



The Economic Case for Nature

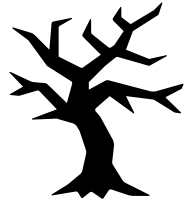
a Global Earth-Economy Model for policy analysis

Forum of Experts on
SEEA Ecosystem Accounting
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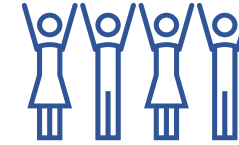


Key Questions



Question 1:

What happens to economies when Nature services collapse?



Question 2:

Are there win-win policies (good for nature, good for economies)?

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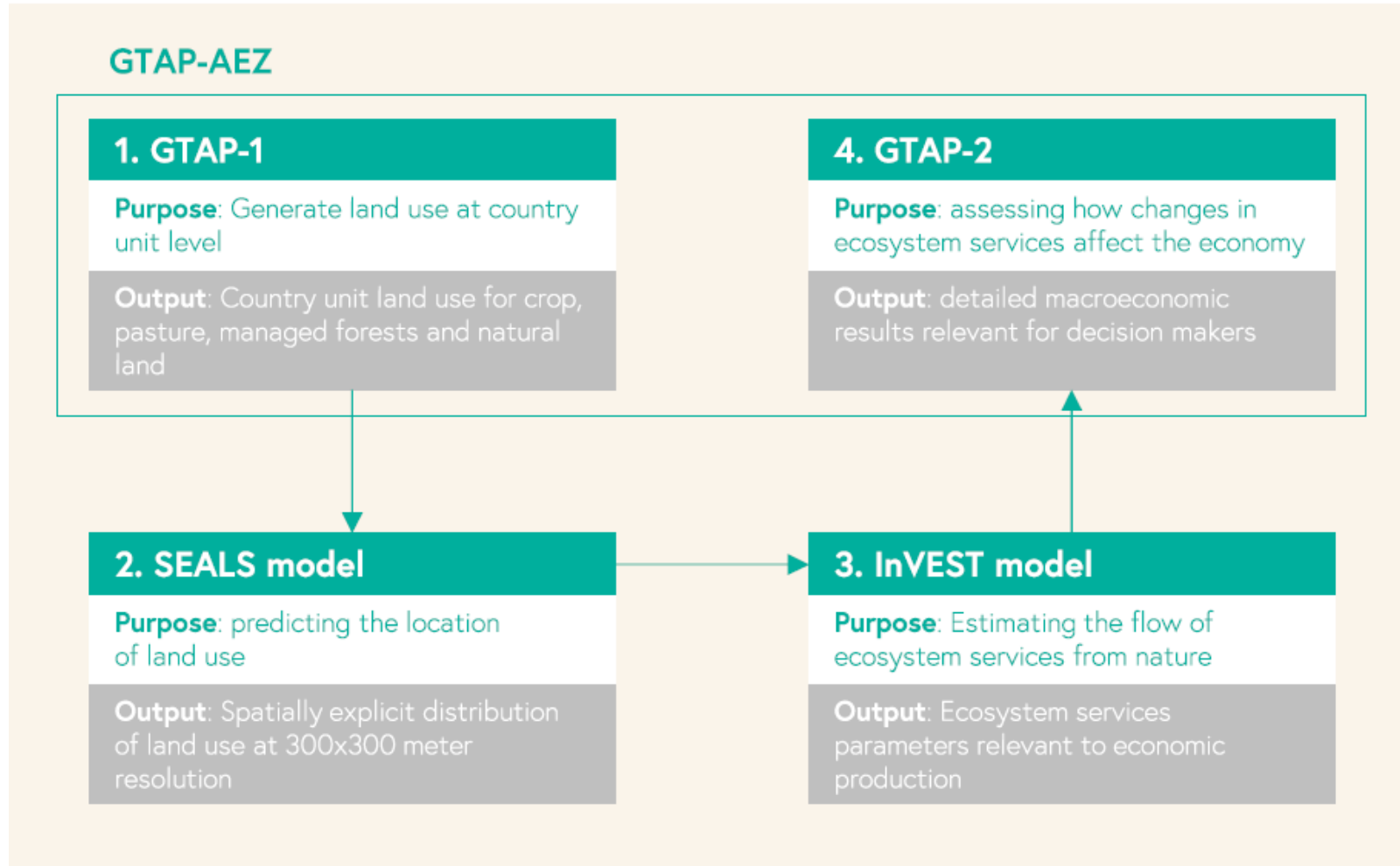
A novel approach to answer the questions: integrated Global Earth-economy Model

