

Which forest resources do we have globally to realize the bioeconomy?

*Peter Csoka,
Forestry Department, FAO*

Young Leadership Programme Eurasia
11-15 March 2019, Joensuu, Finland



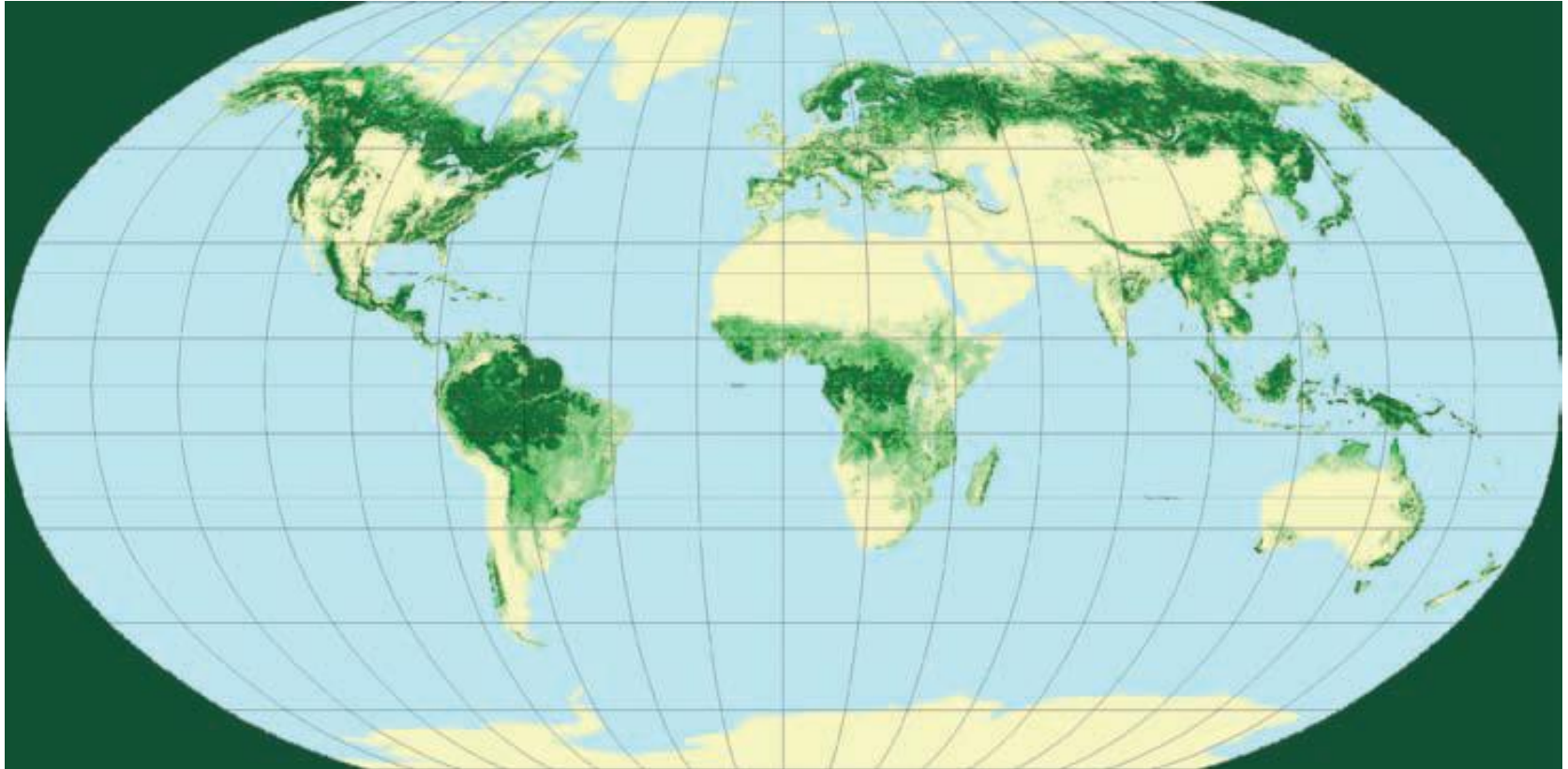
www.fao.org/forestry

