PROCEEDINGS

FAO Advisory Committee on Paper and Wood Products

Forty-ninth session

Bakubung, South Africa, 10 June 2008

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2008

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FOREWORD

The Advisory Committee on Paper and Wood Products (ACPWP) is a technical statutory body of the Food and Agriculture Organization of the United Nations (FAO). It was originally established in 1959 as the Committee on Pulp and Paper and later, in 1996, merged with the FAO Advisory Committee on Wood-based Panels.

The Committee is FAO's main contact with private forest industry. Its mandate is to advise the FAO Director-General on activities that industries consider could usefully be undertaken by the Organization in the forestry sector. Furthermore, the Committee provides a privileged avenue of communication between FAO and the private sector, ensuring both that activities undertaken by FAO are relevant to the current issues faced by industry and that the information presented is useful.

The Committee is composed of a maximum of 25 members, appointed by the FAO Director-General, based on their experience and knowledge of the industry. Typically, senior executives of companies or associations, the members come from all regions of the world and currently represent over 90 percent of the global pulp and paper industries sector. FAO gratefully acknowledges the contribution made by Committee members who so generously donate their time and their organizations' resources in support of FAO's work.

This year's session took place in Bakubung, Republic of South Africa. The 49th session was opened by the Honourable Minister of Water Affairs and Forestry, Mrs Lindiwe Benedicta Hendricks, and other keynote speakers, who highlighted the links between South Africa's forestry sector, the international paper and wood products industry and the global debate on climate change and its impacts, in particular increasing fossil fuel prices and soaring food prices.

FAO expresses its gratitude to the Government of the Republic of South Africa and to the Paper Manufacturers Association of South Africa (PAMSA) for their most generous invitation and their help in ensuring the success of the meeting.

Wulf Killmann
Director
Forest Products and Industries Division

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ACRONYMS AND ABBREVIATIONS

%	Percent
ACPWP	Advisory Committee on Paper and Wood Products
AF&PA	American Forests and Paper Association
BRACELPA	Brazilian Association for Pulp and Paper
BREFs	Are designed to demonstrate best available techniques:
BAT	Best Available technologies to achieve a high level of protection of the environment as a whole
CDM	Clean Development Mechanism
CEPI	Confederation of European Paper Industries
CIFOR	Center for International Forestry Research
CO_2	Carbon dioxide
COPACEL	Confederation of the French Pulp, Paper and Board and Industry
CPF	Collaborative Partnership on Forests
CSR	Corporate Social Responsibilities
ENGO	Environmental non-governmental organization
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FPAC	Forest Products Association of Canada
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
ha	Hectare
IEA	International Energy Agency
ICFPA	International Council of Forest and Paper Associations
ILO	International Labour Organization
IPPC	European Commission Integrated Pollution Prevention and Control Bureau
ISIC	International Standard Industrial Classification of all Economic Activities
ITTO	International Tropical Timber Organization
IUCN	World Conservation Union
MCPFE	Ministerial Conference on the Protection of Forests in Europe
NGO	Non-governmental organization
PEFC	Pan European Forest Certification
RES	Renewable Energy Sources
SBSTA	Subsidiary Body for Scientific and Technical Advice
SFM	Sustainable forest management
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
WBCSD	World Business Council on Sustainable Development
WWF	World Wildlife Fund

REPORT

The FAO Advisory Committee on Paper and Wood Products held its Forty-ninth Session in Bakubung, South Africa , on 10 June 2008. Mr Avrim Lazar chaired the session, which was attended by 36 participants (see Annex 1) from 20 countries. This report summarizes the main results of the discussions.

Item 1. Opening of the Session and welcome address

Mr Avrim Lazar, Chairman of the Committee, opened the Session and welcomed the Minister of Water Affairs and Forestry of the Republic of South Africa. He then gave the floor to Mr Wulf Killmann, Director, Forest Products and Industries Division, FAO Forestry Department.

Mr Killmann welcomed Her Excellency, Mrs Lindiwe Benedicta Hendricks, Minister of Water Affairs and Forestry, Republic of South Africa and, on behalf the Food and Agriculture Organization of the United Nations (FAO), thanked the participants for coming, many of them from far away, to attend this Forty-Ninth session of the FAO Advisory Committee on Paper and Wood Products.

The Director thanked the hosts, the Government of South Africa, and in particular the South African Department of Water Affairs and Forestry, who had so kindly agreed to hold the meeting in Bakubung. He also thanked Mr Mike Edwards, Chief Executive Officer, Forestry South Africa, and his team for their excellent organization of the meeting in this beautiful location.

