

Resources for the Future: What we expect from our forests 20 years from now

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Outline

- Forests today and in the future
- Research community responses
- Trends in major themes being tackled today



for·est·ry man·age·ment (n):
managing to cut down forests.



Forestry today

Former Forestry	Future Forestry
Sustained yield	Sustainable ecosystems
Focus on cheap commodity products	Focus on value-added and 'smart' products
Focus on timber products	Focus on the needs of people



Forestry today

Former Forestry	Future Forestry
Based on Newtonian economics	Based on post-Newtonian economics
Based on natural sciences	Based on social <i>and</i> natural sciences
Focus on western experimental science	Recognition and use of multiple scientific systems (including TEK)



Forestry today

Former Forestry	Future Forestry
Policy dominated by powerful stakeholders (industry)	Policy dominated by needs of dis-enfranchised
Focus on industrial logging concessions	Focus on community-based approaches
Top-down control of decisions	Participatory decision-making



IUFRO Responses

- Recognition that eight Divisions were inadequate
- Split of Division 6 (social and economic science)
- Creation of inter-disciplinary Task Forces



IUFRO Research Themes

IUFRO Strategy for 2010-2014:

- **Forests for people**
- **Climate change and forestry**
- **Bioenergy and the forest products industry**
- **Forest biodiversity conservation**
- **Forest and water interactions**
- **Resources for the future**



IUFRO Task Forces

- Forests for People
- Resources for the Future
- Forests and Water Interactions
- Forests and Human Health
- Traditional Forest Knowledge
- International Forest Governance
- Education in Forest Science
- Biodiversity and Ecosystem Services
- Forest Bioenergy
- Forests and Climate Change



Forests for people

- (Agro)forestry, food security and livelihoods
- Culture and education
- Recreation and eco-tourism
- Urban and rural landscapes


















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Rainforest

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20 years from now

- Food security will be critical
- Competition for land will be intense
- Some countries may no longer have access to sufficient amounts of their land
- Demand for recreation will have increased, particularly in urban and peri-urban areas



Resources for the future

- Trends in demand for innovative forest products, ecosystem goods and services and conflicting needs
- Management options at the landscape level
- Globalization and changes in governance systems



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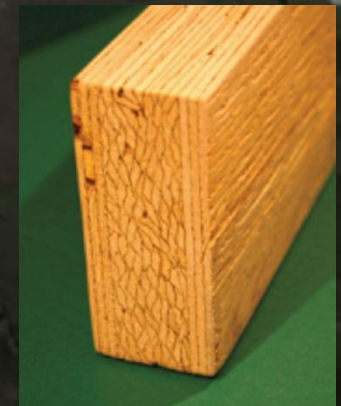
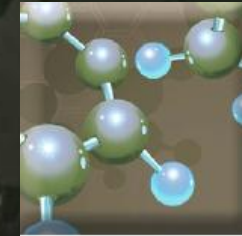
water
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OZ TURF
SYNTHETIC GRASS