The World's forest resources, 2015



Forests: 3.999 billion ha

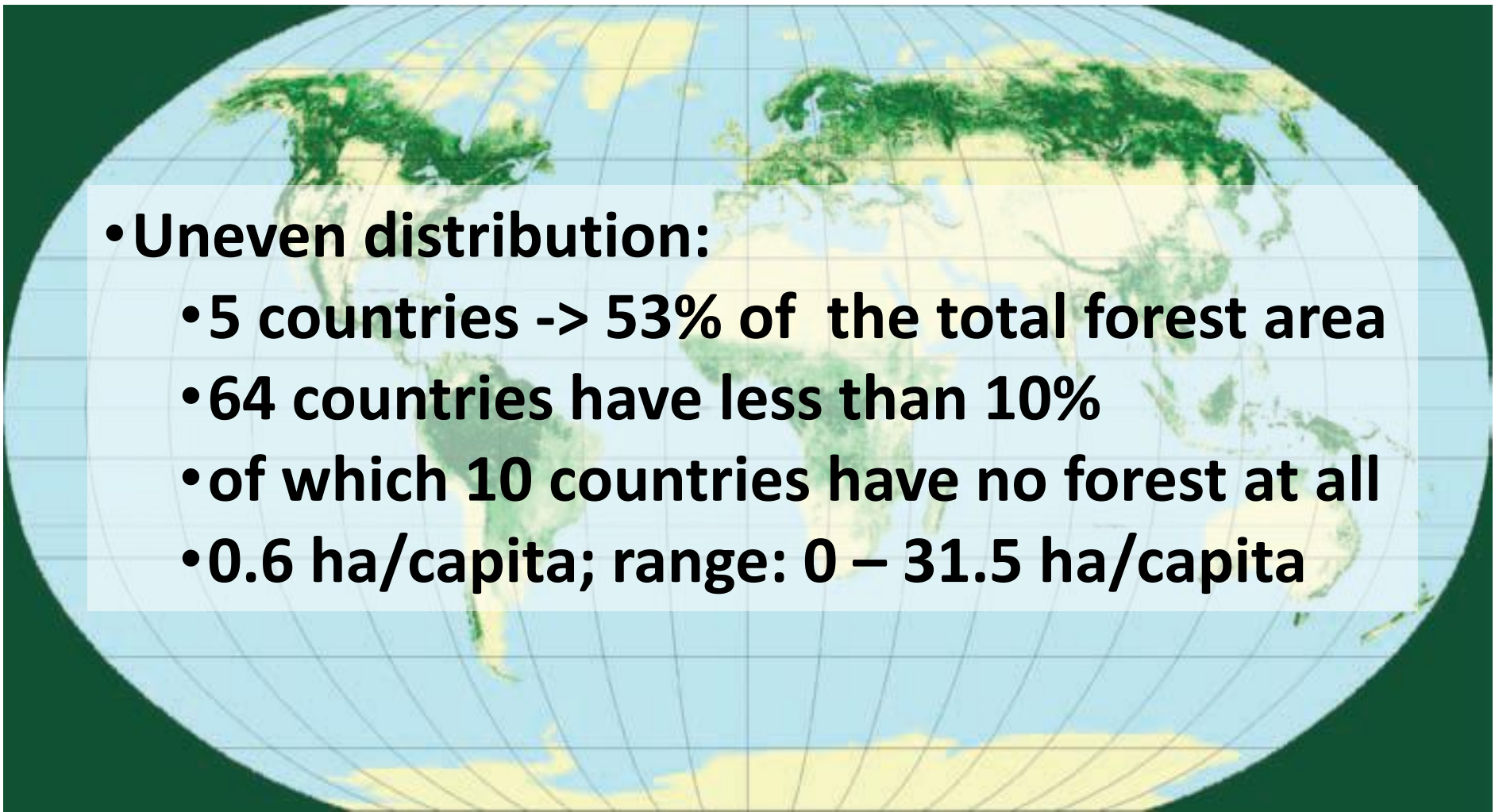
Other wooded land: 1.2 billion ha



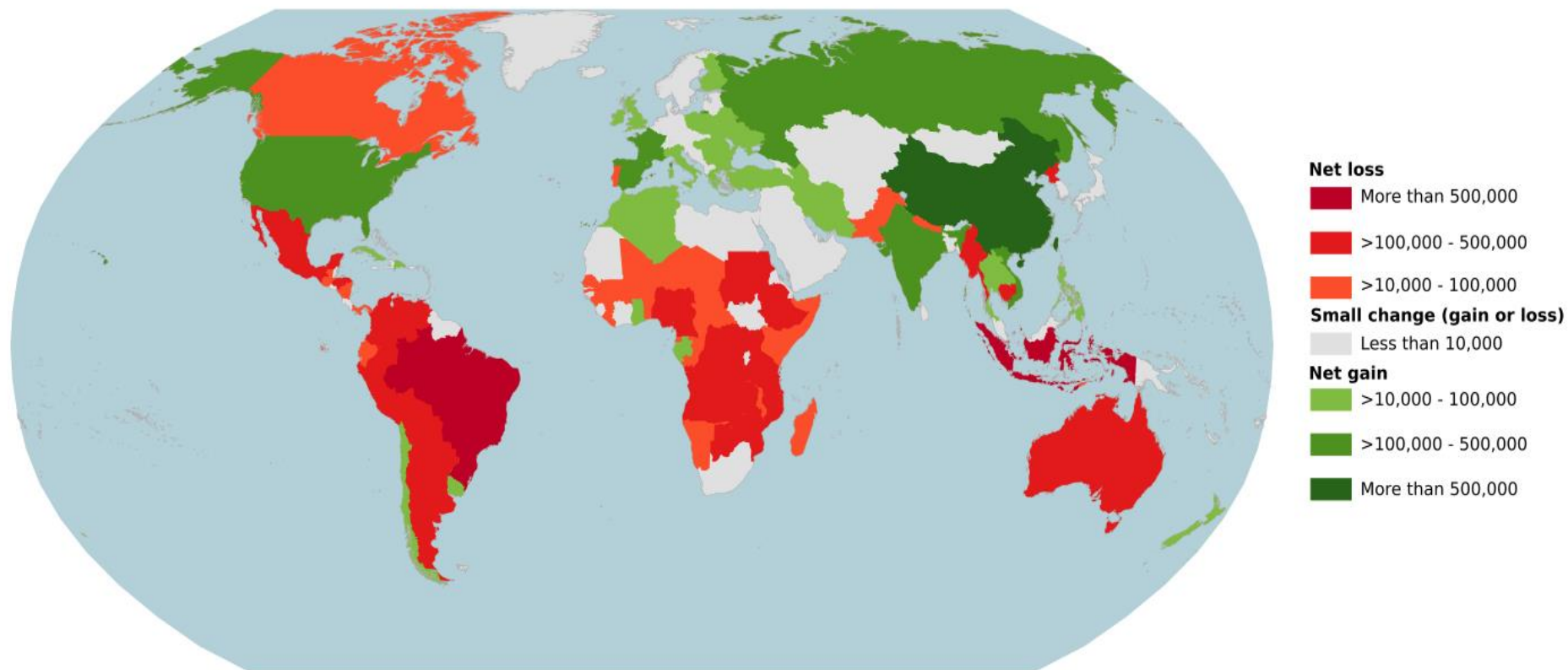
About 1/3 of land area, ~ agriculture, decreasing