Mr Killmann then mentioned that, since the last session, the news has been dominated by three issues - the debate about climate change and its impacts; increasing fossil fuel prices; and soaring food prices. He reminded the meeting that climate change is linked to an increase in intensity and frequency of severe weather events, such as the recent disastrous storm and flooding in Myanmar. At the 13th Conference of Parties of the UNFCCC in Bali in December last year, the international community agreed on the Bali Action Plan, which describes the road forward for negotiations of a post 2012 climate agreement. The negotiation process will consider the inclusion in such an agreement of SFM (Sustainable Forest Management) and reduction of deforestation and forest degradation. This will be a great opportunity for forestry and forest industries. The price for Brent oil has now crossed the $US 140 / barrel mark. This has a severe impact on economies, including on the forest products industry. Lastly, Mr Killmann referred to the past year's significant increase in food prices, due to a variety of causes, amongst them rising fossil fuel prices, food production losses due to weather inclemency, perhaps even climate change, and the conversion of land previously used for food crops to biofuel crops. The previous week, the world community had discussed how to deal with this new challenge, and it was very timely that the industry should take a position on this issue.

Over the past year there had been a drastic increase in food prices. In fact, food prices had not been so high since the mid 1970s.. Wheat, rice and maize prices increased by between 55 and 87 percent over the last 12 months. This has led to an increase in hunger and also in unrest. There are many reasons for this food price increment, such as: rising fossil fuel prices making agricultural inputs more expensive; commodity speculation, the exchange rate of US dollar, food production losses due to weather inclemency (such as the droughts in Australia) and land conversion for biofuels . Mr Killmann said that he would talk more later on about this subject and about the High Level Conference on World Food Security: the challenges of climate change and bioenergy, which took place in Rome the week before the session. In concluding, he mentioned that he looked forward to an intense, open and beneficial discussion and thanked the participants for their attention.

Before ending, Mr Killmann advised the participants, that last year the Committee had lost Mr Ishak from Malaysia and Mr Sadawarte from India and that Mr Mikael Eliasson, Director Setra Group Development and President Setra Building System of Sweden; Mr Masataka Hayama, President of the

Japan Paper Association (JPA); Mr Michael Peter, Executive Director of Forestry South Africa; Mr Ramesh C. Mall, Managing Director of the Emani Paper Mills Limited of India; and Mr Chaovalit Ekabut, President of the SCG Paper Public Company Limited of Thailand have been included in the membership of the ACPWP for the ongoing biennium 2007-2008.

Mr Avrim Lazar, Chairman of the ACPWP, asked Mr Michael Edwards to introduce the Minister of Water Affairs and Forestry of South Africa and invite her to address the ACPWP participants. The Minister welcomed the participants and Mr Killmann to Bakubung and thanked Mr Mike Edwards and staff of the Department. She mentioned that the venue of the meeting, in the Platinum province (North West of South Africa), is the second largest reserve of Platinum in the world. The Minister then referred to the global food crisis, escalating energy costs and water issues which are exacerbated by climate change. She mentioned the importance of the private sector in forest industries and the need to liaise with FAO in tackling the problems being faced. She then highlighted the main issues to be handled during the session, including forestry and climate change; the social contribution of forestry; the role of forests in food security and bioenergy; South Africa's role and contribution to international processes relating to forests, the Million Trees Programme and, most importantly, transformation and growth of the forest sector.

Mr Avrim Lazar thanked the Minister for her speech, which highlighted the real issue - human poverty and its alleviation, the food crisis, and climate change. He reminded the meeting that the South African industry is at forefront of the fight against poverty. Sustainable forestry and good practices are part of the solution to climate change but these issues should not be treated in isolation but should be addressed jointly by the private sector and the local communities, including people living in poverty.

Item 2. Adoption of the provisional agenda

It was suggested to switch items 9 and 10. With this modification, the Agenda was adopted.

Item 3. Forests and timber production in South Africa (including water issues)

Mr Michael Edwards, Executive Director, Forestry South Africa, made a presentation on the South African forestry industry, contrasting the South African political situations before and after 1994.

Before1994, the forestry environment was characterized by unlimited government support (in education, research, and infrastructure); conservation focus, and exclusion of people from the forest. An inward looking focus was intent on self-sufficiency, because of the exclusion from the global economy. Impacts of afforestation were of little concern and environmental and social concerns were not an issue. Land was readily available for planting trees. Politics favoured the privileged.

