



# The role of productive forests for a sustainable world

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*“Green” supply chains in forest landscape management and a circular, bio-based economy*

**Gerhard Dieterle**

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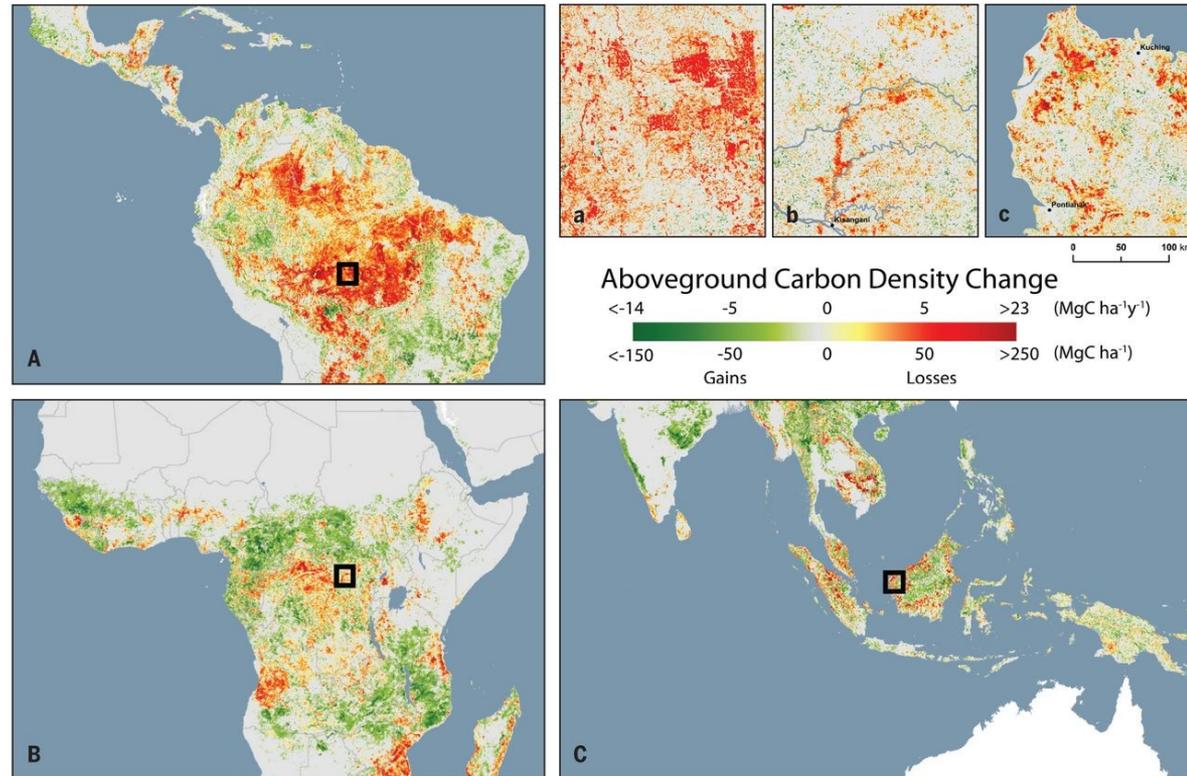
Global Landscapes Forum

Discussion Forum: From forests to markets, making supply chains greener through PPPs

**1-2 December 2018, World Conference Center, Bonn, Germany**

# Tropical forest degradation: geography of carbon density change

- Tropical forests are a **net release of carbon** of  $425.2 \pm 92.0 \text{ Tg C yr}^{-1}$  (losses of  $861.7 \pm 80.2 \text{ Tg C yr}^{-1}$  and gains of  $436.5 \pm 31.0 \text{ Tg C yr}^{-1}$  from forest growth)
- Losses result from (i) deforestation and (ii) reductions in carbon density within standing forests (**degradation**) accounting for **68.9%** of overall losses

