

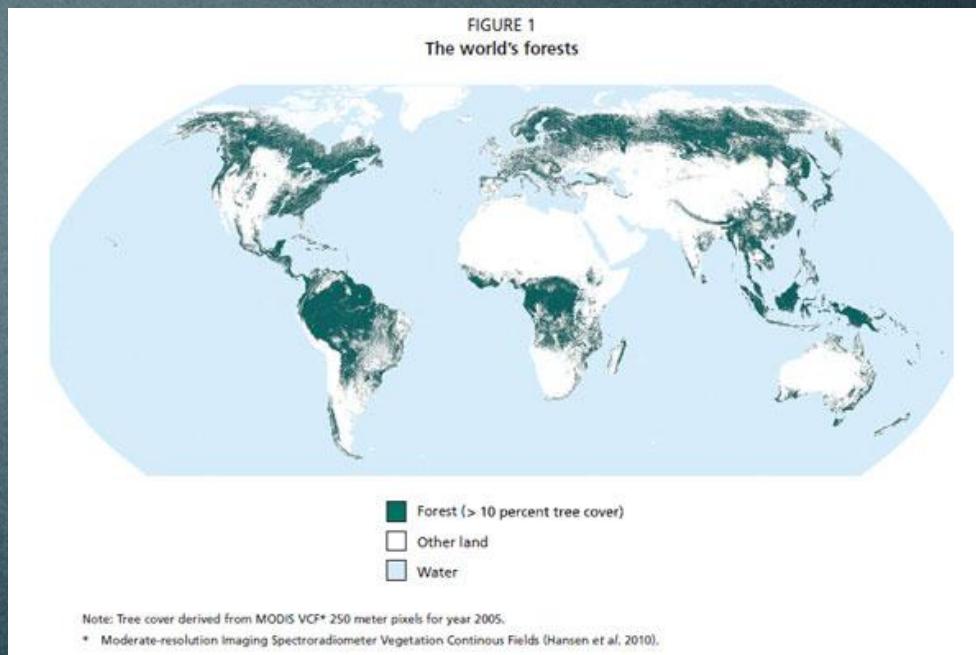
Sustaining Forests in a Changing World

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Topics

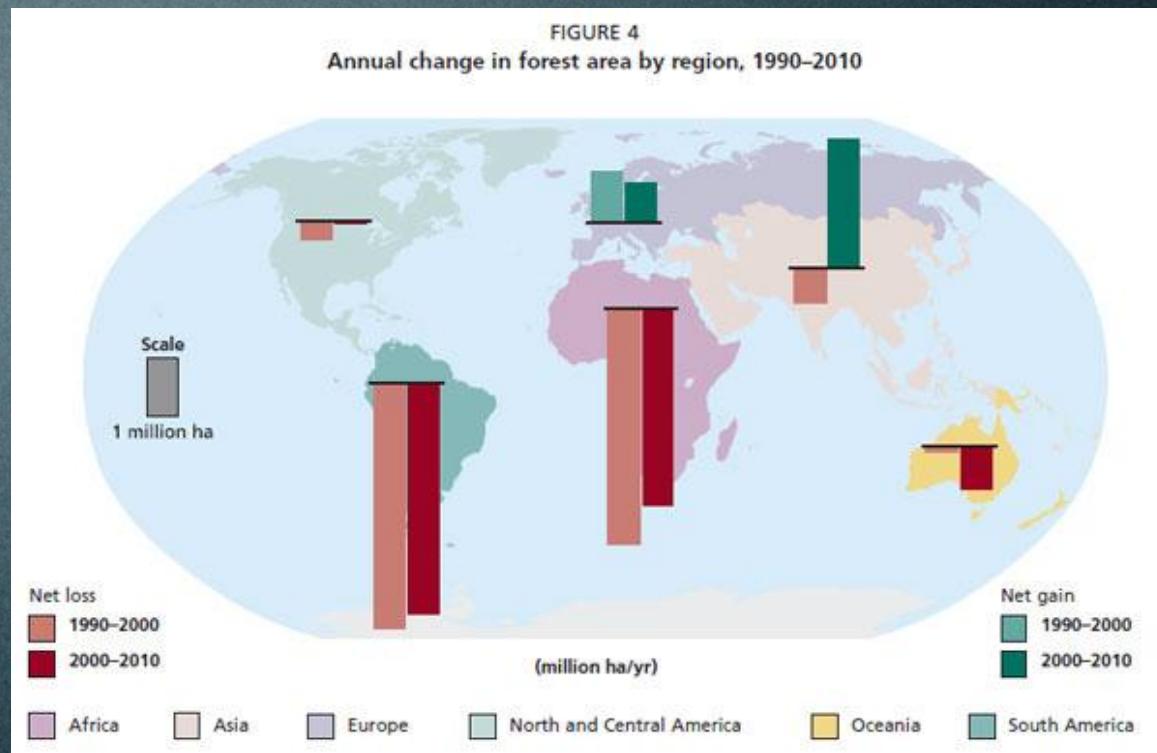
- “ Extent of global forest resources
- “ Forest biological diversity
- “ Forest Health and vitality
- “ Productive functions of forest resources
- “ Socio-economic functions of forests
- “ Legal, policy, and institution frameworks
- “ Data from FAO Global Forest Assessment - 2010