Since 1994, there has been an outward looking focus intent on globalization, larger forest products companies are very much involved in the international market. There is a highly-regulated operating environment and limited government support. South Africa is subject to global dictates and global competition is the driver of business. Impacts of afforestation are a major concern. Limited land is available for forestry. The focus is on sustainable development and participatory forestry.

South Africa's entire timber production comes from plantations of fast growing exotic tree species. Much of the timber estate is now planted with genetically improved material. High growth rates and high stocking rates produce higher levels of tree stress. S.A. is a semi-arid country with lower than average rainfall. Most plantations are situated in areas of rainfall of less than 1000 mm/p.a with periods of drought being common. Fire damage is severe.

Global trade is increasing in South Africa, hugely escalating threats of importation of undesirable pests and pathogens. There is a lack of biocontrol and monitoring at ports of entry, which could lead to

devastation of the Eucalyptus plantations. Movements of timber and timber products internally are uncontrolled. The pest disease is interrelation of Climate change. It is estimated that at least 50 percent of plantations are affected, and this could results in losses of up to 20,000/p.a..

The forest industry sector in South Africa contributes around 4 percent to manufacturing GDP. In this country, 60 percent of the population lives in rural areas. The entire value chain from forestry employs 170 000 people and the average family size in rural areas is around six. .

Mr Mike Peter, successor of Mr Edwards, then briefed the meeting about water- related issues. He referred to the hydrological studies and water polices of the South African government. World awareness of the impact of forest plantations' impact on water has increased in recent years. It should be understood that plantatiosn regulate the flow and rainfalls. Prior to 1972 there was no regulatory system covering planting and irrigation of trees. The government then introduced the Water Act 1998 which declared forestry to be a stream flow reduction system. Mr Peter also referred to the social, economic and ecological benefits provided by forest industries in South Africa (over 84 percent of the forest planted is certified by the FSC and ISO certification plays an important role).

There is an important environmental lobby in South Africa which engages in much negotiation with the government and the private sector. Environmental NGOs sometime attack parliamentarians or the private sector but the situation is changing because there is now sound evidence that land use is being managed more responsibly..

Mr Peter mentioned that South Africa's drinking water is amongst the top fifth in the world as regards quality. The Water Allocation Programme, which is focused at both social and ecological levels, facilitates people's access to water whilst at the same time contributing to the ecosystem. River water must be kept flowing all time to sustain the ecology of the catchments. During Apartheid, quality drinking water reached only a small population, but since 1994 it reaches at least 11 000 000 people. The Water Act and Water Allocation Reform Programme, which has excellent instruments for addressing the inequity present in the South Africa as result of a legacy of the Apartheid period. However, they are not implemented consistently; a plan of actions and programmes take time. One of the negative impacts of overregulation in forestry in South Africa is that much investment is lost to Mozambique, because the cost of business is so much higher in South Africa.

The chairman thanked the lecturers and invited Mr Killmann to present the Review of actions taken by FAO on the recommendations made at the 48th session of the committee.

Item 4. Review of actions taken by FAO on the recommendations made at the 48th session of the committee

Mr Killmann, the Director of FAO's Forest Products and Industries Division, made a short presentation about follow-up to recommendations made by the Committee to FAO regarding the industry's contribution to sustainable forest management and carbon sequestration. He referred to documentation on the social contribution of forest industries, public perception of forest industries and Ten Frequently Asked Questions about Forests, Deforestation and Forest Degradation, which had been prepared for the meeting. Mr Killmann advised that an Independent External Evaluation of the FAO was being carried out, and that preliminary results indicated that the activities of the ACPWP, had been highlighted as a good example of excellent collaboration between the Organization and the private sector. Mr Killmann mentioned that the new FAO Strategy for Forestry, directly linked to the FAO medium-term plan and programme budget process, is on the web open for comments and he encouraged the Committee to comment on the strategy.

Item 5. Soaring Food Prices and Food Security

Mr Killmann introduced this issue. David Rhodes, Chief Executive, New Zealand Forest Owners Association then presented the New Zealand perspective on biofuels and food security, after which Mrs Donna Harman, President and CEO, American Forest & Paper Association, talked about the United States' climate change & bioenergy policy.