The World's forest resources



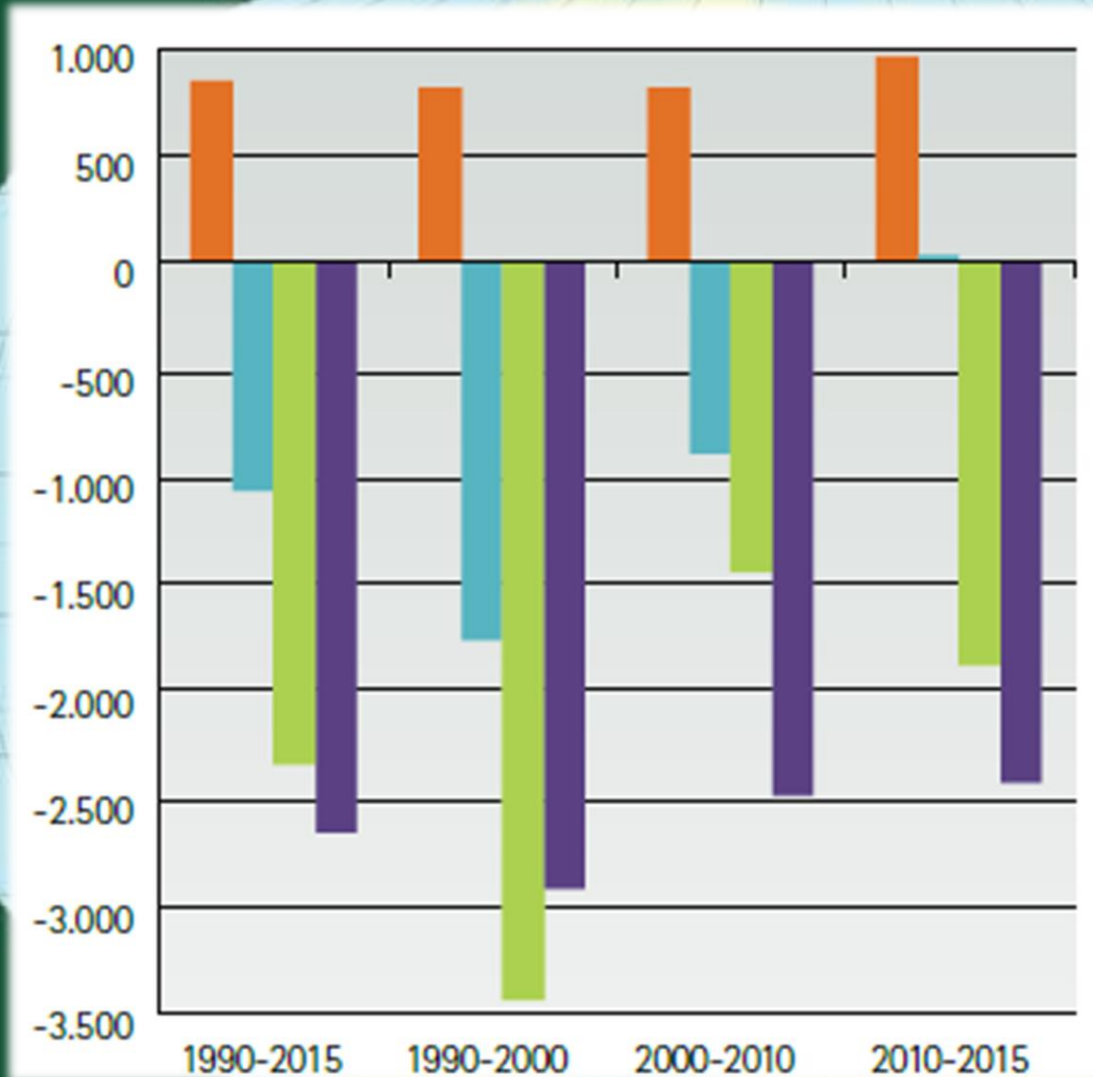
- 
- **Uneven distribution:**
 - **5 countries -> 53% of the total forest area**
 - **64 countries have less than 10%**
 - **of which 10 countries have no forest at all**
 - **0.6 ha/capita; range: 0 – 31.5 ha/capita**