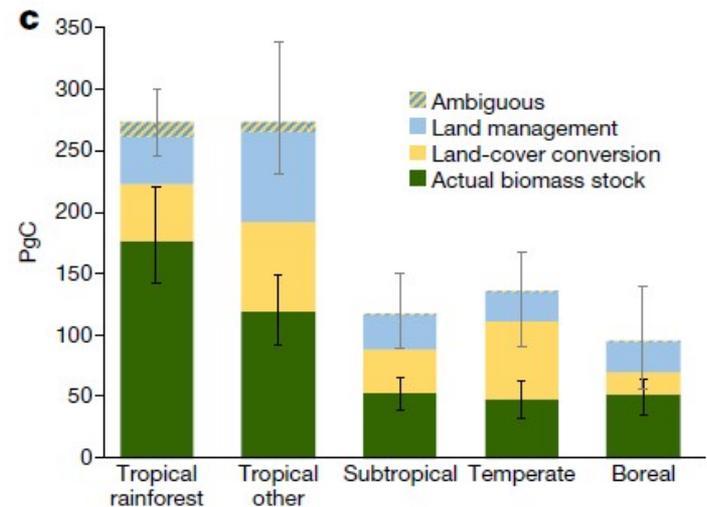
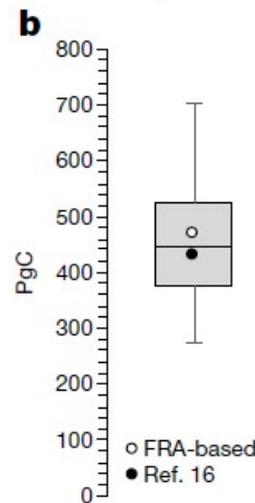
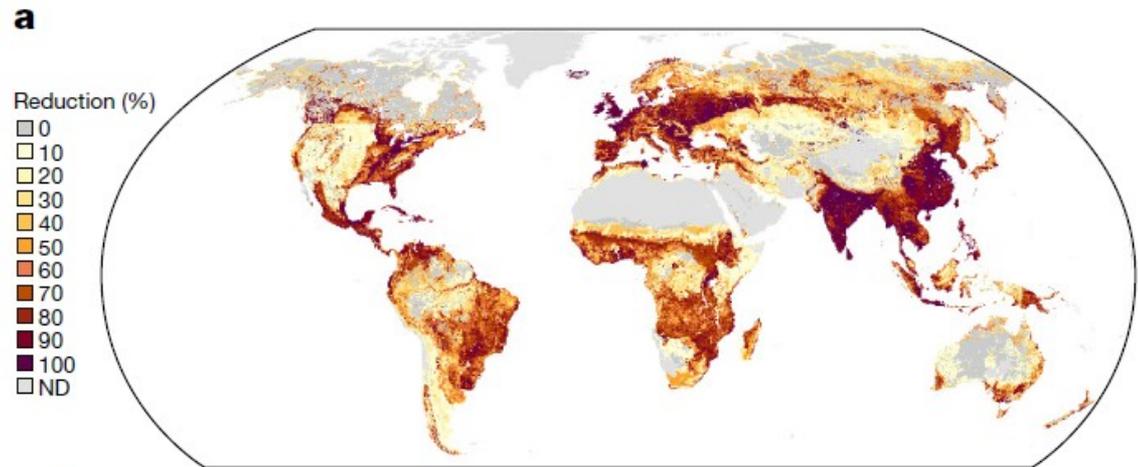


A. Baccini et al. Science 2017;science.aam5962

# Large impact of forest management and grazing on global vegetation biomass



- Land management effects (forest management and grazing) contribute **42-47 % to the reduction of C stocks**
- On-site preservation of carbon stocks on **managed forests** and raising the **contribution of biomass** to raw material and energy supply for CC mitigation

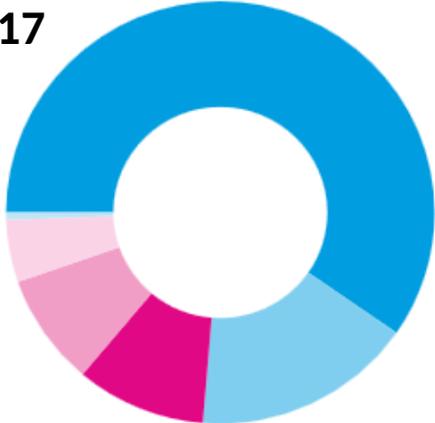


# Africa: hungry for food, fuel, fiber and wood



Global population by region

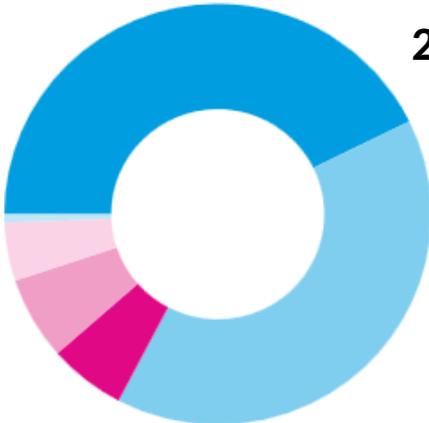
2017



Global population  
7.55 billion

<ul style="list-style-type: none"> <li>■ Asia 4 504 million (59.66%)</li> <li>■ Europe 742 million (9.83%)</li> <li>■ North America 361 million (4.78 %)</li> </ul>	<ul style="list-style-type: none"> <li>■ Africa <b>1 256 million (16.64%)</b></li> <li>■ Latin America /Caribbean 646 million (8.55%)</li> <li>■ Oceania 41 million (0.54 %)</li> </ul>
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2100 (projected)