The first presentation mentioned the growing the demand for food and liquid biofuel; almost all basic food commodities have seen their international prices rise significantly over the past two years. The current world population is about 6 billon people and around 850 million do not have enough food to eat. By 2050 the world population will reach 9 billion people, increasing demand for food and competition for land. Climate change will also impact populations in vulnerable areas. Competition for land for production of fuel, fibres, food and fodder for animals, will increase in the future, leading to migration and instability at national and international levels.

Mr David Rhodes made a presentation on forestry biofuel potential in New Zealand and stressed the significant importance of biofuel origin and sustainable production. He mentioned that although biofuel is important, current policies are creating distortions and biofuels are contributing to thefood price crisis. Biofuel strategies that determine land use outcomes need aligning with social strategies and must avoid negative impacts on other sectors

The U.S. climate change & bioenergy policy was presented by Mrs Donna Harman, who mentioned that the AF&PA (American Forest & Paper Association) members have reduced their CO_2 emissions by 14 percent between 2000 and 2006. Nearly 90 percent of the electricity generated at U.S.A. pulp and paper mills is co-generated and fossil fuel use per ton of paper production declined by 56 percent since 1972 and by 9 percent between 2004 and 2006. There are polices and federal regulations that related to CO_2 emission, for example the Transportation Department will raise fuel efficiency standards for cars by 25 percent by 2015. It was stressed that food and energy issues are interconnected and climate change polices must also be considered.

Finally, Ms Elizabeth de Carvalhaes, Executive President, Associação Brasileira de Celulose e Papel (Bracelpa) made a presentation on World Food Security, Planted Forests and Bioenergy in Brazil. Ms Carvalhaes presented an overview of the certified forest area, planted area, agricultural and other areas, mentioning how much Brazil's agricultural productivity has increased over the last 20 years. The main Brazilian agribusiness exports in Brazil are soy, meat, forest products (of which 50% from pulp and paper) and sugar-alcohol complex. This country can be compared with the emerging economies such as China and India; GDP growth in Brazil is growing sustainable and mainly agriculture impacts in this growth. Brazil is a major supplier of food in the emerging economies.

Since the seventies, gasoline in Brazil has been blended with 25% ethanol Sugar cane production does not receive any subsidy from government. This sector directly generates around one million jobs. It was mentioned that 100 countries could supply biofuels to 200 nations, while currently 20 oil producers provide fossil fuels to the rest of the world. Flex Fuel Vehicles (FFV) were introduced on the Brazilian market in March of 2003. These vehicles are designed to be fuelled with gasoline, ethanol or any blend of gasoline with ethanol it is expected that demand for them will increase (assembling vehicles and exporting machinery). The ethanol from cellulose has higher productivity than that from sugar cane but the production cycle is longer. Brazil could be self-sufficient in transportation not using petroleum; the transport industry is ready to invest strongly in alternative sources. This country could be a major player in delivering food to the emerging economies, contributing to the development of renewable fuel and sustainable processes.

Item 6. The image of the forest industry

Reference was made to the paper "The image of the forest industry", which was available amongst the documentation provided to the participants (see papers presented).

Item 7a. Forestry and climate change after Bali

Before the discussion of this item, a video was shown by Mr Killmann, entitled "A convenient truth". The video, which discussed the linkage between forests and climate change, was produced by the U.K. Forestry Commission with the collaboration of FAO and is available in seven languages at the following site: ftp://ext-ftp.fao.org/fo/data/Upload/Convenient_truth/Translated%20Videos/
The Director encouraged participants to order copies of the video and translate it into other different languages if necessary.

Item 7b. Working with Countries to Reduce Deforestation and Forest Degradation: Taking Climate Change Action through Sustainable Forest Management

A paper on a Joint Proposal from A3P (Australian plantation products and paper industry council) and the new Zealand Forest Owners' Association Inc to the ICFPA and invited member organizations was distributed to participants. This is a draft of common positions on climate change, LULUCF and REDD. It was suggested that the paper could be submitted for analysis to FAO's Interdepartmental Working Group on Climate Change with a view to presenting the final version in November 2008 to FAO Conference.

There was some discussion of definitions in the context of REDD (Reduction of Emissions from Deforestation and Forest Degradation). Killmann mentioned that the climate change community is very sensitive as regards definitions. FAO and partners held three meetings to harmonize definitions (in English) in the forestry sector, but the process got blocked over the term "forest degradation". It is hoped to reactivate this process in future. Mr Killmann also mentioned that a workshop on harvested wood products (HWP) will take place in September 2008 in Geneva, organized by FAO, UNECE and the Swedish Government. The results will be presented at the European Forest Week (20-24 October 2008) in Rome. This workshop will be focused between other subjects in the Role of harvested wood products for climate change mitigation. It was noted that as carbon storage each wood product has a different percent of carbon stored.