Extent of Global Forest Resources



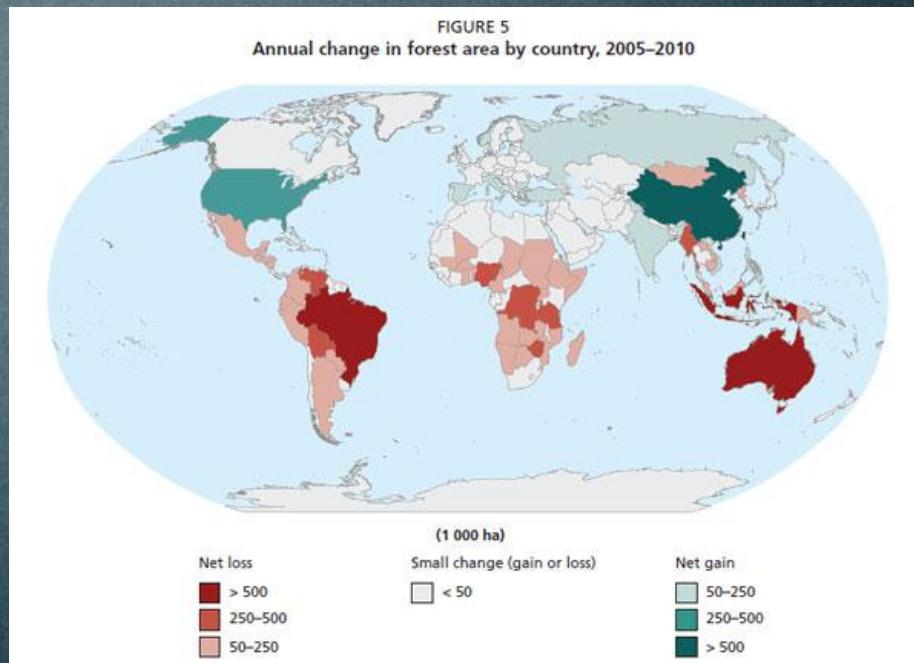
- “ Forests cover 31% of the land area
- “ About 4 billion ha (over 10 billion acres)
- “ Half of the world’s forests occur in just 5 countries: Russian Federation, Brazil, Canada, USA and Chile

Annual Change in Forest Area by Region



- “ Annual conversion rate of forests globally averaged 13 million ha (33 million ac) over the last decade.