Global population  
11.18 billion

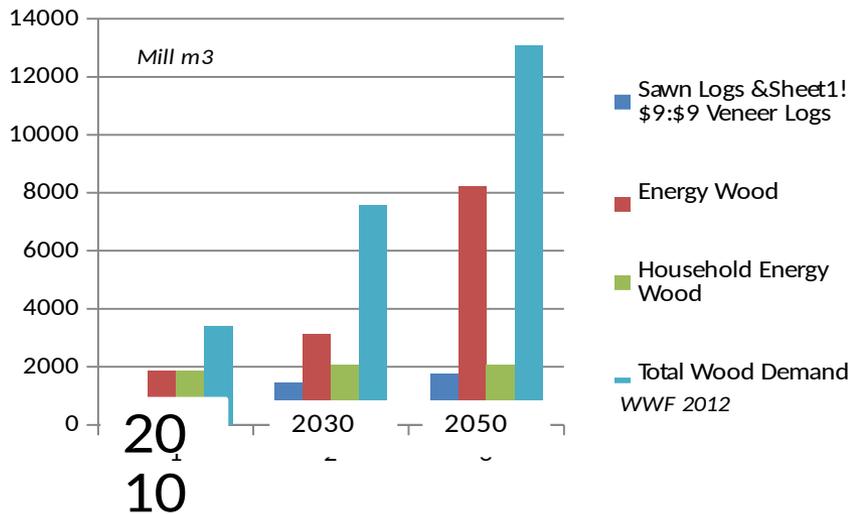
<ul style="list-style-type: none"> <li>■ Asia 4 780 million (42.74%)</li> <li>■ Europe 653 million (5.84%)</li> <li>■ North America 499 million (4.46%)</li> </ul>	<ul style="list-style-type: none"> <li>■ Africa <b>4 468 million (39.95%)</b></li> <li>■ Latin America /Caribbean 712 million (6.37%)</li> <li>■ Oceania 72 million (0.64 %)</li> </ul>
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Grafik: Deutsche Stiftung Weltbevölkerung (DSW)  
Quelle: Vereinte Nationen, World Population Prospects: The 2017 Revision



# Increasing global wood demand

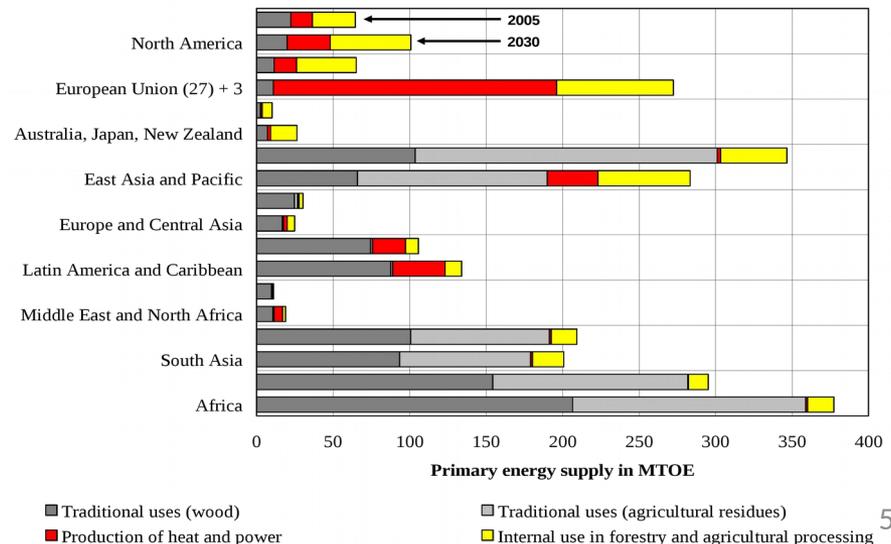
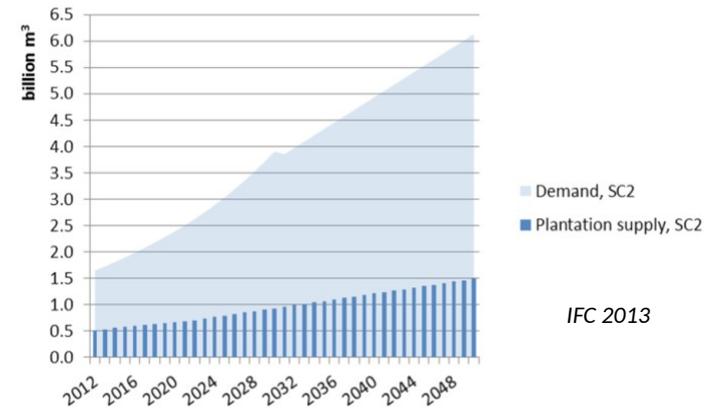
## Increasing global demand for wood



## Demand in woodfuel and charcoal continues to increase

- 2.8 billion people will depend on traditional fuels in 2030
- Massive increase in demand for energy wood in industrialized countries