Item 8. Planted forests in the world

Mr Killmann advised the meeting that FAO is working on this theme and that a Code of Voluntary Guidelines had been finalized and presented during the last COFO. The latest data regarding planted forest is from 2005 and is available on CD Rom . The world's planted forests account for 2 percent of the total forest cover and supply 60 percent of total worldwide industrial roundwood. Its Carbon Sequestration is around 1.6 Giga tons, equivalent to the carbon emissions from deforestation.

Item 9. Summary of country reports, including the social impacts of forest industries

A short presentation on the status of forest industries and main important related issues was introduced by each country (See Annex 2).

Item 10. Recommendations of the Committee to FAO for 2008-2009

The Committee proposed the following recommendations to FAO:

(a) reaffirmed the importance of further strengthening the cooperation between FAO and the private sector through the ACPWP;

(b) requested FAO to work further with the International Council of Forest and Paper Associations on promoting positions for the UNFCCC COP 15 reflecting the contributions of sustainable forest management to climate change mitigation;

(c) requested FAO to keep the private sector informed on further analysis and forecasts on the

evolving relationship between liquid biofuels, food and fibre, and the impacts on forest and forest product sectors;

(d) requested FAO to facilitate private sector involvement in the Global Bioenergy Partnership (GBEP);

(e) recommended FAO to analyze the impacts of forest-based industries' operations on availability and quality of water;

(f) requested FAO to expand the analysis on the contribution of the forest sector to the GDP, including contribution to communities and to individual well-being;

(g) requested FAO to facilitate private sector participation in the World Forestry Congress 2009;

(h) agreed to hold an informal interim meeting in conjunction with the European Forest Week on October 20, 2008 in Rome;

(i) agreed to hold its 50th Session in Brazil during the first week of June, 2009.

Programme, Policy and Financial Implications

The work areas of forests and climate change, forests and water, forests and energy, forests and livelihoods and the land-use linkage between forest, food, and fuel proposed by ACPWP may require additional funds but certainly will be the major themes for the forestry sector and thus may indeed require increased attention.

Item 11. Election of Chairperson

The Chairperson of the 50th Session will continue to be Mr. Avrim Lazar to facilitate activities in view of the large number of recent and upcoming changes of members and participants.

Item 12. Date and place of next session

The Committee proposed to hold its 50th Session in Brazil, tentatively on one of the last four days of May or 1, 2 or 3 June 2009. The preparatory meeting will be on 20 October 2008 in Rome.

PAPERS PRESENTED

Item 4.a. Review of actions taken by FAO on the recommendations made at the 48th session of the committee

Recommendations

At its 48th session in Shanghai and the subsequent meeting in Rome, the ACPWP made the following recommendations to FAO:

1. Highlight the industry's contribution to sustainable forest management and carbon sequestration, in particular:

   1.1 Jointly organize a side event at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP 13), to be held in Nusa Dua, Bali, Indonesia, from 3 to 14 December 2007;

   1.2 Further document the social contribution of the forest products industry;

   The Committee took note that the study on GDP contribution of the forestry sector is being updated. It recommended highlighting not only the economic aspect but also the industry's contribution to people's wellbeing. Wealth and forest industry are strongly related.

   1.3 It was further recommended to produce a brief country report on the impact of the forest industry to people's wellbeing. FAO will produce a set of questions and outline of the report. Title of the report: *Social contribution of the forest industry;*

   1.4 Contribute to clarifying UNFCCC accounting rules for carbon sequestration by forests.

2. Actively promote understanding of the causes of deforestation.

   2.1 This issue is closely related to public perception of the role of the forest industry. The Committee should highlight the main causes of deforestation, which are often related to land use change, in particular to cattle raising and large-scale agriculture;

   2.2 The Committee recommended producing a short paper including the ten most frequently asked questions about the causes of deforestation. Two different versions should be produced: (1) FAQ for journalists and (2) FAQ in a language that farmers and the general public will understand.

3. Continue to work on the nexus of forests and energy, building on the results of the IEA-FAO-ICFPA energy conference in Rome, October 2006.

4. Undertake an analysis of the relationship between water and forestry, in the context of the increasing scarcity of water.