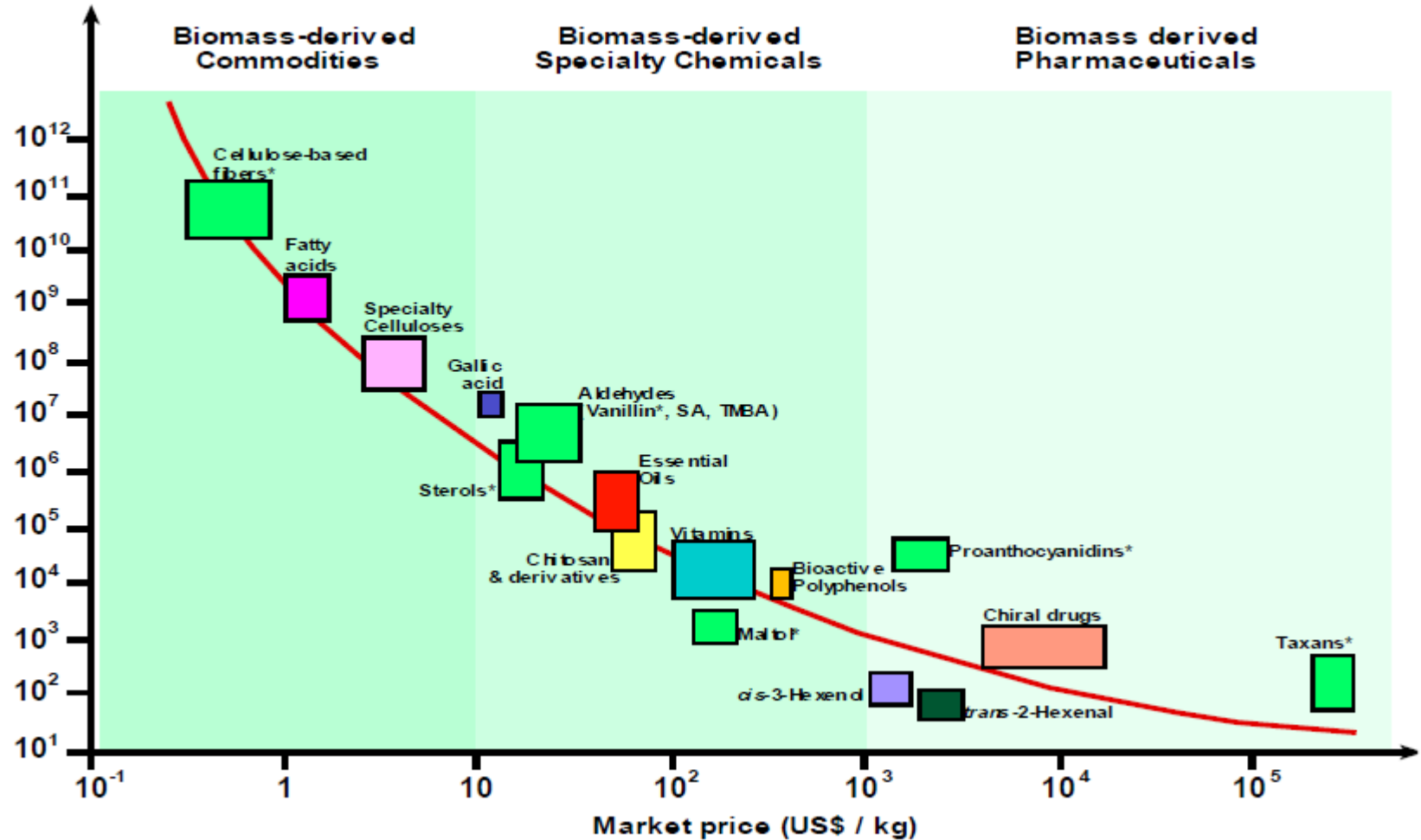
**\$200 billion market
in biorefinery
products globally
by 2015**







Market size / price for co-products derived from biomass



森林、林木、林地状况登记表

03504811306GDYMSY00108

No 4

林地所有权 权利人	永安市洪田镇洪田 委会	林地使用权 权利人	邓杨钦
森林或林木 所有权权利人	邓杨钦	森林或林木 使用权权利人	邓杨钦
座落	福建省永安市洪田镇洪田村		
小地名	进峰坑甲	林班	12-9
面积	117亩	小班	1
株数	/	主要树种	杉木
林地使用期	26年	林种	用材林
		终止日期	2029/12/31

四至：东：山脊

南：205、206号宗地界

西：11林班界

北：山脊

注 记： 1、宗地号：099
2、具体分成比例见1999年元月6日永安市洪田镇洪田村与邓杨钦等16户签订的第010号山林承包合同书。

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证
机
关

(机关印)

经办人： 许接眉

负责人： 蔡为茂

2003年 10月 16日

2003年 10月



中华人民共和国
林 权 证

廉洁规范



拍

拍人

20 years from now

- **Wide range of new products coming from forests**
- **Services will have adopted new importance**
- **Forest ownership patterns will have changed (dramatically)**
- **Governance issues will continue to be important**



Forest and water interactions

- Effects of land-use and land-cover change on watershed hydrology
- Forest and water interactions under conditions of climate change, and response options
- Region-specific interactions of forests and water (including water consumption by forest plantations)













WATER SUPPLY CATCHMENT AREA

**YOU ARE TRAVELLING THROUGH THE CATCHMENT AREA
OF THE COLAC WATER SUPPLY.**

PLEASE CO-OPERATE TO PREVENT POLLUTION.

**THE REMOVAL OR CUTTING OF TREES, FERNS, SHRUBS
OR ANY NATURAL FLORA IS FORBIDDEN.**

20 years from now

- Water will much more limiting than today
- Water will determine the survival of many of today's forests
- Water will determine forest policy in many areas



Forests and Human Health

- The role that forests play in improving human health
- Forest livelihoods
- Emerging diseases



Forests and the
associated
wildlife are
traditionally
seen as a source
of threat to
human health

RABIES ALERT



La Rage	狂犬病
Tollwut	Rabbia
Rabia	बिमारी
광견병	Bệnh dại

Sallim-yok (Forest rest-cure)

'Sallim-yok' is a new method of health care. People can restore their vitality while breathing the fresh air and the fragrance of trees and by seeking rest in a forested area.

Trees in a forest manufacture *Phytoncide* which is a compound word of *phyton* (meaning fragrant smell that trees emit to protect itself) and *cide* (meaning to kill living things). This compound, released into the air, is beneficial to help people by killing harmful germs.