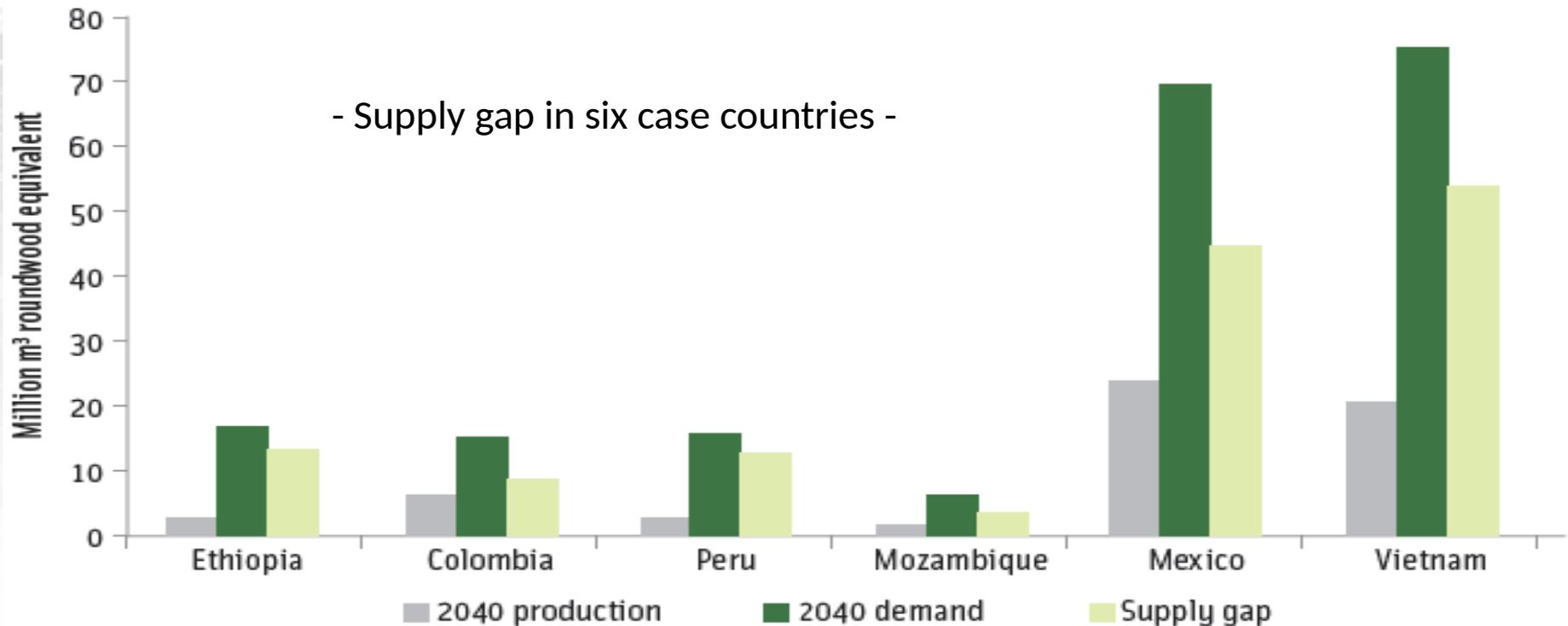
## Increasing Gap for Industrial Roundwood



