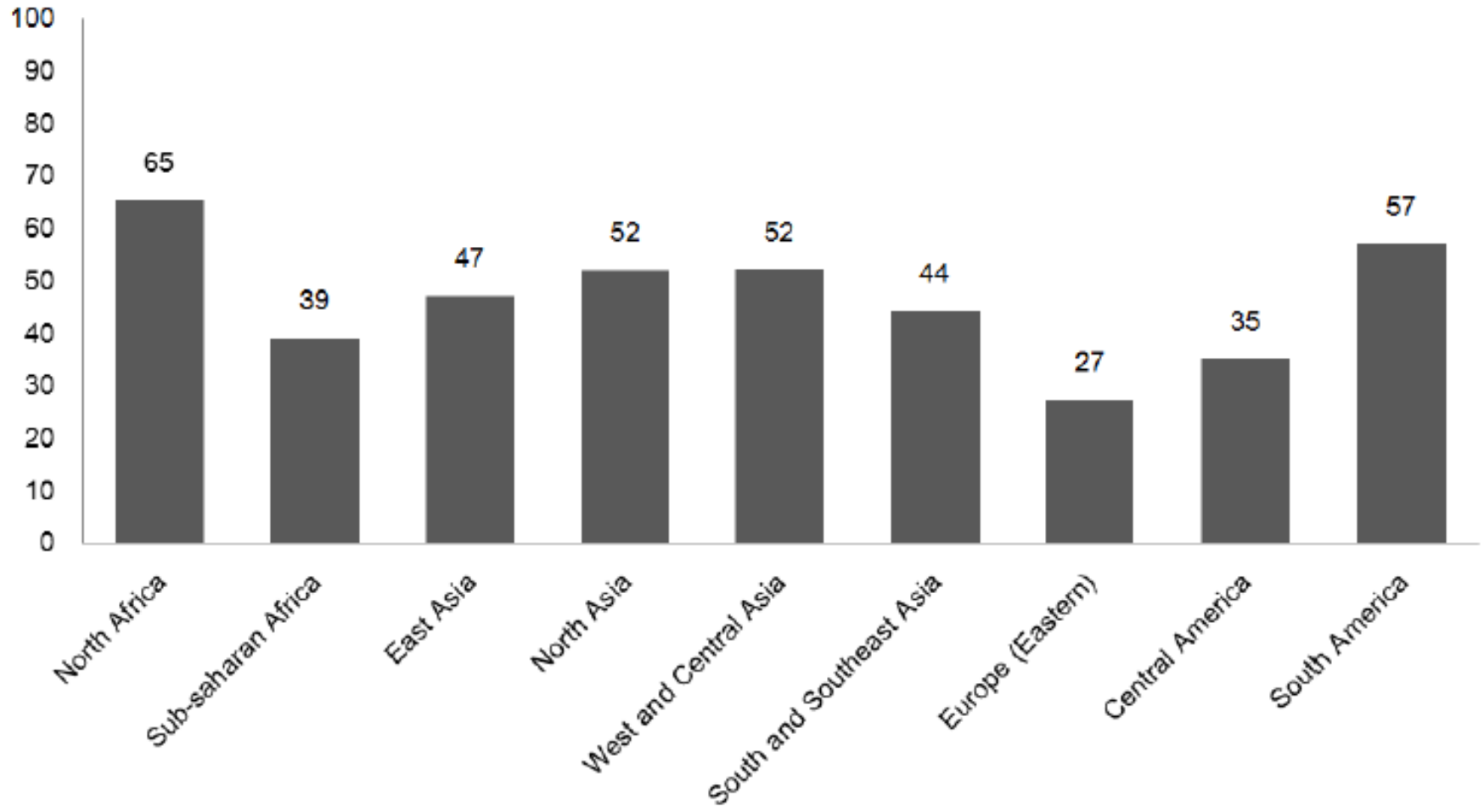


# Previous relevant projects

- Institutional and Fiscal Policies for Forest Conservation [Wehkamp 2017, completed dissertation]
  - Meta-analysis of forest governance impact on deforestation
  - Building an indicator for institutional environmental quality
  - Integrating institutional and governance variables into forest modeling
- Options Market and Risk-Reduction Tools for REDD+ [NORAD-funded project, completed]
  - Policy packages: offsets in emissions trading systems, implications for emissions, investments, carbon revenues (Koch et al. 2017 REE)
  - Impact of uncertainty on decision-making (Szolgayová et al. 2014 ENPOL)