Ecosystem Services analyzed

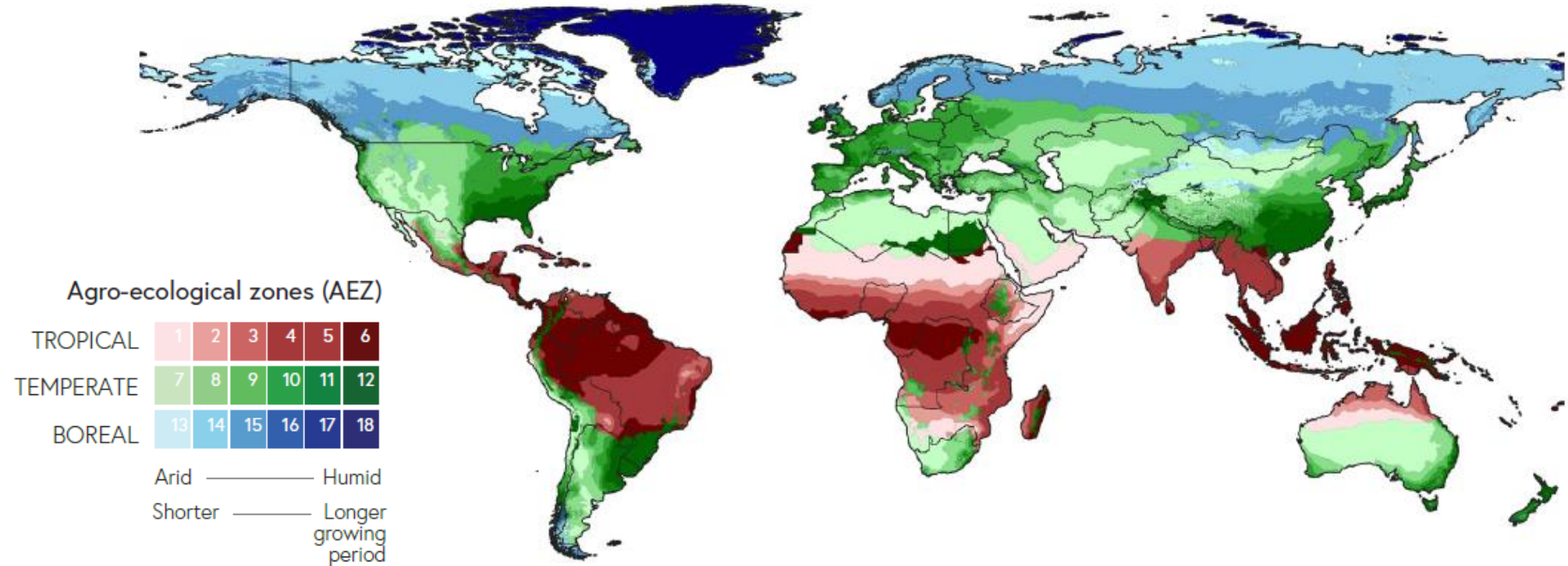
1. *Pollination*
2. *Timber*
3. *Fisheries*
4. *Carbon*