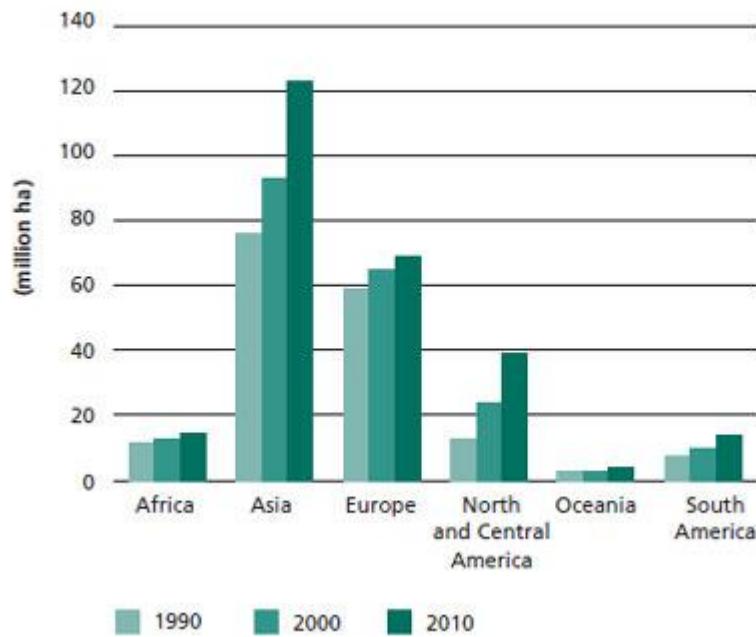
Annual Change in Forest Area by Country



- “ Brazil and Indonesia are still world leaders in deforestation, but the rate is decreasing.
- “ Fires and drought have reduced forest cover in Australia

Afforestation Trends

FIGURE 8
Trends in area of planted forests, 1990–2010



- Reduces the net loss of total forest area to about 5.2 million ha per year from 2000 to 2010.

Deforestation in the Tropics



Slash & burn
(Cambodia)



Rubber and Oil Palm
Conversion (Malaysia)



Forest Clearing
(Thailand)



Agriculture
(Thailand)



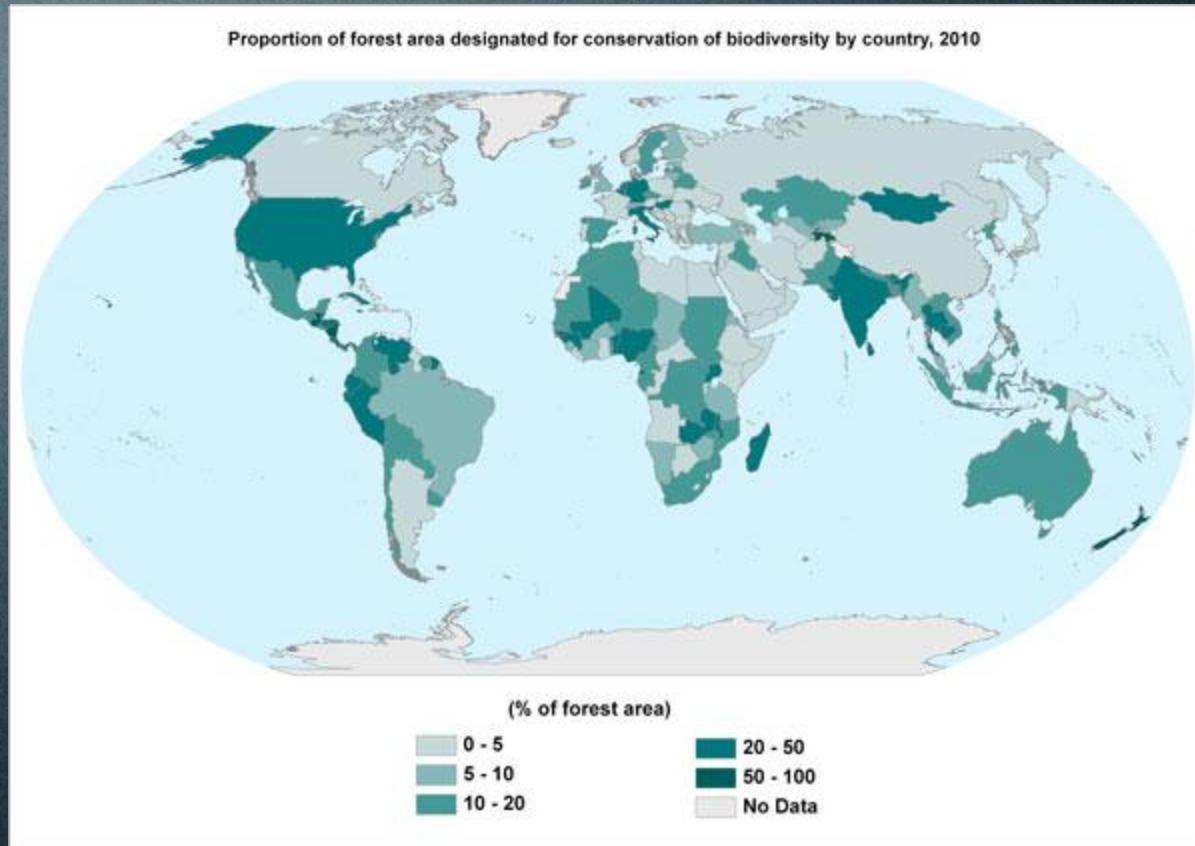
Conversion to Ag Land
(Indonesia)

Forest Biological Diversity

- “ 12% of the world’s forests are designated for the conservation of biological diversity, or over 460 million ha or nearly 1.2 billion ac.
- “ 13% of the world’s forests are in legally established protected areas.