Implementation

1. Highlight the industry's contribution to sustainable forest management and carbon sequestration.

   1.1 ICFPA (which took the lead), FAO, WBCSD and CEPI organized a side event on December 8, 2007, the Forest Day, during UNFCCC COP 13 in Bali, on the theme: *Forests, climate change and the forest industry – The business perspective.*

In spite of the small size of the room the remoteness of the location, the side event was a success. ICFPA, WBCSD, CEPI and FAO also produced and distributed wood and paper fans with the message: *Stay cool- Use wood*. These fans were highly sought after by participants at the conference.

1.2 The report on the GDP contribution of the forest products industry is under preparation, but not yet finished. It is expected to be finalized in September, 2008, and will then be circulated. Countries have been requested to share information on the social contribution of the forest products industry. The secretariat consolidated the information received and backed it up with some data by ILO and FAO. Nevertheless, it must be said that this is a subject where it is difficult to find data and information. The secretariat will continue working on this subject.

1.3 Contribute to clarifying UNFCCC accounting rules for carbon sequestration by forests.

1.3.1 On 20 June 2007, the Executive Secretary of the UNFCCC visited FAO and a number of issues were discussed, including collaboration on forests and climate change. In a meeting between the Executive Secretary of UNFCCC, the Director-General of FAO and Wulf Killmann, Mr de Boer stressed that he saw FAO's role in the work on climate change falling into three areas:

a) adaptation to climate change;
b) bioenergy;
c) forests and climate change.

1.3.2 FAO is working closely with UNFCCC and IPCC on this issue and also with the IPCC. FAO recently produced a background paper on: *FAO datasets on land use, land use change, agriculture and forestry and their applicability for national greenhouse gas reporting.* We also participated in the IPCC Expert meeting on guidance for greenhouse gas inventories of land uses such as agriculture and forestry, which took place in early May in Helsinki. Mr Killmann is also contributing to the NCASI project "*Approach for estimating carbon impacts associated with land use and land-use change*".

2. Actively promote understanding of the causes of deforestation.

2.1 FAO is continuously, and in different forums, clarifying understanding about the causes of deforestation, most lately in a document on the issue of reduced emissions from deforestation and forest degradation (REDD). The document is being prepared by FAO, UNDP and UNEP as a "one UN approach".

Mr Killmann also addressed this issue in his keynote address to the Conference on Plantation Investment, in Singapore from 25-27 March 2008 and at the recent GEF- UNEP day in Nairobi on 11 April 2008.

2.2 A separate document with questions and answers has been prepared, as attached.

3. Continue to work on the nexus of forests and energy, building on the results of the IEA-FAO-ICFPA energy conference in Rome, October 2006.

3.1 On 10 October 2007, UNECE and FAO co-organized in Geneva a Policy Forum on the "*Opportunities and impacts of bio-energy policies and targets on the forest and other sectors"*, at which ICFPA also actively participated through CEPI and AF& PA.

3.2 FAO strongly supports the European Task Force on Wood Availability and Demand, which held its recent 7th meeting at FAO. CEPI is a member of that task force.

3.3 At the recent discussions of the integrated programme of work for the next five years for the UNECE European Timber Committee and the FAO European Forestry Commission, bioenergy took a central role. The task force was commended and requested to continue its work, and it was agreed that an activity on forest sector outlook with particular emphasis on bioenergy should be undertaken.

3.4 FAO finalized a document on the nexus on forests and energy, which has been printed in the six FAO languages and distributed at the High-Level Conference on World Food Security: The Challenges of Climate Change and Bioenergy, from 3-5 June 2008.

4. Undertake an analysis of the relationship between water and forestry, in the context of the increasing scarcity of water.

4.1 An analysis on the nexus of forests and water has been prepared and is presently being reviewed. It is expected to be published in September 2008.

5. Others

5.1 FAO finalized the update of the Global Planted Forest Outlook Survey, based on the most recent data from 2005. A presentation on the results of this study will be made under Agenda item 8.

Item 4.b. Forests, Deforestation and Forest Degradation. Most frequently asked questions

1. How much of the world is under forest?

- Forest area: about 4 billion hectares (3 952 million hectares or about 40 million km²) or 30.3 percent of total land area;
- Forest area per capita: 0.62 hectares;
- More than half of the world's forest area is found in the Russian Federation, Brazil, Canada, United States and China, combined;
- Ten countries account for two-thirds of the global forest cover;
- Sixty-four countries, mostly in North Africa, West Asia and small islands, have less than 10 percent of their total land area forested;
- American Samoa, Federated States of Micronesia, French Guiana, Gabon, Guyana, Palau, Pitcairn, Seychelles, Solomon Islands, Suriname and Turks and Caicos Islands all have more than three quarters of their total land area forested;
- Forty-five countries have more than 50 percent of their total land area forested.