Economic outcomes modeled

1. *GDP*
2. *Welfare*
3. *Factor use*

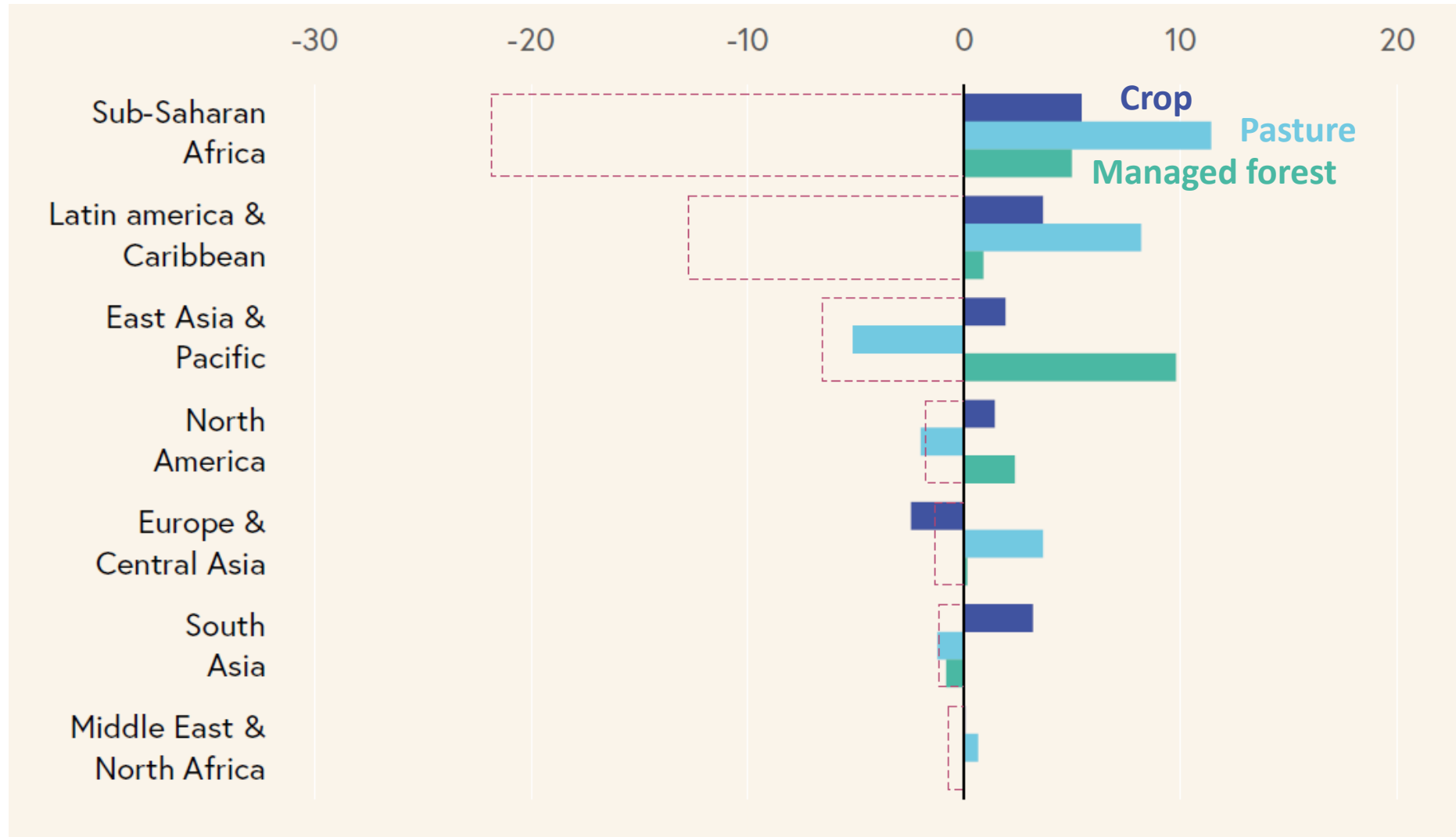


Spatial disaggregation



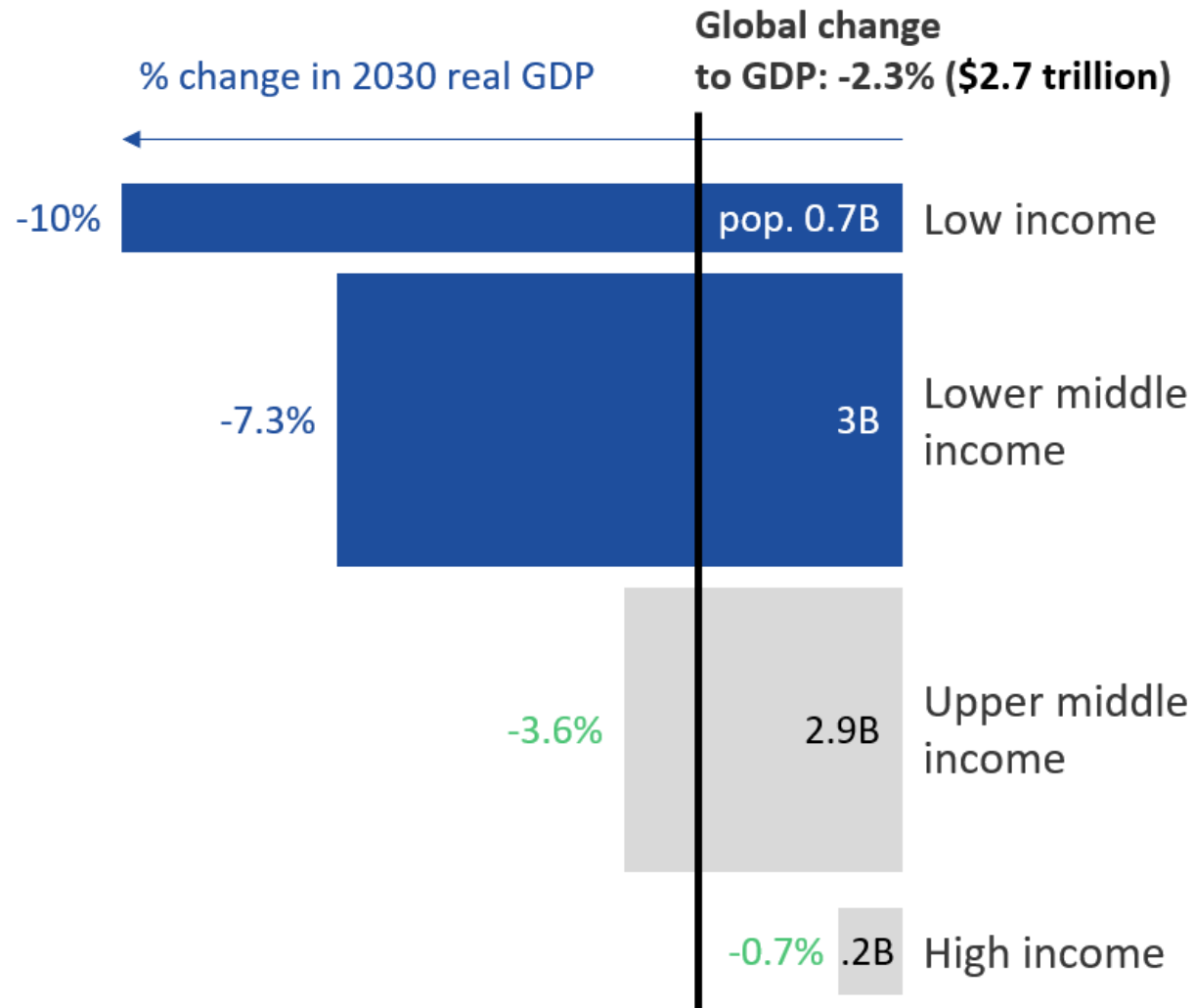
37 Country units x 18 agro-ecological zones

Under business as usual, by 20230 there would be a loss of 46 Million hectares of natural land



Answer to question 1: the collapse of ecosystem services hurts low-income and lower-middle-income countries the most

Difference in 2030 GDP under collapse scenario vs. baseline scenario, **by income group**

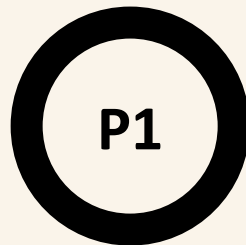


Answer 2: Nature-smart policies (and their combinations)..