Forest area change 1990-2015



1990-2000: **-7,267** 2000-2005: **-4,752** 2005-2010: **-3,414**
2010-2015: **-3,308** 2015-2020: **????**

Forest area change by income category



High

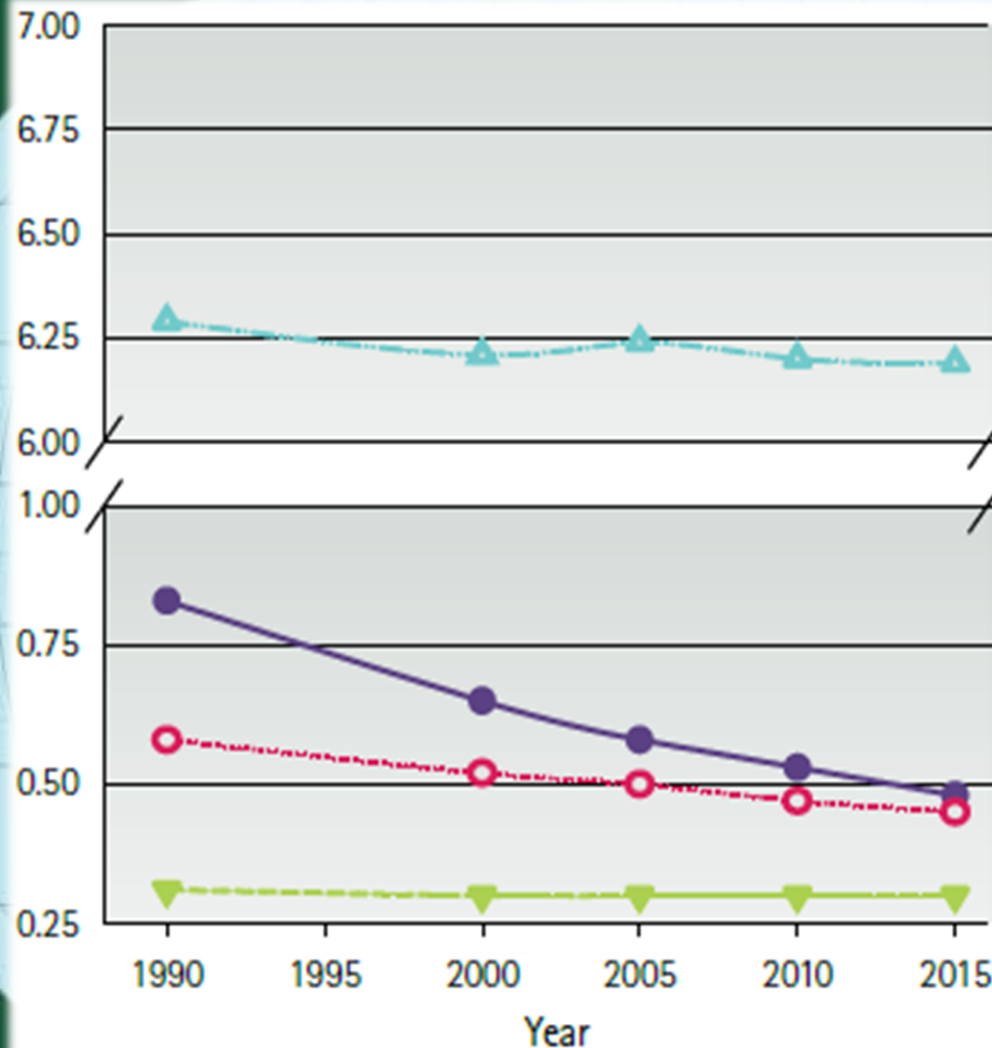