2. Who are the major producers and consumers of forest products?

In 2006 the major producer countries of forest products, as a percentage of global production, were:

- Woodfuel: India (16 percent); China (11 percent); Brazil (7 percent); Ethiopia (5 percent); Democratic Republic of Congo (4 percent); Indonesia (4 percent);
- Industrial roundwood: United States (26 percent); Canada (12 percent); Russian Federation (9 percent); Brazil (6 percent); China (6 percent);
- Sawnwood: United States (22 percent); Canada (14 percent); Germany (6 percent); Brazil (6 percent); Russian Federation (5 percent); Sweden (4 percent);
- Wood-based panels: China (25 percent); United States (17 percent); Canada (7 percent); Germany (7 percent); Brazil (4 percent); Russian Federation (4 percent);
- Pulp for paper: United States (28 percent); Canada (12 percent); China (9 percent); Finland (7 percent); Sweden (6 percent); Brazil (6 percent); Japan (6 percent), Russian Federation (4 percent);
- Paper and paperboard: United States (23 percent); China (16 percent); Japan (8 percent); Germany (6 percent); Canada (5 percent); Finland (4 percent).

In 2006, the major consumer countries of forest products in percentage of global consumption were:

- Industrial roundwood: United States (25 percent); Canada (12 percent); China (8 percent); Brazil (6 percent); Russian Federation (6 percent); Sweden (4 percent); Finland (4 percent);
- Sawnwood: United States (31 percent); Canada (5 percent); Germany (5 percent); Japan (5 percent); Brazil (5 percent); China (4 percent); India (4 percent);
- Wood-based panel: United States (24 percent); China (23 percent); Germany (5 percent); Japan (4 percent); Russian Federation (3 percent);
- Pulp for paper: United States (29 percent); China (13 percent); Canada (7 percent); Japan (7 percent); Finland (5 percent); Sweden (5 percent);

- Paper and paperboard: United States (25 percent); China (17 percent); Japan (8 percent); Germany (6 percent); United Kingdom (3 percent); Italy (3 percent); France (3 percent).

3. What is the contribution of the forest sector to countries' economies?

- Gross value-added in the forestry sector: US$354 billion (2000);
- Global trade in primary wood products: US$186 billion (2005);
- Global roundwood production: 3 503 million cubic meters (2005);
- Countries with the highest contribution of the forestry sector to gross domestic product (GDP): Bhutan, Finland, Malaysia, Baltic States and some African countries;
- Small-scale forest product enterprises are among the top three non-farm rural commercial activities in most countries.

4. How many people live off forests and forestry?

- Globally, over 70 million people live directly off forests;
- Forests contribute considerably to the livelihoods of more than 450 million people;
- Global employment in the formal forestry sector - 13 million people (2000).

5. Do forests contribute to food security?

Forests do contribute directly to food security, for example:

- As food supplements: forest foods provide certain proteins, fats, vitamins and minerals that are not found in many staple crops, and may even stave off hunger and famine when drought, floods or pests and diseases cause crops to fail;
- Half a million pre-school children go blind every year because of vitamin A deficiency. Vitamin A is abundant in many tree foods, such as mango;
- Bushmeat or edible wild mammals, reptiles, birds and insects which live in forests or trees can account for up to 85 percent of the protein intake of people living in or near forests;
- Some 80 percent of the people living in developing countries depend on non-wood forest products, such as fruits and herbs, for their primary health and nutritional needs;
- Natural products are the only source of medicine for 75 to 90 percent of people living in developing countries.

However, forests also provide indirect contributions. For example, they:

- Regulate the water cycle;
- Protect agricultural soils in downhill and down river areas;
- Provide fodder for domesticated animals in silvopastoral systems;
- Provide shade for agricultural crops (e.g. for coffee);
- Provide shade, nitrogen, etc, for agricultural and garden crops in agroforestry systems.