**Basic
policy options**



**Domestic forest
carbon payment**



**Decoupled support
to farmers**



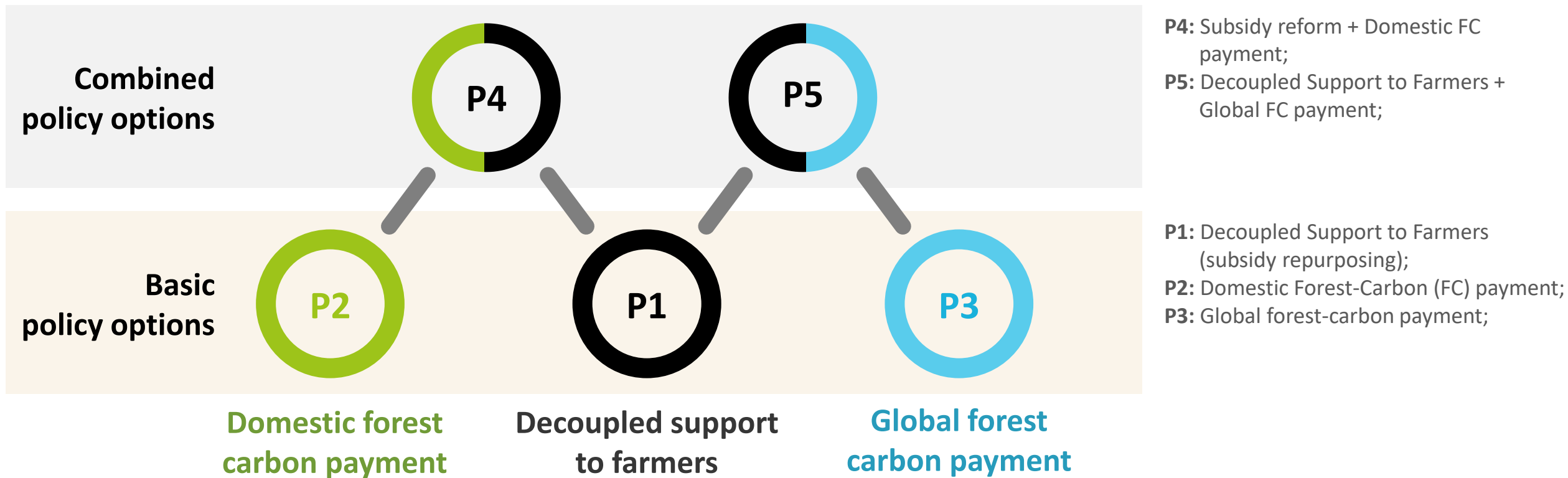
**Global forest
carbon payment**

P1: Decoupled Support to Farmers
(subsidy repurposing);

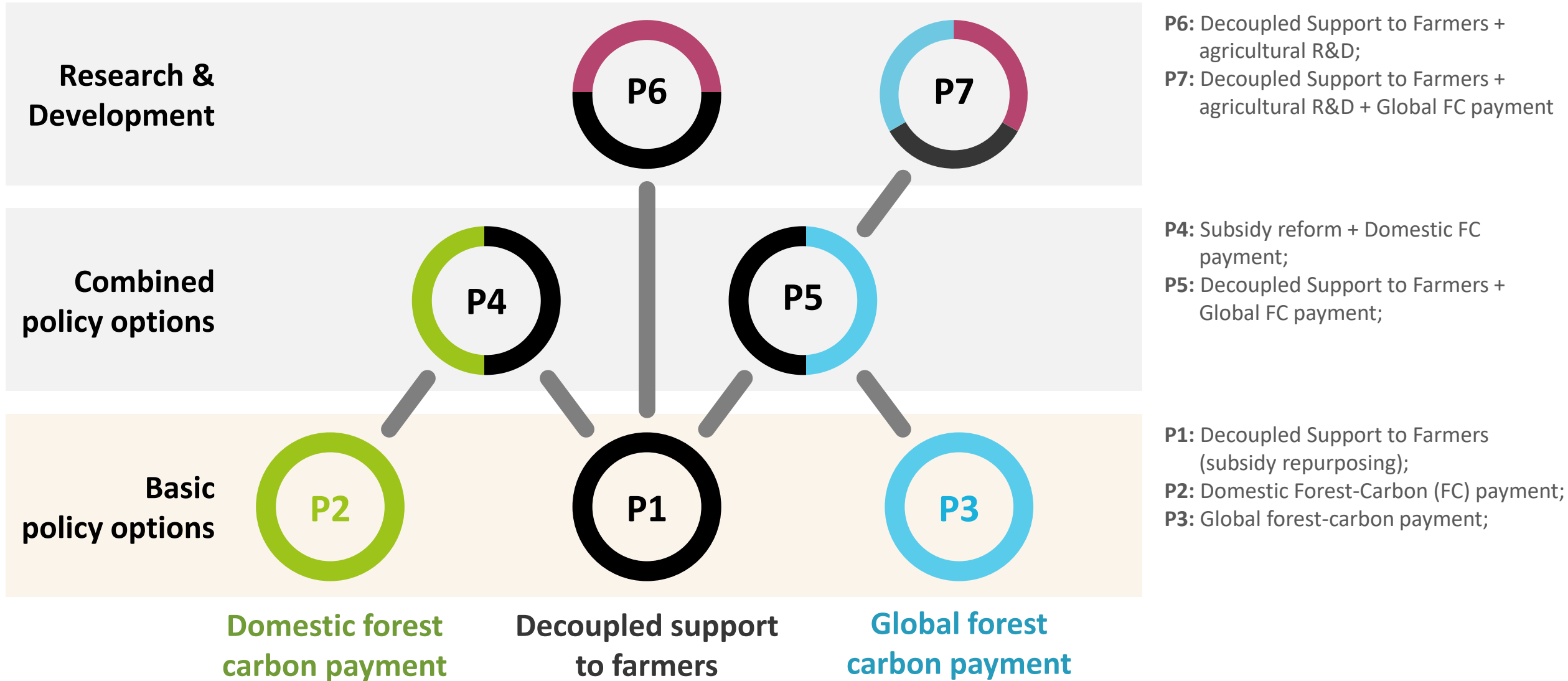
P2: Domestic Forest-Carbon (FC) payment;