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# Current relevant projects

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- Looking Beyond the Label: Evaluating the effectiveness of agricultural commodity standards in avoiding deforestation and promoting restoration and sustainable forest management [Schulte 2017, ongoing]
- Delivering Incentives to End Deforestation: Global Ambition, Private/Public Finance and Zero-Deforestation Supply Chains [NORAD-funded project, ongoing]
  - Mitigation potential from avoided deforestation and restoration (negative emissions) → implications for 1.5°C target → IPCC special report
  - Funding matching mechanisms for private and public REDD+ funds
- Network for Enhanced Ecosystem Services (NEES) [bilateral project with Korea on landscape restoration]

# Background for RESTORE+

- Commercial agricultural commodities responsible for 40% of total deforestation in the tropics and sub-tropics (FAO, 2016).
- Emerging initiatives: Zero-deforestation-supply-chain pledges, restoration explicit sub-goal of SDG 15.
- Standards and certification to reduce this effect by promoting sustainable supply.
- What standards are there? How to systematically assess, as they differ along various dimensions? Also for restoration?
- Influence of uncertainty on conservation & restoration decisions?
- Complementary or conflicting policies? How to assess impact? Policy packages promoting restoration? Engage stakeholders!



# IV.1: assessment of existing international sustainability standards



Standard	Commodity					Supply chain level					Criteria for evaluation								Findings	
	Palm Oil	Cocoa	Coffee	Tea	Forestry	Producer	Processor	Manufacturer	Trader	Retailer	Environmental				Operational			Social		
											Reforestation/Afforestation	Forest conservation/HCV	Forest conversion/New plantings	Ecosystem services	Risk or impact assessment	Monitoring plan	Responsible individual	Training and awareness		Compensation for land rights
RSPO	•					•	•	•				•	•	•	•	•	•	•	•	
RA/SAN		•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•
UTZ		•	•	•		•	•	•	•	•			•	•		•	•	•	•	•
IFOAM			•	•		•	•					•	•	•			•			
4C			•			•	•	•			•		•	•			•			•
Fairtrade			•			•	•	•	•	•	•	•	•	•	•	•	•	•		
FSC					•	•	•	•	•		•	•	•	•	•		•			•
PEFC					•	•	•	•			•	•	•	•	•	•	•	•		•

See discussion of findings.