Upper-middle

Lower-middle

Low

The World's forest resources - per capita area

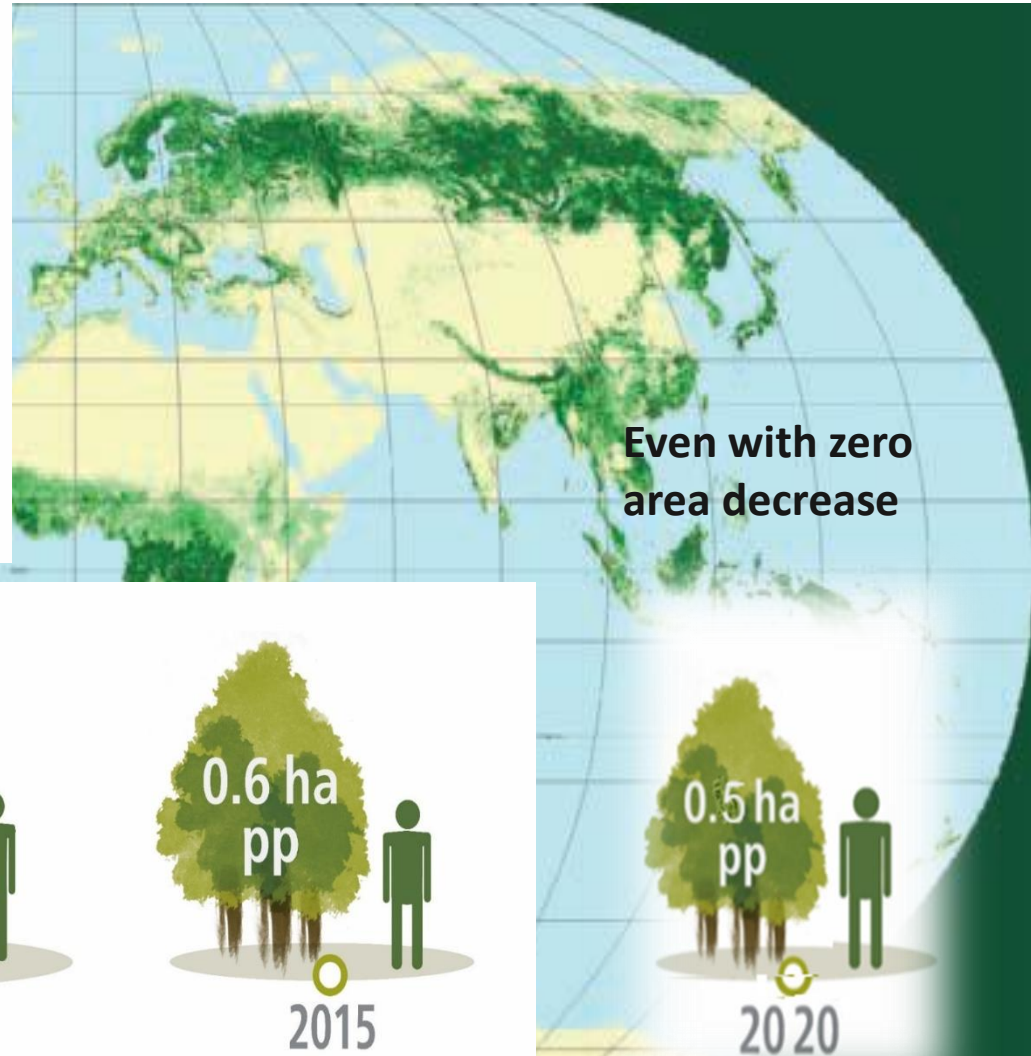
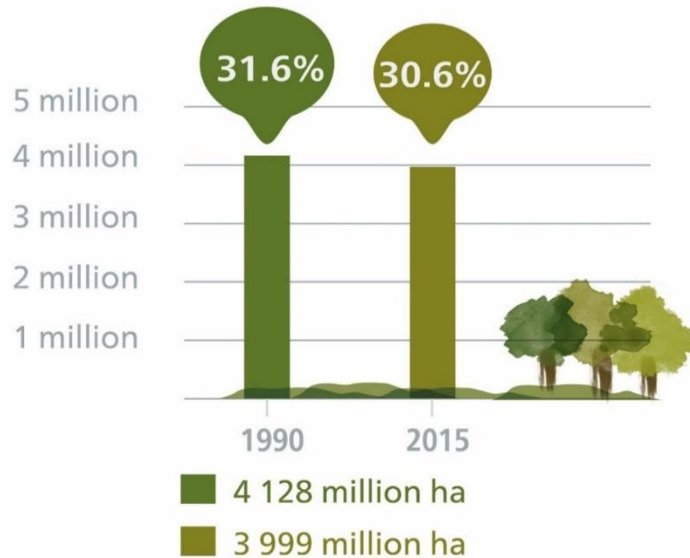
$f(\text{area}; \text{population})$