P3: Global forest-carbon payment;

Answer 2: Nature-smart policies (and their combinations)..

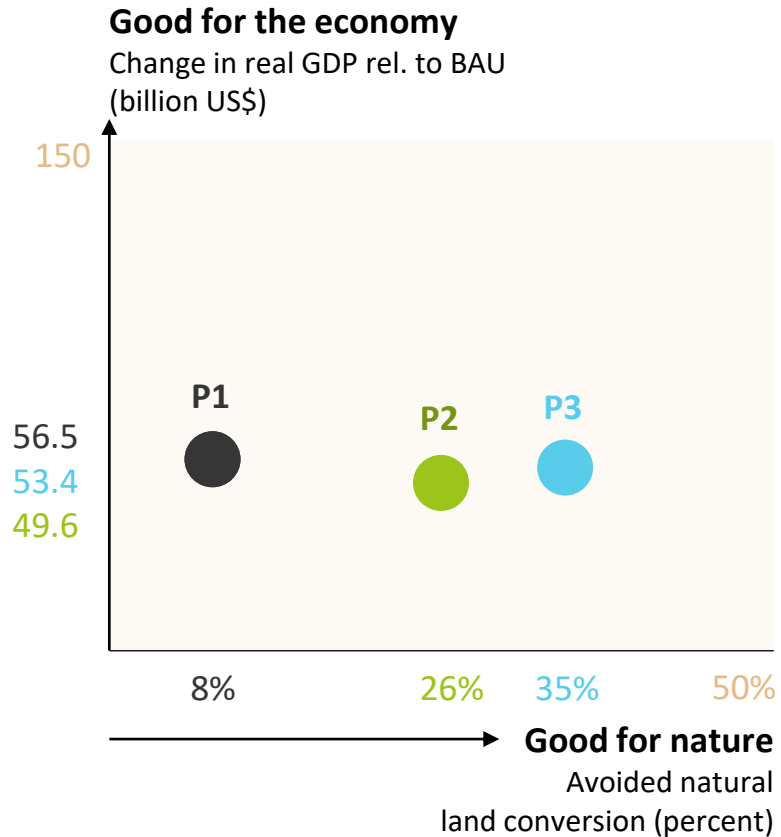


Answer 2: Nature-smart policies (and their combinations)..



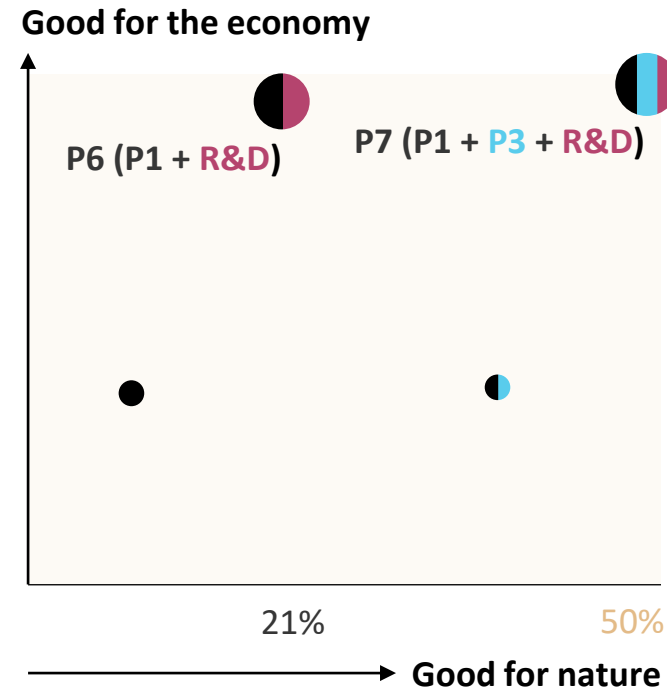
...deliver win –win (globally and in most countries)...