Forests designated for the Conservation of Biodiversity



Forests in Legally Protected Areas

FIGURE 11
Percentage of forest area in protected areas by region, 2010



Issues with Protected Areas



Gorillas
(Uganda)



Forest Encroachment
(Jamaica)



Illegal Logging
(Phillipines)



Bushmeat
(CAR)

Forest Health and Vitality

- ” Insect and disease pests
- ” Forest fires
- ” Other natural disasters



Tsunami (Thailand)



Insects

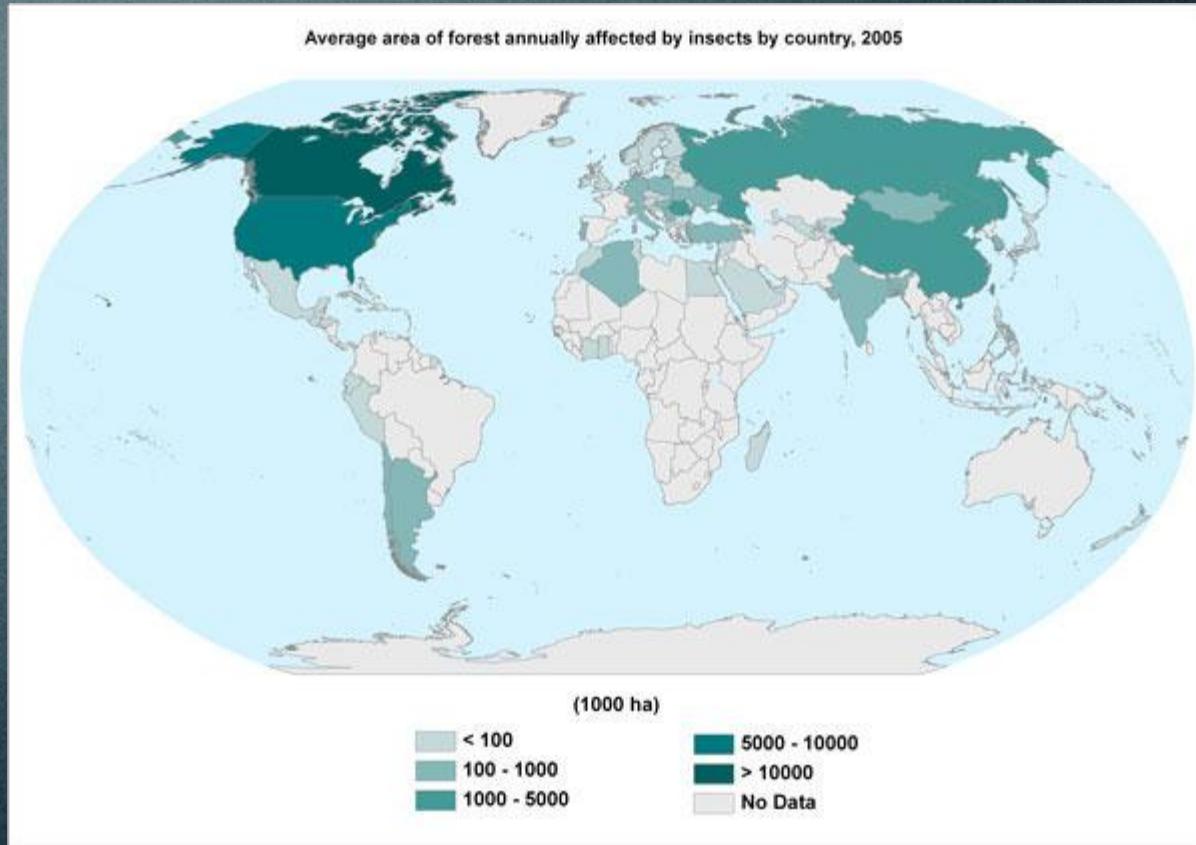


Diseases

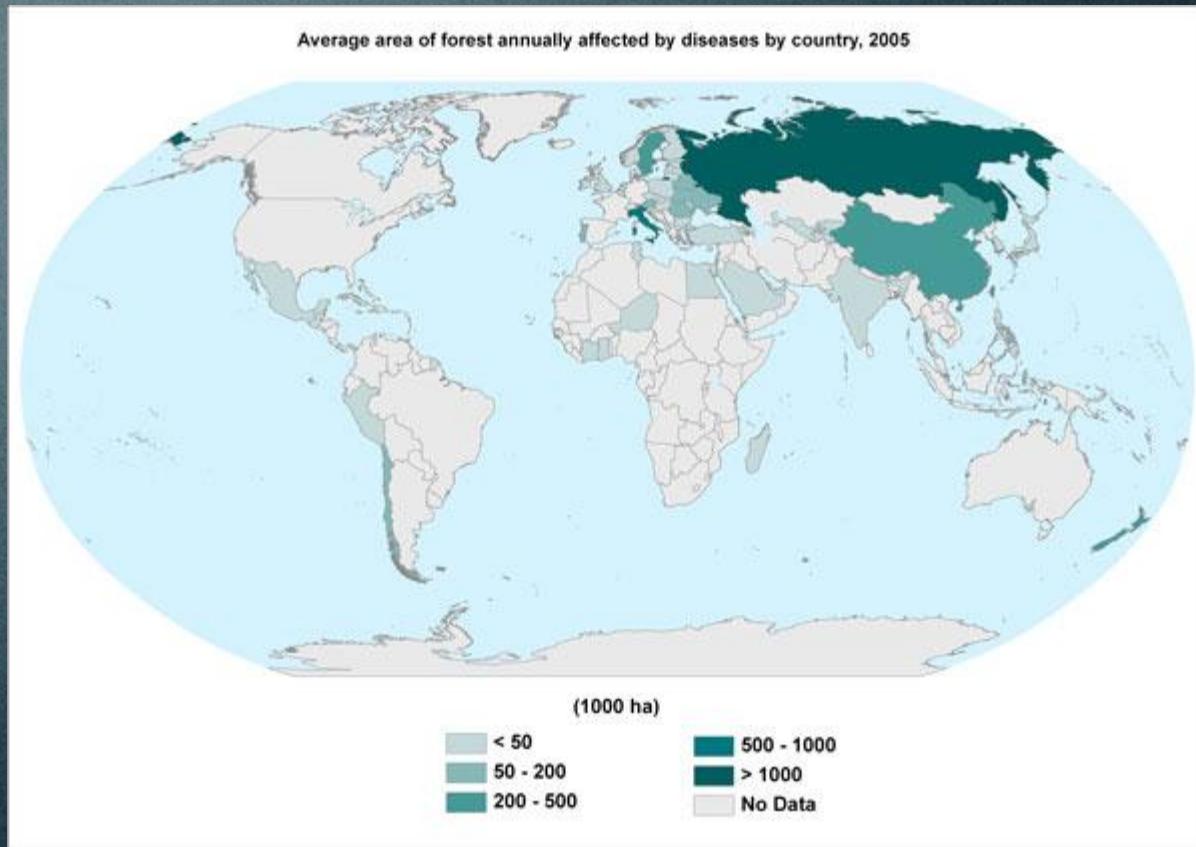


Fire