Boreal

Tropical
Sub-tropical
Temperate

The impact of population growth



The World's forest resources - natutalness



Primary forest: 36%



Other naturally regenerated 57%



Planted:
7%

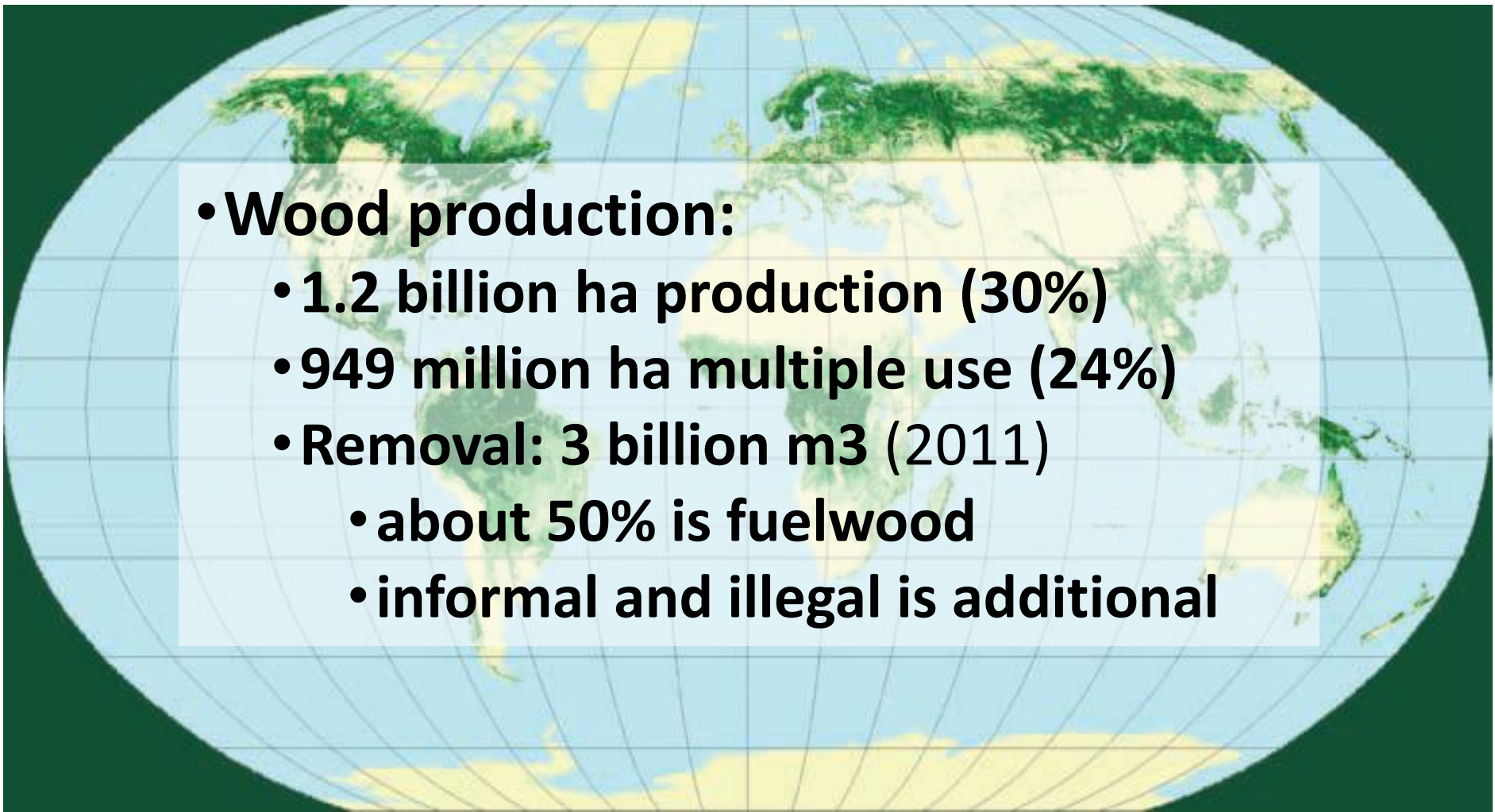
The World's forest resources – growing stock



- **Growing stock (estimated):**
 - **530 billion m³**
 - **about 4 billion more than in 1990**
 - **600 Gt of Carbon**
 - **296 Gt of Carbon in biomass**

The World's forest resources

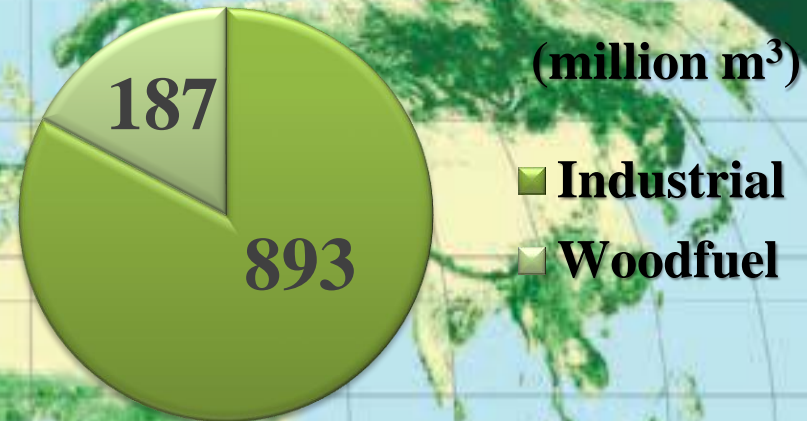


- 
- **Wood production:**
 - 1.2 billion ha production (30%)
 - 949 million ha multiple use (24%)
 - Removal: 3 billion m³ (2011)
 - about 50% is fuelwood
 - informal and illegal is additional

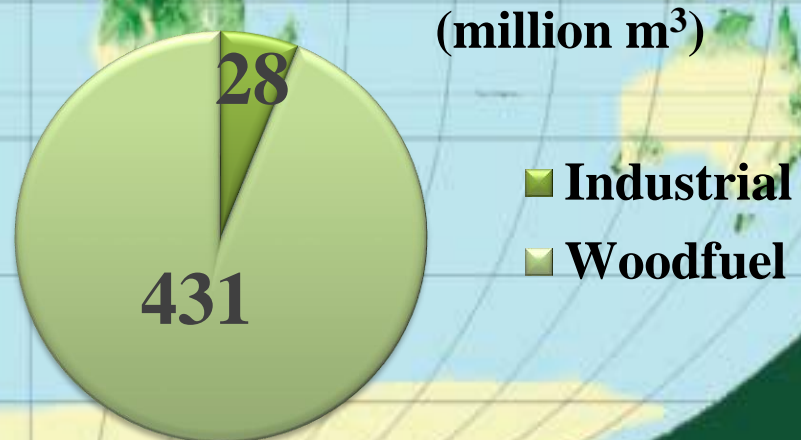
What is the wood used for?