# Projected HWP supply gap in 2040 under current conditions

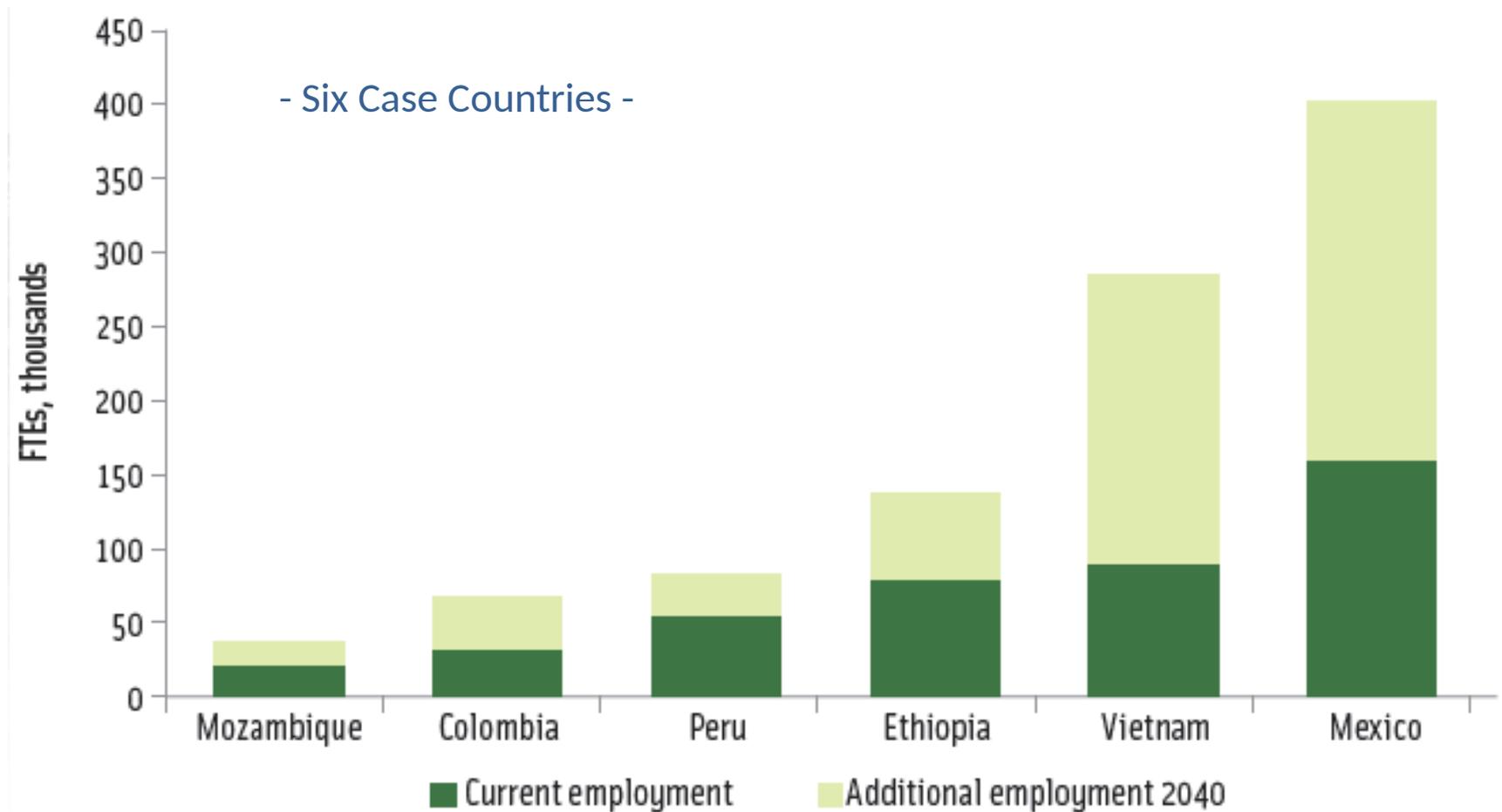


- Supply gap in six case countries -



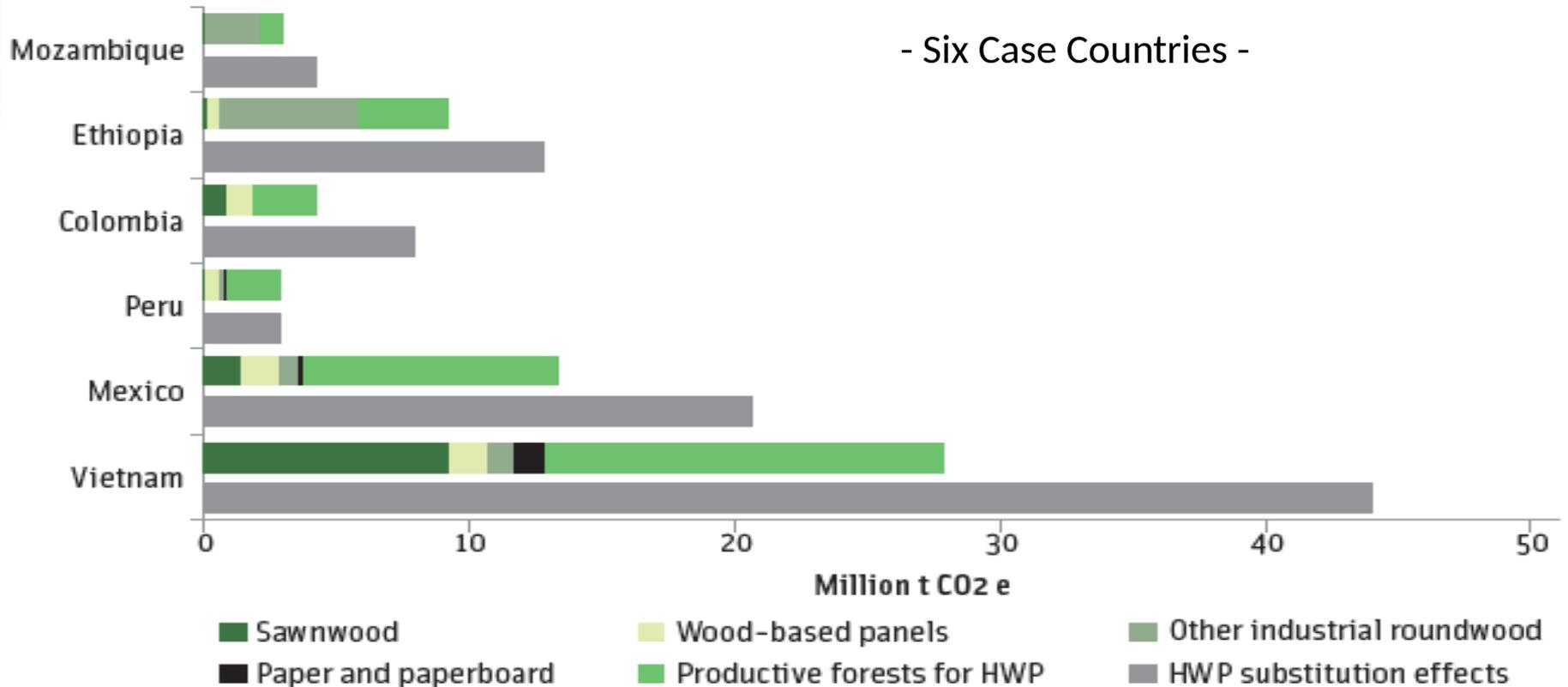
Note: HWP = harvested wood products; m = meter.

