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

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Forestry today

Former Forestry	Future Forestry Sustainable ecosystems Focus on value- added and 'smart' products	
Sustained yield		
Focus on cheap commodity 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 and natural sciences	
Focus on western experimental science	Recognition and use of multiple scientific systems (including TEK)	



Forestry today

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



IUFRO Responses

- Recognition that eight Divisions were inadequate
- Split of Division 6 (social and economic science)
- Creation of interdisciplinary 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























20 years from now

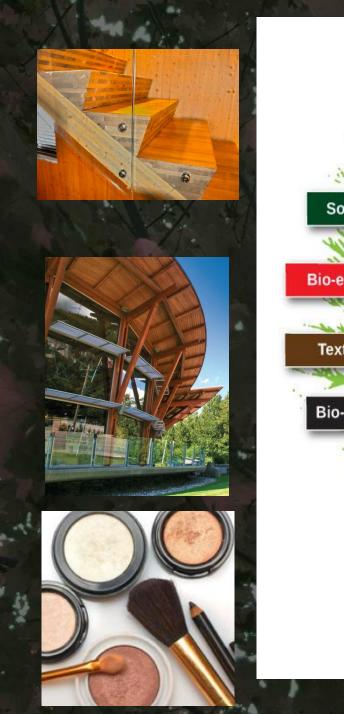
- Food security will be critical
- Competition for land will be intense
- Some countries may no longer have access to sufficient amounts of their land
- Demand for recreation will have increased, particularly in urban and peri-urban areas

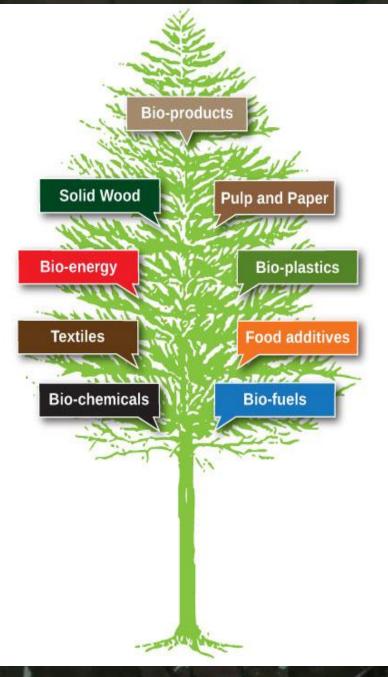
Resources for the future

- 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







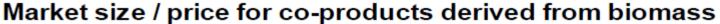


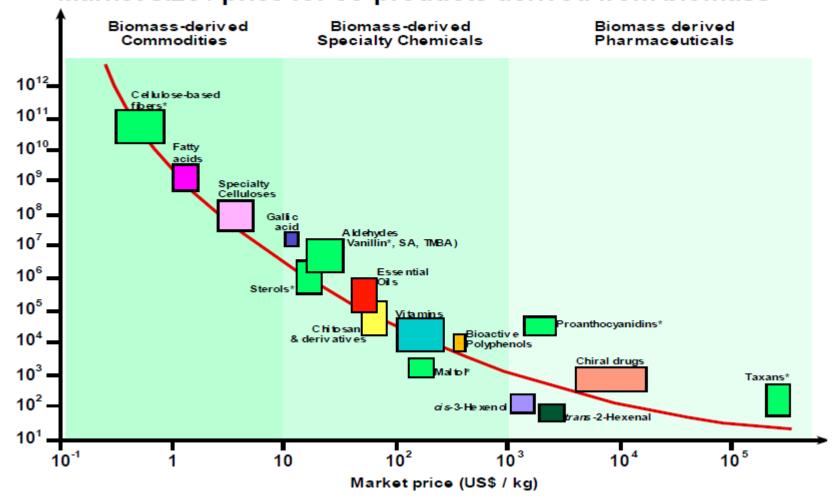












森林、林木、林地状况登记表

No 4

林地所不		永安市洪田镇 委会	世日林地使用权 和 人	邓杨钦
秋 利 森林或林 所有权权	林木利人	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	小班 1
面	积	117亩	主要树种	杉木
株	数	9000	林种	用材林
林地使用	期	26 年	终止日期	2029/12/31

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恒 钦等16户签订的第010号山林承包合同书。

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证

(机关印)

机

经办人: 许接眉

负责人: 蔡为茂

2003年 10月

16_H

2003年 10月



中华人民共和国林权证



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 landcover 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.