High income countries

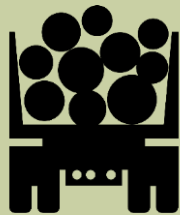


Low income countries



Up
200 million m³
since 1990

Annual wood
removal

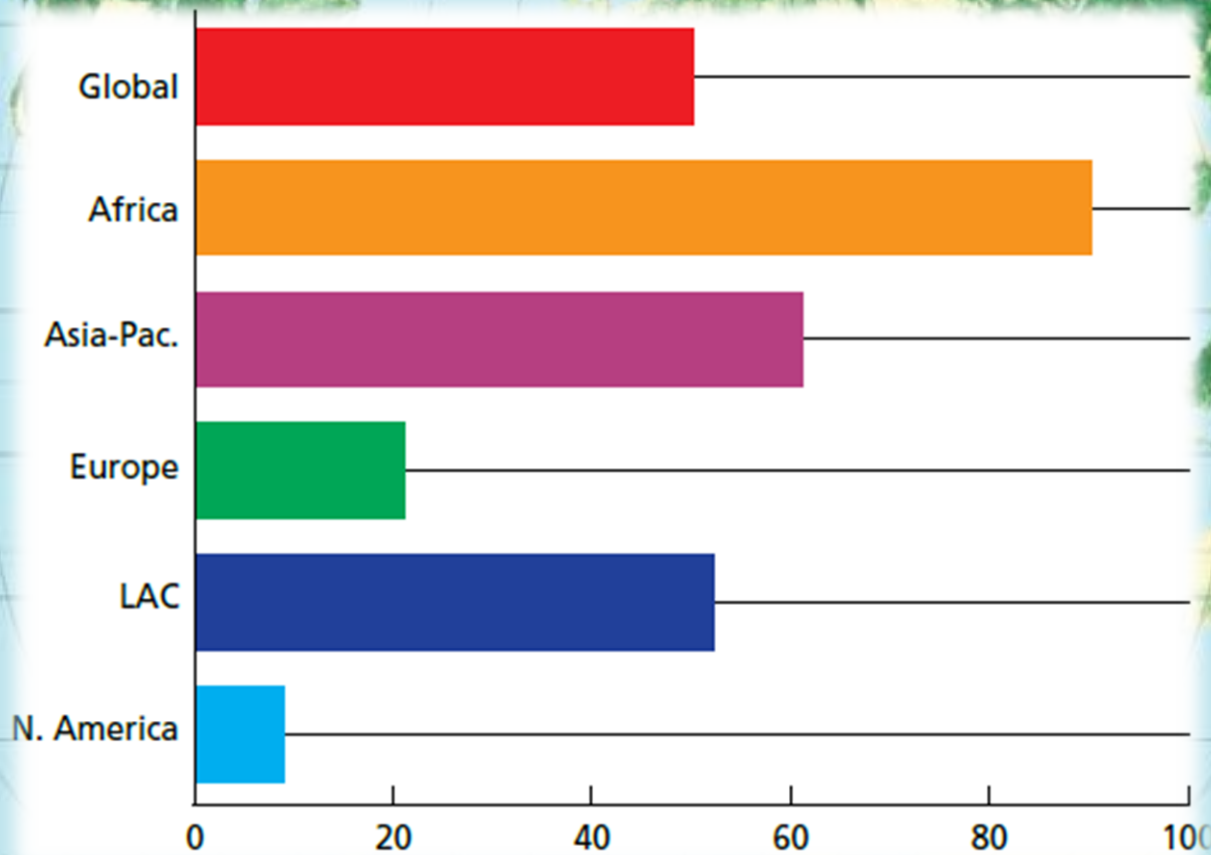


3 billion m³

What is the wood used for?



Percentage of roundwood used as woodfuel in 2016



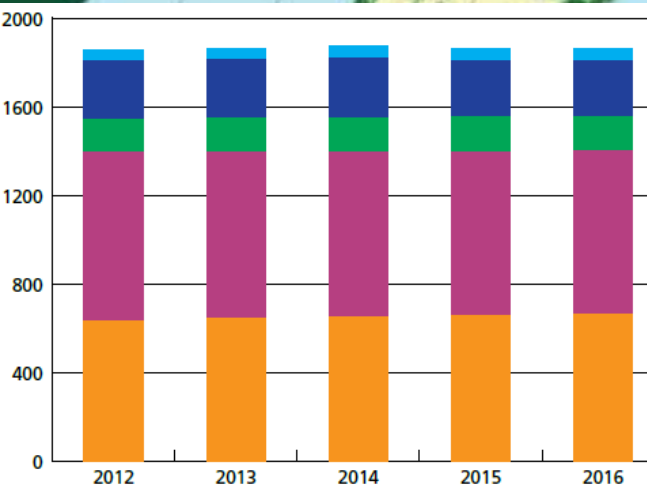
What is the wood used for?