# Employment benefits of the Green Growth Scenario



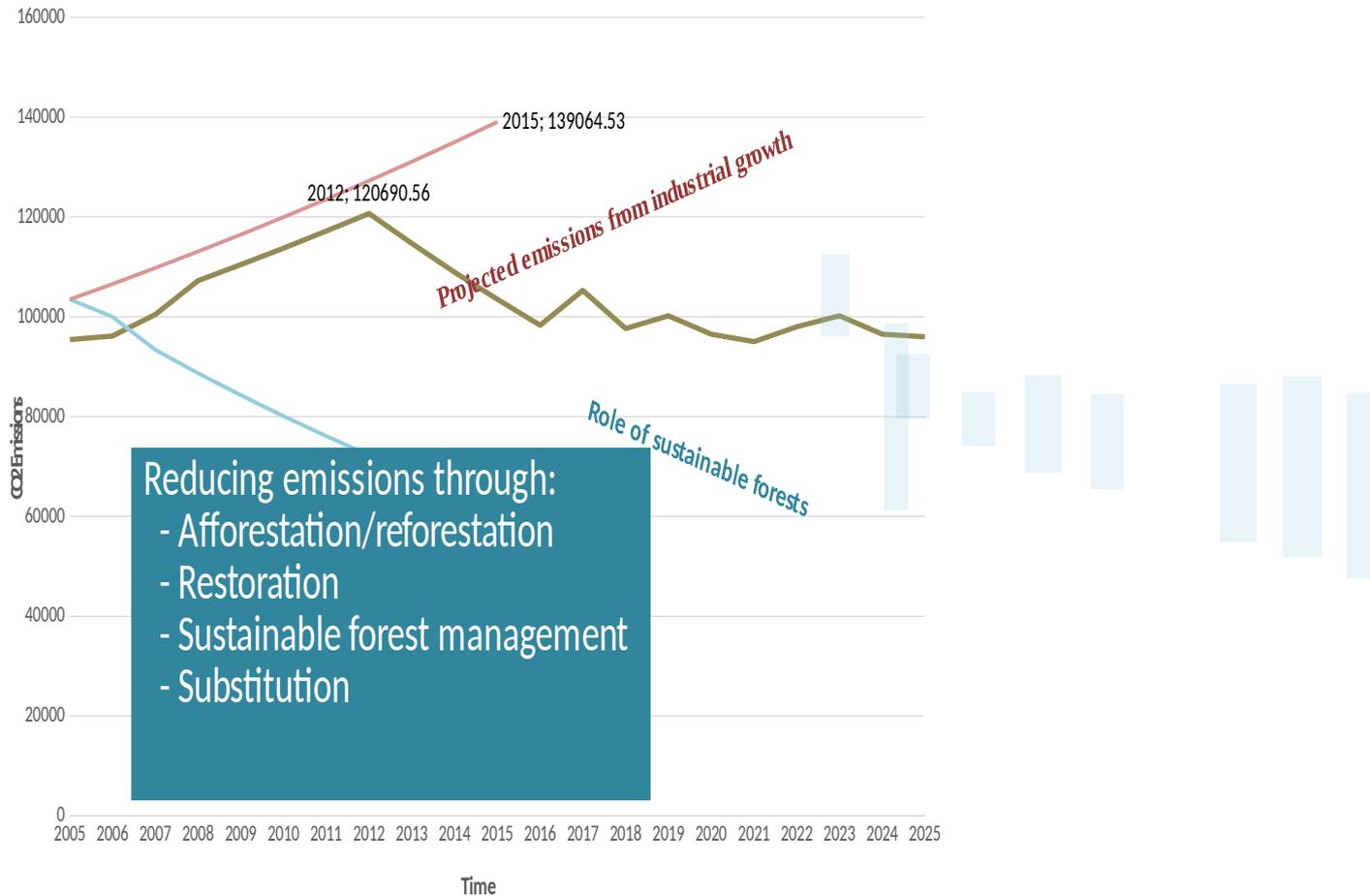
Note: FTEs = full-time equivalent workers.

# Mitigation potential of the Green Growth Scenario



Note: HWP = harvested wood products; t CO<sub>2</sub> e = tons of carbon dioxide equivalent.