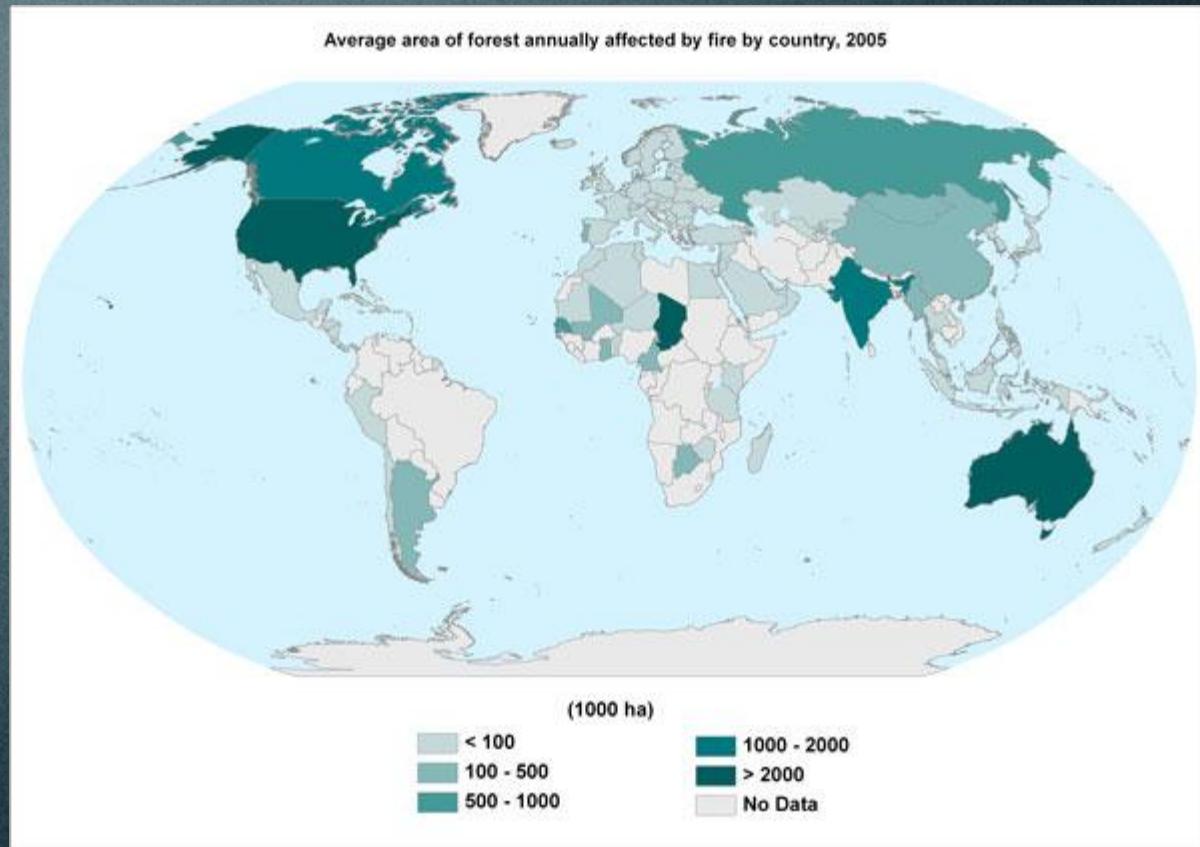
Forests Affected by Insects



Forests Affected by Diseases



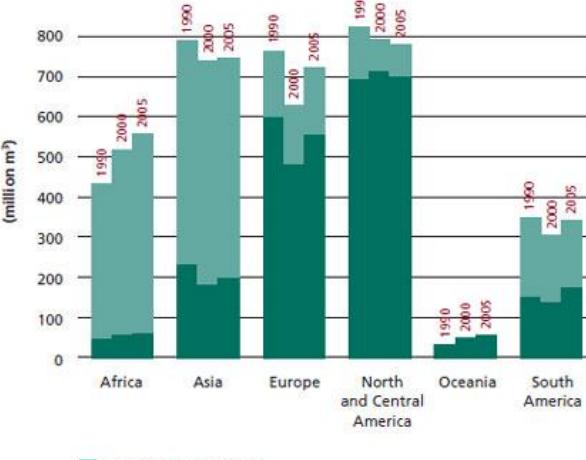
Forests Affected by Fires



Productive Functions of Forest Resources

Trends in Wood Removals

FIGURE 12
Trends in wood removals, 1990–2005



- “ 30% of the world’s forests are used for the production of wood and non-wood products, nearly 1.2 billion ha.
- “ Worldwide, the area designated specifically for timber production has decreased by about 50 million ha since 1990, as forests have been designated for other purposes.

Productive Functions of Forest Resources, cont.

- “ Globally, 3.4 million cubic meters are harvested annually, about 0.7% of the total growing stock.
- “ About 50% of the harvest is wood fuel.



Fuel Wood
(Cambodia)



Log Yard
(Indonesia)



Labeled log
(Liberia)

Productive Functions of Forest Resources, cont.

- “ 8% of the world's forests around 330 million ha, are designated for protection, such as soil and water conservation, avalanche control, sand dune stabilization, coastal protection, desertification control, etc.