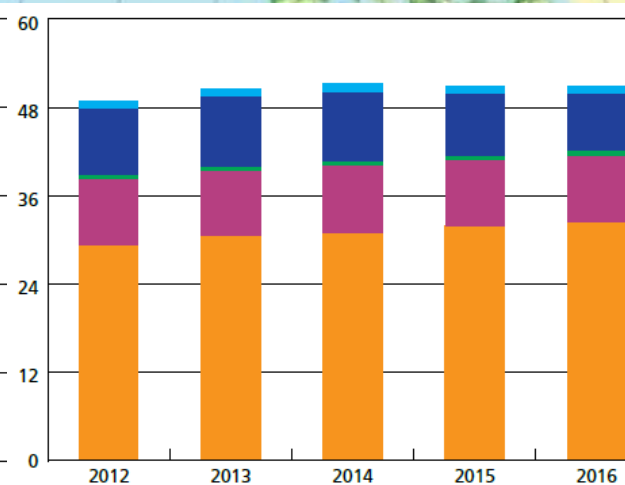
Fuelwood

Charcoal

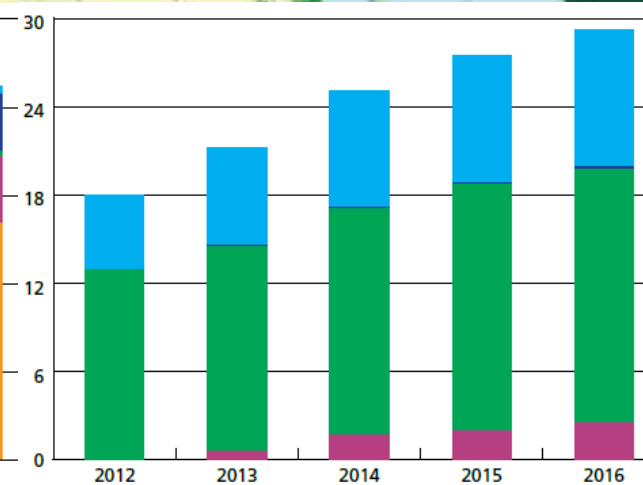
Pellet



Million m3



Million m.t.



Million m.t.

Legend: Africa (Orange), Asia-Pacific (Purple), Europe (Green), Latin America and Caribbean (Dark Blue), Northern America (Light Blue)

What else has changed?

GDP growth 1990-2015

Total

3.4x



Forest

1.9x



Slower growth

=

decreasing weight

\$

%

Forests' socioeconomic benefits (SOFO2014)



- **\$600 billion (0.9 of the global GDP) in the formal sector**
- **\$88 billion in the informal sector**
 - **a conservative estimate**
- **Employment for 13.2 million (0.4%)**
- **41 million employed in the informal sector**
 - **another conservative estimate**
- **880 million produces woodfuel and charcoal**
 - **part-time activity, estimated at 5%**



Forests' socioeconomic benefits



Consumption benefits:

- **Energy: 772 MTOE or 6% of the global total TPES**
 - 27% in Africa, 2% in North America
 - 90% in 15 countries
 - 2.4 billion cook with wood/charcoal
- **Housing: 1.3 billion (very conservative estimate)**
- **Health:**
 - up to 80% of the population rely on traditional remedies
 - 765 million sterilize water with wood/charcoal
- **Food: 76 million tonnes (0.6%)**

What are the major threats?



Competition for land – land use change

Unsustainable, illegal practices

Degradation, biodiversity loss

Climate Change, fire, drought, pests

Growing demand, hunger

Growing demand,
no alternative

Shrinking
resource base

Detachment,
urbanization

Challenges



- Major drivers come from outside the sector
- The true value of forest is often unknown/disregarded
- Forest is often:
 - outcompeted by other economic activities
 - weakly recognized in developmental policies

Opportunities



- **Convert political relevance to tangible results:**
 - **Aichi Biodiversity Targets**
 - **2030 Agenda for Sustainable Development**
 - **Paris Agreement on Climate Change**
 - **UNSPF 2017-2030**

Opportunities (SOFO2016)



- **Food security can be achieved without destroying forests:**
 - **Improved coordination**
 - **Regulation of change**
 - **Integrated land-use planning**
 - **Agricultural intensification**
 - **Poverty alleviation**

Opportunities (SOFO2018)



- **Forests contribute to all SDGs**
 - **Good policies require evidence**
 - **Secure access and tenure rights for all**
 - **Enabling environment for the private sector**
 - **Stakeholder engagement in good governance**
 - **Cross-sectoral coordination at all levels**



Thank you for your attention

www.fao.org/forestry