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



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.

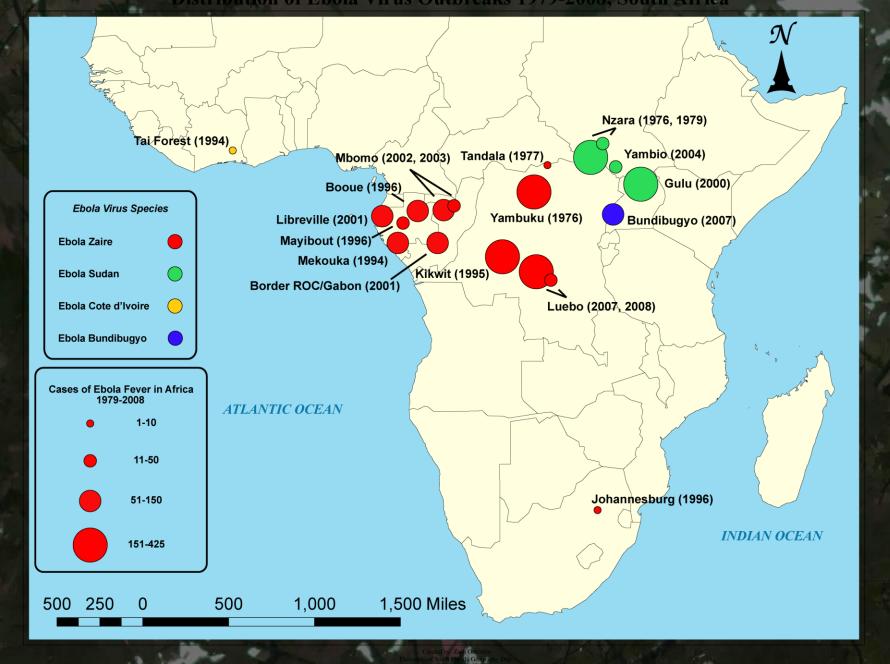
Trees in a forest manufacture *Phytoncide* which is a compound word of *phyton* (meaning fragrant smell that trees emit to protect itself) and *cide* (meaning to kill living things). This compound, released into the air, is beneficial to help people by killing harmful germs.

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 overcame their fatigue and recover their spiritual strenth.

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



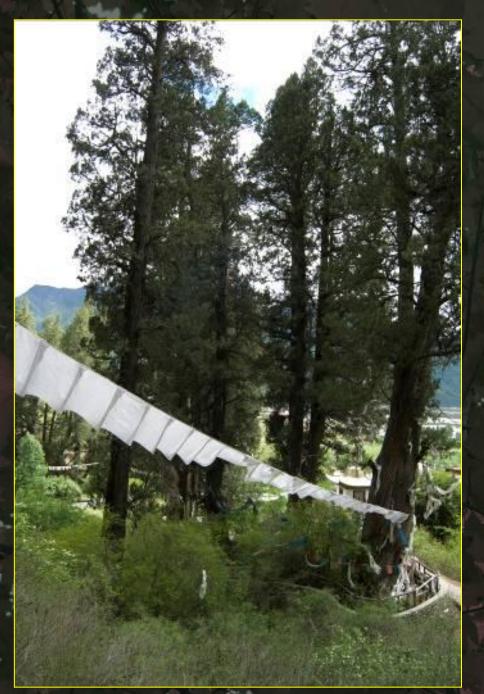




Ebola Virus outbreaks 1979-2008

- 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











Gina waadluxan gud7ad kwaagiidang

Everything depends on everything else

- Aboriginal peoples will have control of substantial areas of forest
- These forests will increasingly be managed according to Aboriginal values
- Traditional knowledge will be much more widely accepted than today

International Forest Governance

 Whether, when, and how, international forest governance initiatives might produce enduring and effective results for the myriad of social, environmental and economic challenges facing the world's forests



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Rainforest mafia floors Canadian homes

International criminal syndicates operating in China,
Hong Kong, Singapore and Malaysia ravage
Indonesian forests to make luxurious
hardwood floors in North America.