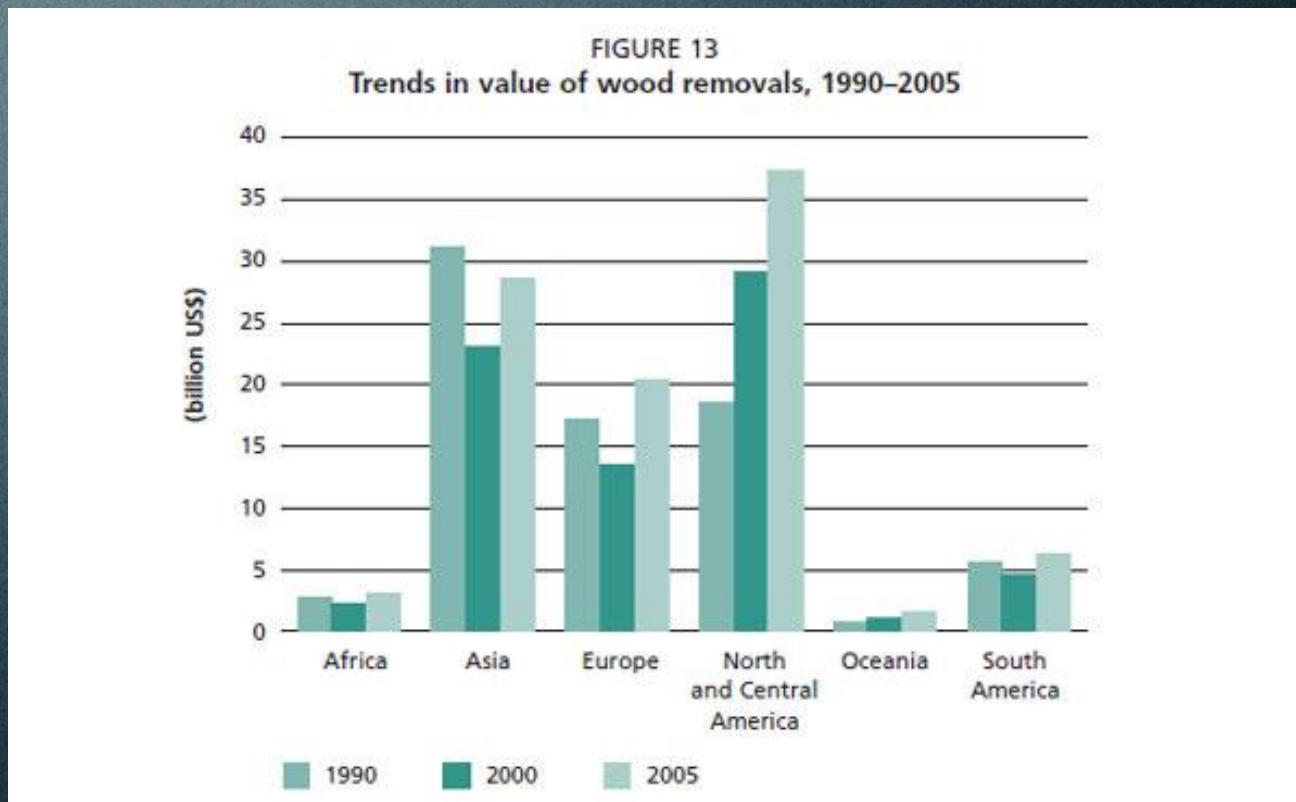
Desertification Control
(Senegal)



Sand dune stabilization
(Niger)

Socio-Economic Function of Forests

- “ Timber production drives the monetary value of forests worldwide



Other Values

- " Recreation and Eco-tourism
- " Conservation of cultural and spiritual heritage
- " Protected and reserved areas for indigenous populations
- " Non-timber forest products and values, including food
- " Education and research
- " Data is limiting



Non-wood forest products



Forest Recreation



Research

Legal, Policy, and Institutional Frameworks

- “ 143 countries have forest policies in place, and 76 have issued or updated their policies since 2000.
- “ 156 countries have a specific Forest Law.
- “ 75% of the world's forests are covered by a national forest program
- “ 1.3 million people work in public forest institutions worldwide, down by 1.2% since 2000.
- “ About 60,000 university students graduate in forest annually, 1/3 female.

Major Issues

- “ Bioenergy
 - “ Harvest for fuel
 - “ Conversion to oil or biomass crops
- “ Climate Change
 - “ Influence on productivity, pests, natural disturbances
 - “ Extreme weather events
 - “ Carbon sequestration in forests
- “ Ecosystems Services
 - “ REDD and REDD+
- “ Biodiversity Conservation
- “ Illegal Logging
 - “ Forest certification
 - “ Chain . of - custody
 - “ Market influences
 - “ Tighter laws (CITIES, Lacy Act)