# Potential of forest for achieving NDCs -important for transition countries-

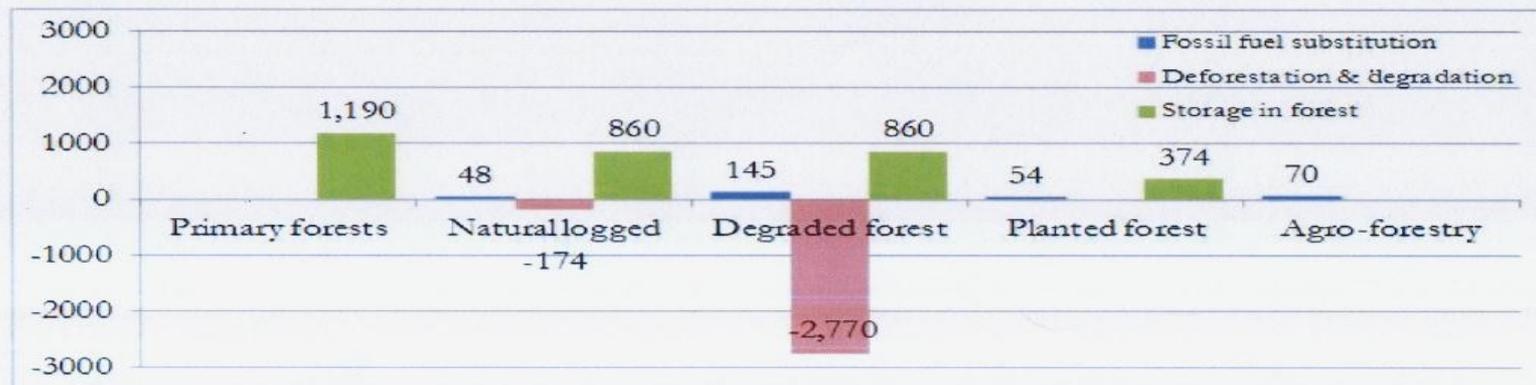


# How to generate sequestration and substitution effects in tropical forests

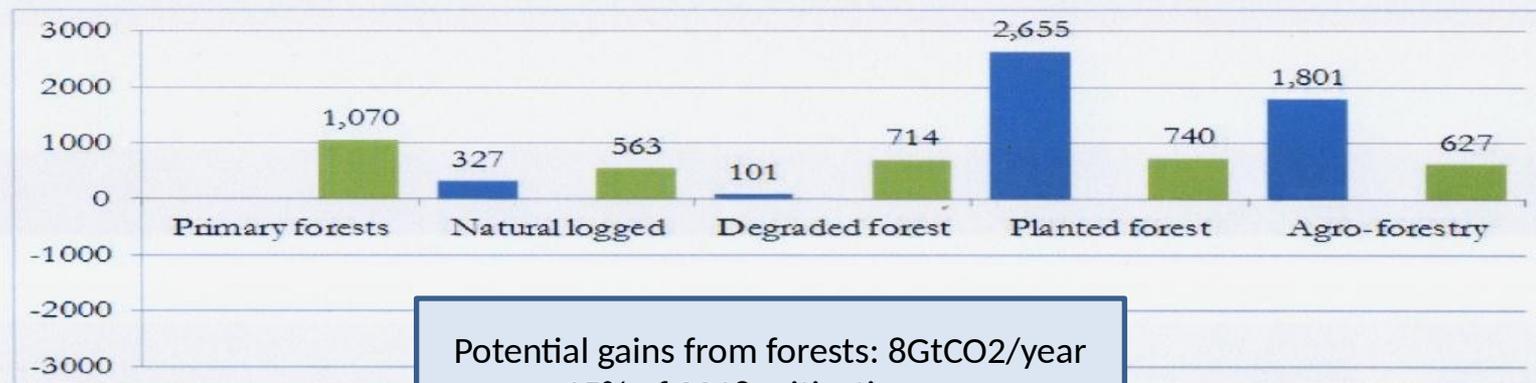


*Fossil Fuel Substitution, Deforestation and Degradation, and Forest Carbon Storage in 2010 and 2050  
(million tons carbon per year)*

2010



2050



Potential gains from forests: 8GtCO<sub>2</sub>/year  
15% of 2018 mitigation gap

# Multiple wins from sustainable forest supply chains



- Economic growth
- Poverty reduction
- “Wood security”
- Additional climate mitigation benefits: Emission reduction + Co2 removals+ substitution + storage:
  - Potential is up to 8GtCO<sub>2</sub>/year, however accounting of substitution benefits unclear
- Increased environmental/biodiversity benefits
- Global water regime: *Rivers in the Sky*