- The UNFF will still be talking about the need for action
- There will be much better control of illegal wood (DNA fingerprinting, enforcement)
- NGOs and the private sector will be playing a much more prominent role in policy

Education and Forest Science

- Development of curricula for forest management
- Improvement of standards of forestry education
- Sharing of experiences





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Anweisung

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Heinrich Cotta,

Konigt. Gachf. Oberforftrath, Direktor ber Forftakademie und ber Forstvermeffung, Ritter bes Konigt. Sachf. Civilverblenftorbens, und Mitglied vieler gelehrten Gesellschaften.

> Fünfte verbefferte Auflage, herausgegeben

> > von

August Cotta,

Konigt. Gadf, Forftinfpector und Lebrer an ber Forftatabemie.

Mit zwei Rupfern und bem Bitbniß bes Berfaffere.

Dresden und Leipzig, Urnotbische Buchhanblung.











- Traditional forestry education may have disappeared
- Education will have globalized
- Far greater use of distance education
- Recognition of qualifications across borders
- Global shortage of professional foresters

Bioenergy and the forest products industry

- Resource competition (bioenergy, fibre, traditional forest products) and cascades of use, including environmental and social impacts
- 'Eco-efficiency' of forest bioenergy production systems and technologies
- Marketing of bioenergy and economic impacts























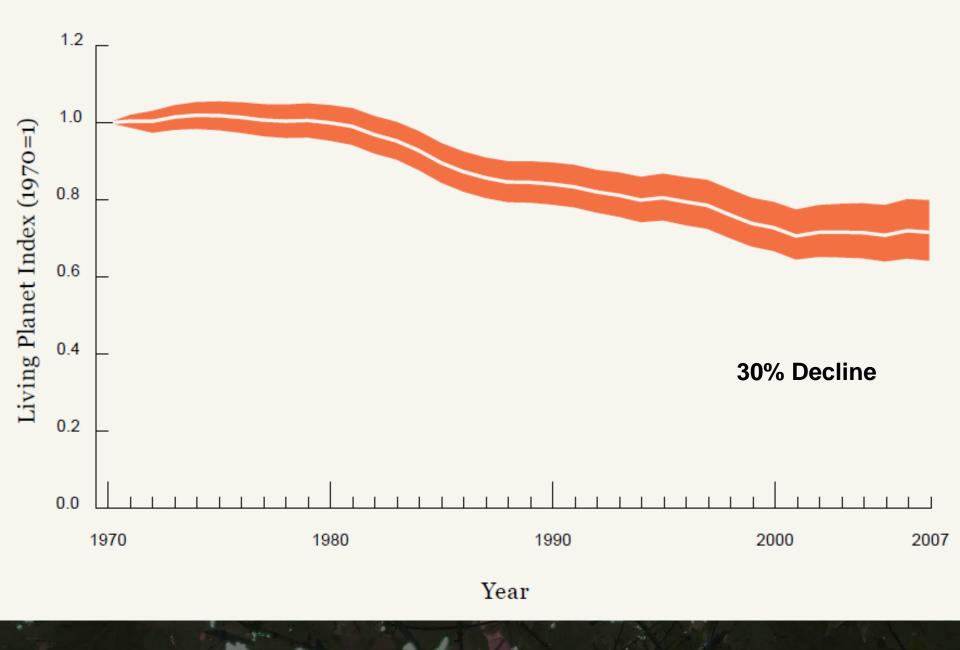
20 years from now

- Energy will come from a greater variety of sources than today
- More wood will be utilized (to the potential detriment of biodiversity)
- Energy will be derived more efficiently (especially for domestic uses)
- Less wood will be consumed directly as firewood

Forest biodiversity conservation

- Impacts and effects of biodiversity loss at various levels, including forest ecosystem resilience
- Landscape-level strategies for biodiversity conservation (including fragmentation, conflicting land uses, role of plantations for biodiversity conservation)
- Ecosystem services from forest biodiversity





Based on population trends in 1686 vertebrate species









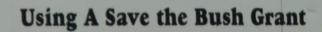
Tree Planting To Save The Regent Honeyeater

planted by













RESERVA BOSQUE NUBOSO SANTA ELENA. MONTEVERDE PROYECTO COMUNITARIO SANTA ELENA 3 KMS CLOUD FOREST RESERVE TEVERDE COMMUNAL PROJECT

Tranquille Ecological Reserve

This Ecological Reserve was designed in 1972 to protect a representative example of ecosystems in Ponderosa Pine Biogeoclimatic Zone.