Basic policy options



Combined policy options

Adding forest carbon payment schemes and research and development improves the policy



*P1: Decoupled Support to Farmers;
P2: Domestic forest-carbon (FC) payment;
P3: Global FC payment*

*P4: Subsidy reform + Domestic FC payment;
P5: Decoupled Support to Farmers + Global FC payment*

*P6: Decoupled Support to Farmers + RD;
P7: Decoupled Support to Farmers + RD + Global FC payment*

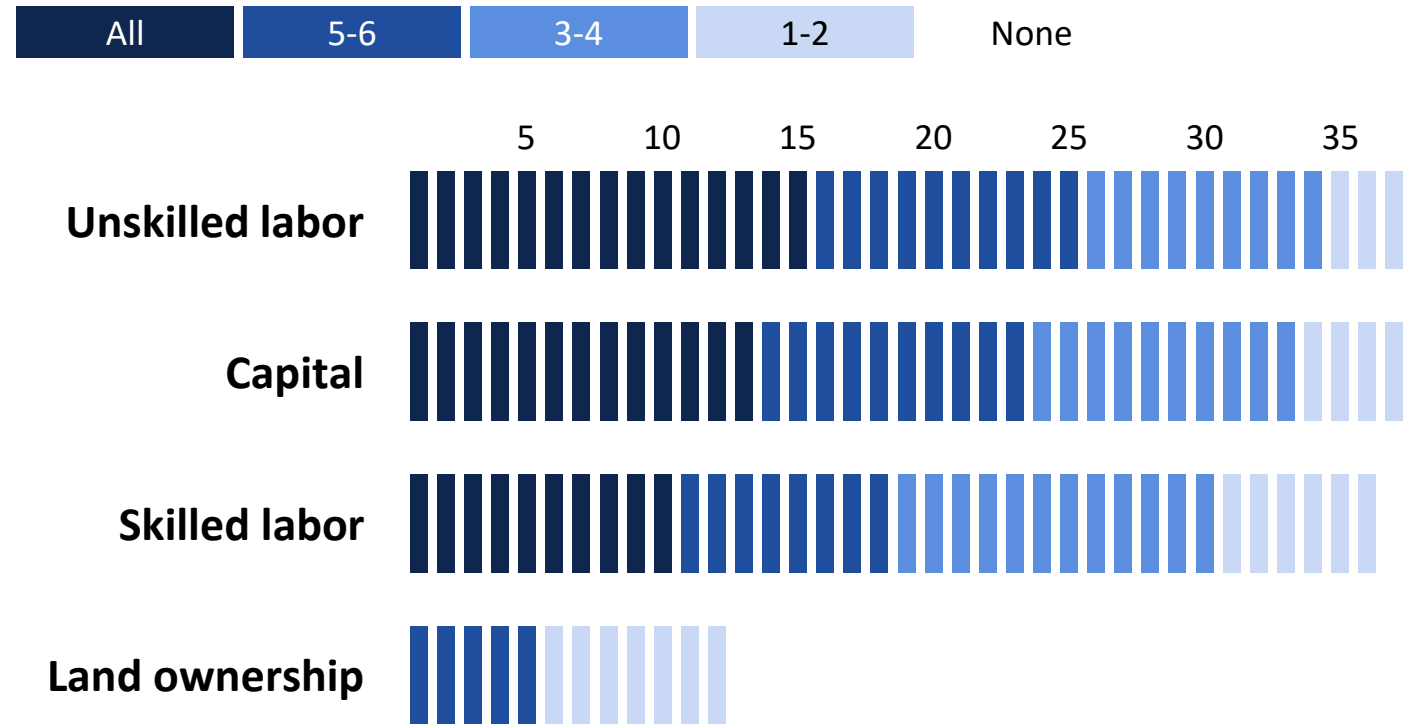
..but political economy challenges need to be addressed

Although at the global aggregate level the case for adopting nature-smart policies is clear...