# First conclusions & next steps

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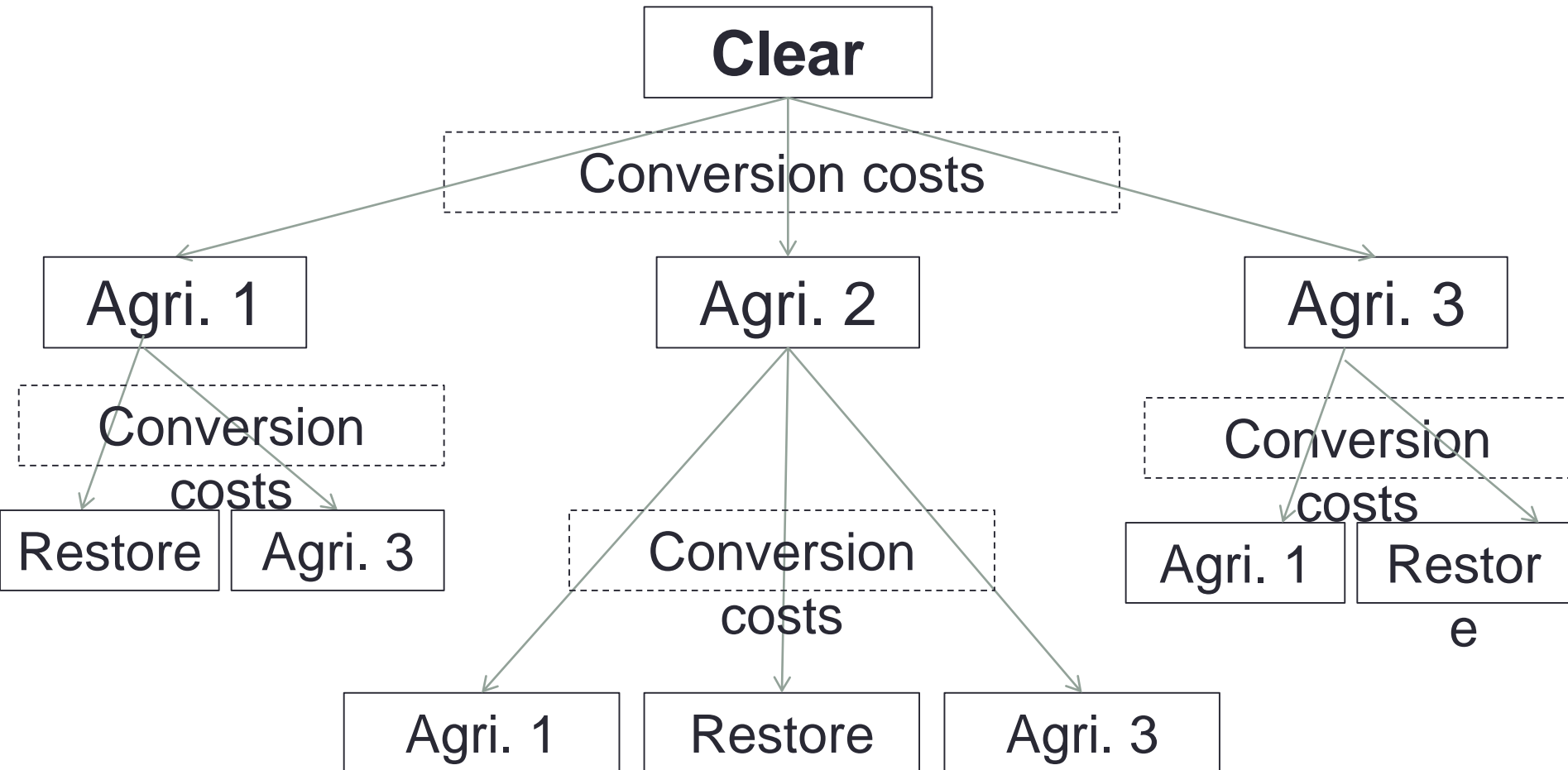
- Current standards and certification applied in Indonesia include little on restoration specifically/stringently; low incentives to restore.
- Up-front investments + uncertain agricultural returns create incentives to delay forest conversion? Extension to restoration  
→ IV.2
- Interaction with other policy instruments? Impact assessment  
→ IV.3

## IV.2: explore uncertainty in land-use returns

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- LSE model uses real options theory to study how up-front costs and uncertainty in alternative land-use returns over time can influence the decision of whether or not to deforest.
  - The model can be extended to include restoration
- The model can be calibrated to time-varying, secondary data on alternative land uses in Indonesia (pending data availability)
- The model will be used to provide insights for policy and regulatory instruments that could improve avoided deforestation and restoration.

# Decision tree



## IV.3: interaction with other policy instruments/regulation

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- Step 1:
  - systematic review of policy instruments in Indonesia affecting deforestation and reforestation decisions
- Step 2:
  - analysis of effectiveness of private sector initiatives, standards and certification in the presence of other policies
- Step 3:
  - identify instrument packages most conducive to reforestation in close consultation with stakeholders

# Further research ideas

# Effect of different types of land titles on restoration

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- Research questions:
  - Economies of scale or access to finance/information make land restoration more likely on larger areas?
  - Which types of land titles and tenure security favor long-term investments in land restoration?
- Method: spatial regression discontinuity along straight area boundaries combined with diff-in-diff (Turner et al. 2014)

# Socio-economic outcomes of (certified) commodity cultivation

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- Research questions:
  - Income, productivity effects (spillovers on manufacturing?)
  - Schooling effects (investments in human capital)
  - Health effects
- Method: instrumental Variable analysis - suitability of land to grow specific crops

# Contact

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