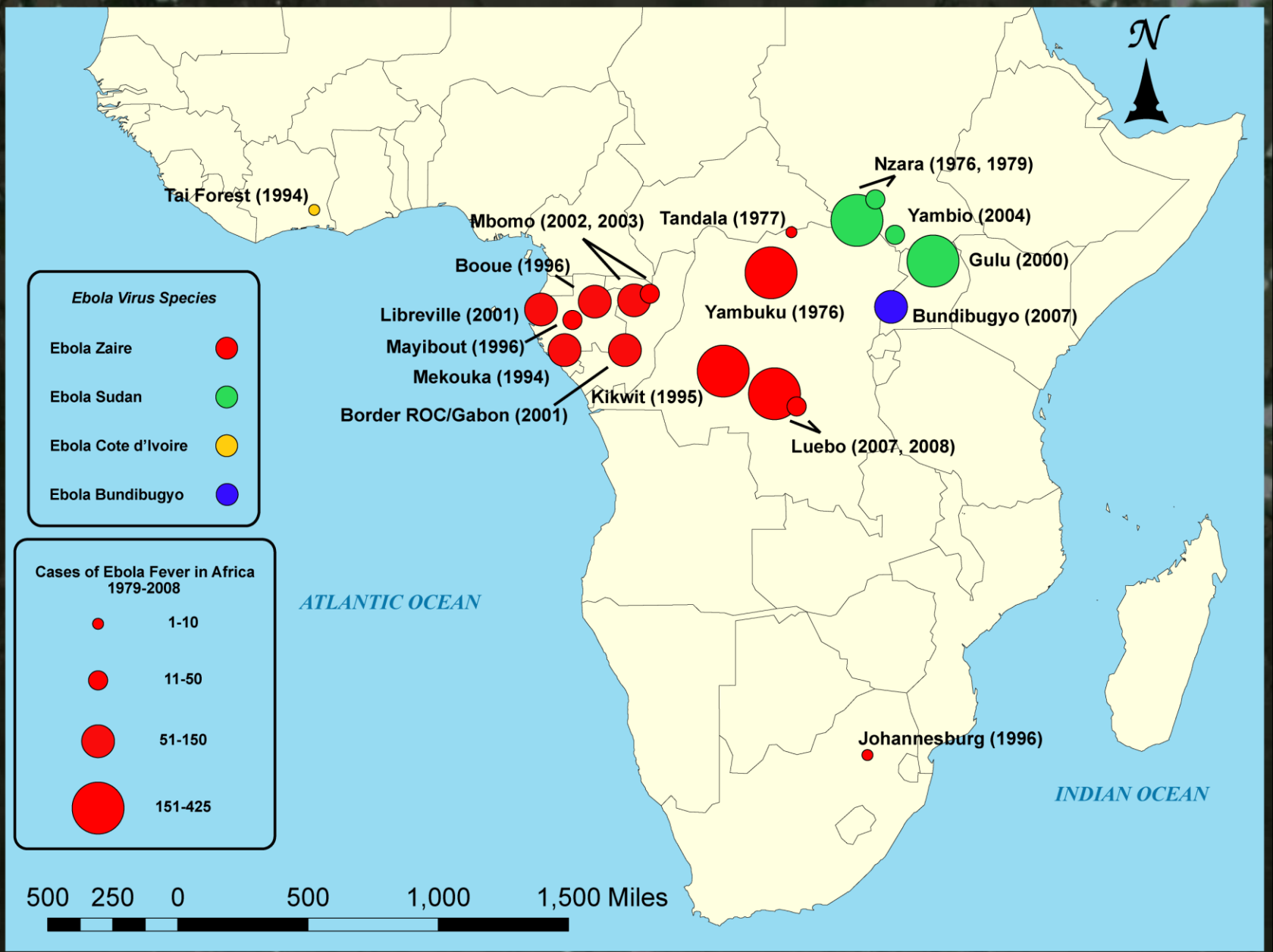
Resting in a forest helps asthma and disinfects the skin as well as strengthens the function of the lungs and heart. It also helps people overcome their fatigue and recover their spiritual strength.

A coniferous (needle-shaped) forest is better than a latifoliate (broad-leaved) forest for 'Sallim-yok'. Especially 'Bija' (*Torreya nucifera*), Korean fir (*Abies koreana* WILS) and Thuja (*Chamaecyparis obtusa* ENDL) give off a heavy fragrance which are good for human.

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Ebola Virus outbreaks 1979-2008

20 years from now

- Rising healthcare costs will have generated more interest in natural remedies
- Forest owners will be paid for this service
- Urban forests will be particularly significant for health benefits
- More diseases will have been transferred to humans



Traditional Forest Knowledge

- The inter-relationships between traditional and formal (scientific) forest-related knowledge
- Potential synergistic applications with sustainable forest management









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kwaagiidang

Everything depends on
everything else