Fire and other natural disturbances have played an important role historically in shaping the structure and composition of Ponderosa pine forests. Fire used to be more frequent in these ecosystems than in any other forested ecosystems in the Province. Based on fire scars in the cross-section of trees, a local fire history study of the last 500 years suggested an average fire interval of about 18 years.

An absence of First Nations burning practices, domestic grazing, and successful suppression of wildfires in the more recent past have lengthened the interval between fires in this reserve. This has allowed the buildup of additional fuels that, if unchecked, would have created the potential for a catastrophic wildfire.

At the same time, the gradual reduction of open spaces would have resulted in habitat loss for those plants and animals which are adapted to live in the grassland/forest interface.

BC Parks undertook a prescribed burn here in April of 1999 to return a natural process to the Ecological Reserve and minimize the risks associated with wildfire. The study of the effects of fire on this Ponderosa pine forest will help us gain further insight which will be useful in the management of this ecosystem and of similar ecosystems outside the reserve.



BC Parks Partners' in Management and Research:

BC Forest Service: Kamloops Fire Zone Kamloops Forest District Kamloops Forest Region



Agriculture and Agri-Food Canada, Kamloops Range Research Unit



University College of the Cariboo



For more information please contact BC Parks: phone: 851-3000 at 1210 McGill Rd. Kamloops

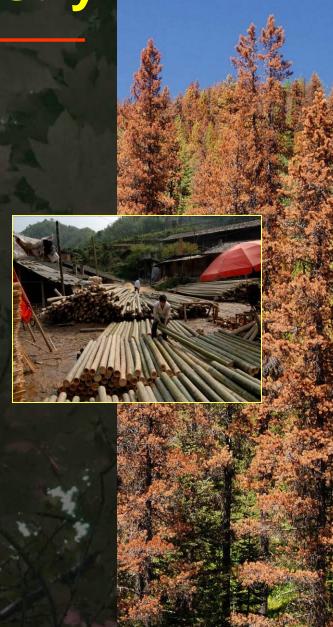


20 years from now

- We will have lost a significant amount of biodiversity
- The world will have accepted this as inevitable
- Conservation will be driven by NGOs, not government
- More land will be actively managed for conservation (not just reserved)

Climate change and forestry

- Climate change impacts on forest ecosystems and forestdependent people
- Options for adaptation and trade-offs between adaptation, conservation and/or sociocultural needs
- Reducing emissions from deforestation and forest degradation















20 years from now

- We will have surpassed the 2°C threshold
- Effects will be very obvious especially at high latitudes
- The global community will be "very concerned"
- Efforts to resolve climate change will be led by BRICS countries
- Carbon will be managed by the private sector

Changes in policy?

- Major problem due to massive institutional failures (UNFF etc.)
- Abrogation of forest governance in developed countries
- Failure of forest governance in many developing countries
- Loss of expertise in forest governance

Policy responses

- Forest policy makers always trying to catch up (reactive, not proactive)
- Bureaucracies in government (and in education and industry) are not helping adaptation to the new demands placed on forestry



Governance

- The poor governance of forests, both nationally and internationally, is one of the biggest problems we face
- In many countries, corruption is pervasive If this problem is not resolved, an affected country's forests and Forest Service have little hope of success

A way forward?

- A new vision for forests exists, but it is largely outside 'old forestry'
- Foresters and forestry need to be more relevant
- There is a need to move beyond traditional disciplinary confines



Conclusions

- Rapid change in the nature of forestry has occurred and will continue
- Many in the sector have failed to recognize the extent of these changes
- In a post-industrial, post-Newtonian world, our existing knowledge systems, institutions and practices will be continuously challenged