# What if?

## Why legal and sustainable supply chain initiatives are important



### Developments in Consumer countries

- Foreign investment by progressive wood industry will focus on **low-risk countries** to ensure legality and sustainability.
- Consumer countries will become increasingly **self-sufficient**: increasing North-South trade
- Market share of **chemically & mechanically modified softwood** (e.g. Kebony, acetylated wood, compressed softwood) eroding the demand and market share for tropical hardwood will decrease.
- **Public and political acceptance** of tropical timber will further erode if GSC is not done.
- Demand for verification of legality and sustainability will become the “norm” in an increasing number of countries.
- **Global climate goals/REDD+ approach cannot succeed without pivotal role of productive forests**: meeting demand of growing population, biodiversity, water, bio-economy

### Implications for Tropical timber producing countries

- **Risk of losing global market access** for tropical timber if not produced legally and sustainably;
- Without addressing **emerging domestic supply gaps of timber** and wood-based energy many tropical countries will
  - Depend increasingly on non-renewable materials (steel, concrete, fuels)
  - Risk of increased deforestation/degradation
  - Face trade deficits and loss of jobs/income from increasing dependence on wood imports
- **Reduce risks and improving governance** is essential for attracting foreign investment
- **Policy incentives and capacity building** investments in forest landscape restoration, legal and sustainable supply chains

# The Role of ITTO



Promote sustainable production & consumption of wood as a contribution towards a bio-based economy and meeting demands of a growing global population

# The Specific Role of ITTO

Promote sustainable production & consumption of wood as a contribution towards a circular economy



Intervention Area	ITTO Service Offer as part of the <b>CPF SW4SW Initiative</b>
<b>Policies</b>	Creating awareness across international forest regime; policy processes, bio-economy: <b>Poverty alleviation, economic/rural development, climate, biodiversity, social</b>
<b>Incentives</b>	Urgent need for <b>fiscal and taxation incentives</b> as stimulants for massive investments in sustainable tropical forest landscape restoration and production <i>Country case studies on incentive mechanisms for increased investments in FLR and supply chains; supply-demand analysis; bio-economy potential etc.</i>
<b>Global Green Supply Chain Platform</b>	Promote/facilitate <b>conversion towards universal criteria</b> for legal and sustainable supply chains; <b>Reduce complexity</b> for producers and consumers Support to Information and Business Exchange facilitation
<b>Information and capacity building</b>	Support and assist with information, data and skills throughout supply chains: producers and consumer government, traders, processors, market; Building <b>user associations</b> among SMEs and informal Supporting including verification/certification systems
<b>Tracking and verification systems</b>	Piloting <b>innovative tracking and verification technology; state-of-the-art wood identification technology (genetic fingerprinting etc).</b>
<b>Assist private sector initiatives</b>	<b>Encouraging/promoting/piloting private sector initiatives</b> for green supply chains (from legality to sustainability); company-commodity certification is not sufficient – avoid supply chain apartheid. What to do with informal sector?

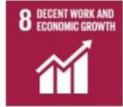
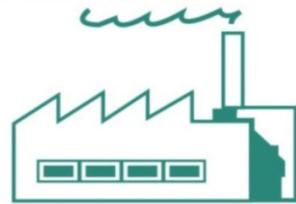


# Working with partners: SW4SW Initiative: FAO, ITTO,

<http://www.fao.org/forestry/sustainable-world/en>



Food and Agriculture  
Organization of the  
United Nations



SUSTAINABLE  
WOOD *for a*  
SUSTAINABLE  
WORLD

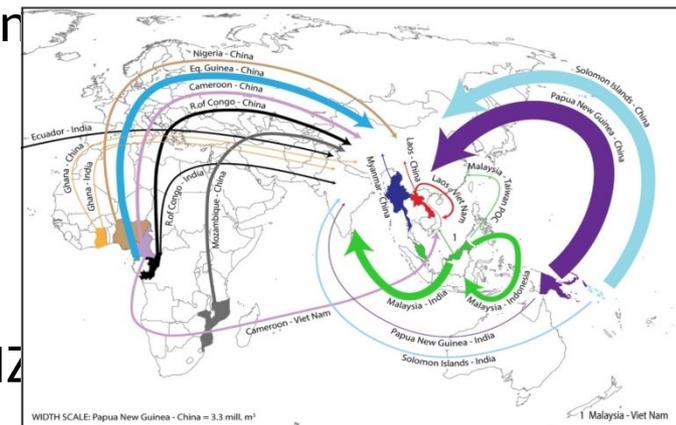


# Towards a Global Green Supply Chain Platform

Chinese Private Sector Initiative (GGSC) - Beijing, June 2018



- **GGSC members:** Currently 14 progressive Chinese wood importing and processing enterprises. Trade volume ~US\$ 14 billion
- **GGSC secretariat:** CINFT / NFGA (National Forest and Grassland Administration, previously SFA).
- **GGSC promotion committee:** GGSC secretariat, ITTO, China timber and wood products distribution association, Green carbon foundation, (open for enterprises to join).
- **GGSC expert group:** ITTO TAG, CINFT.
- **External stakeholders / supporters:** MOFCOM, GIZ, Forest Policy Facility, TNC, DfID etc.



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## Thank you !

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