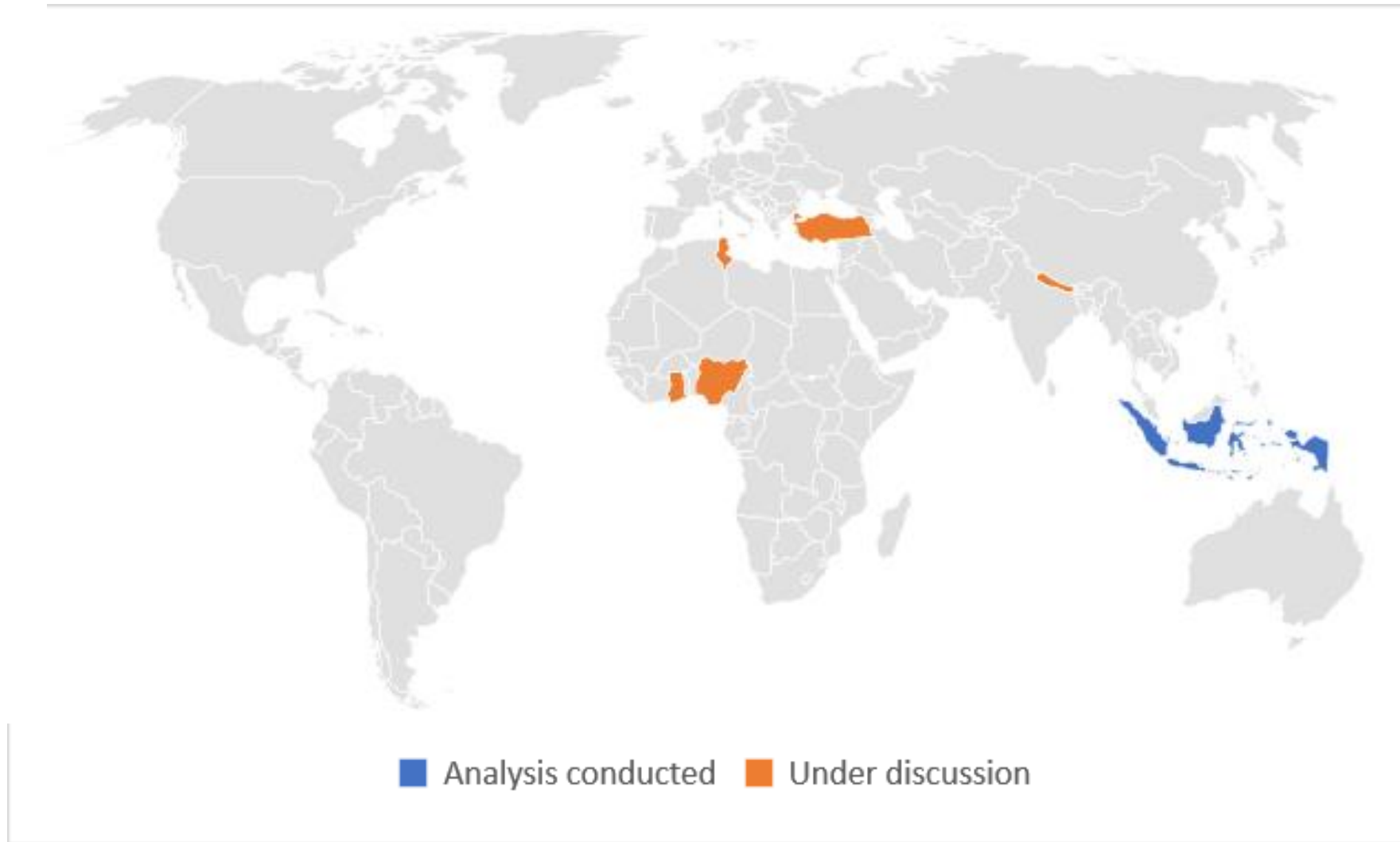
... Policy reforms tend to have a positive impact on labor wages and a negative impact on returns to land.

Country-level adoption of nature-smart policies crucially depends on reconciling incentives across social groups

A) Number of policies that will benefit each factor of production per country unit



Follow-up work at country level



Thank you
for your
attention



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