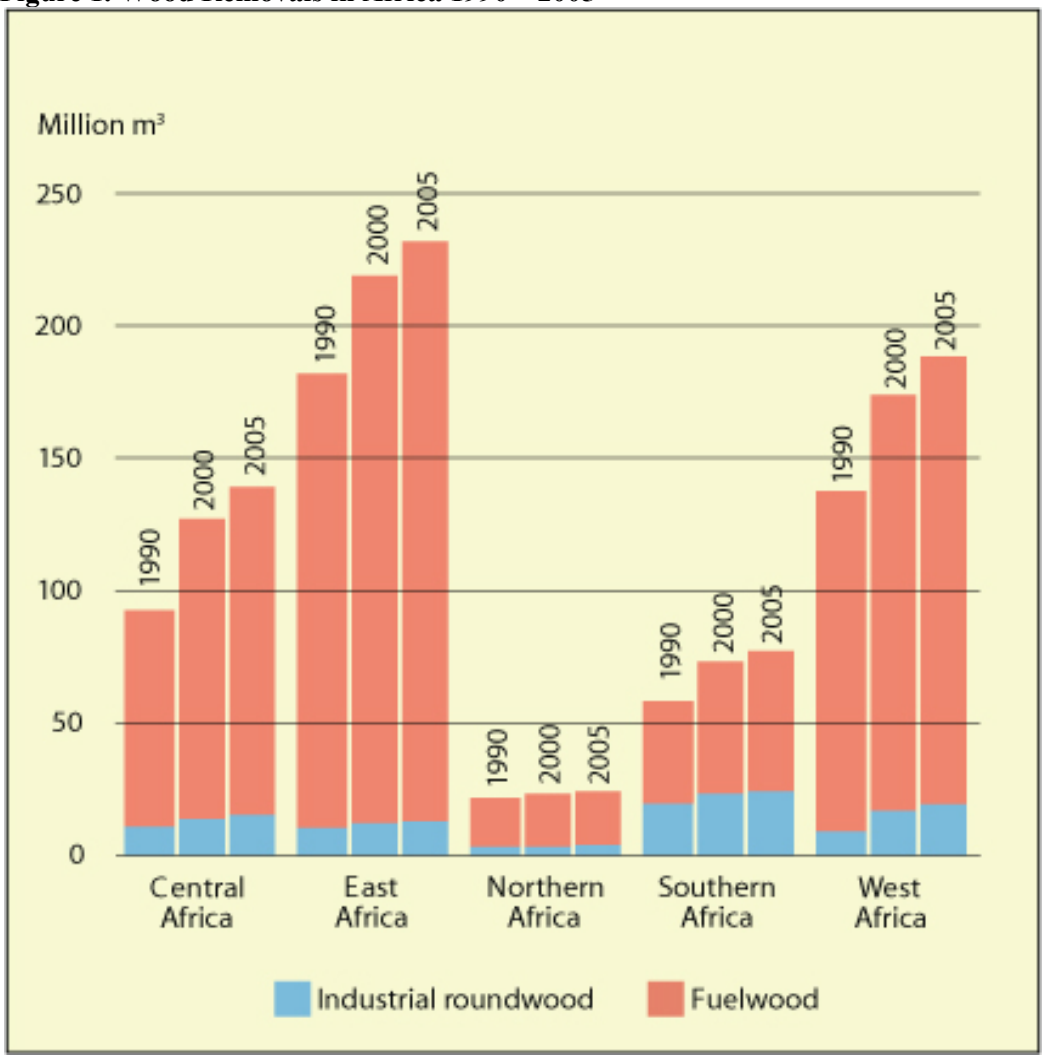
6. What is the role of forests in energy generation?

- Energy from biomass accounts for 12 percent of energy consumed worldwide and up to 90 percent in some developing countries;
- Wood energy accounts for 7 to 9 percent of energy consumed worldwide, and over 80 percent in some developing countries (97 percent in Bhutan ,93 percent in Burundi, 93

percent in the Dominican Republic, 92 percent in Nepal, 80 percent in Paraguay,) (Figure 1);

- Woodfuels account for 60 percent of global forest product consumption;
- More than 2 billion people are dependent on woodfuel for cooking, heating and food preservation; several million people are involved in the production, distribution and sale of fuelwood and charcoal.

Figure 1. Wood Removals in Africa 1990 – 2005



Source: FAO 2007

7. What is the rate of deforestation in the world?

Forests are defined as: land spanning more than 0.5 hectares with trees higher than 5 metres and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land predominantly under agricultural or urban use (FAO, 2006).
Deforestation is defined as the conversion of forests to another land use or the long-term reduction of the tree canopy cover below the minimum 10 percent threshold as defined for forests (FAO, 2000).

- Each year about 13 million hectares of the world's forests are lost due to deforestation, but the rate of net forest loss is slowing down, thanks to new planting and natural expansion of existing forests;

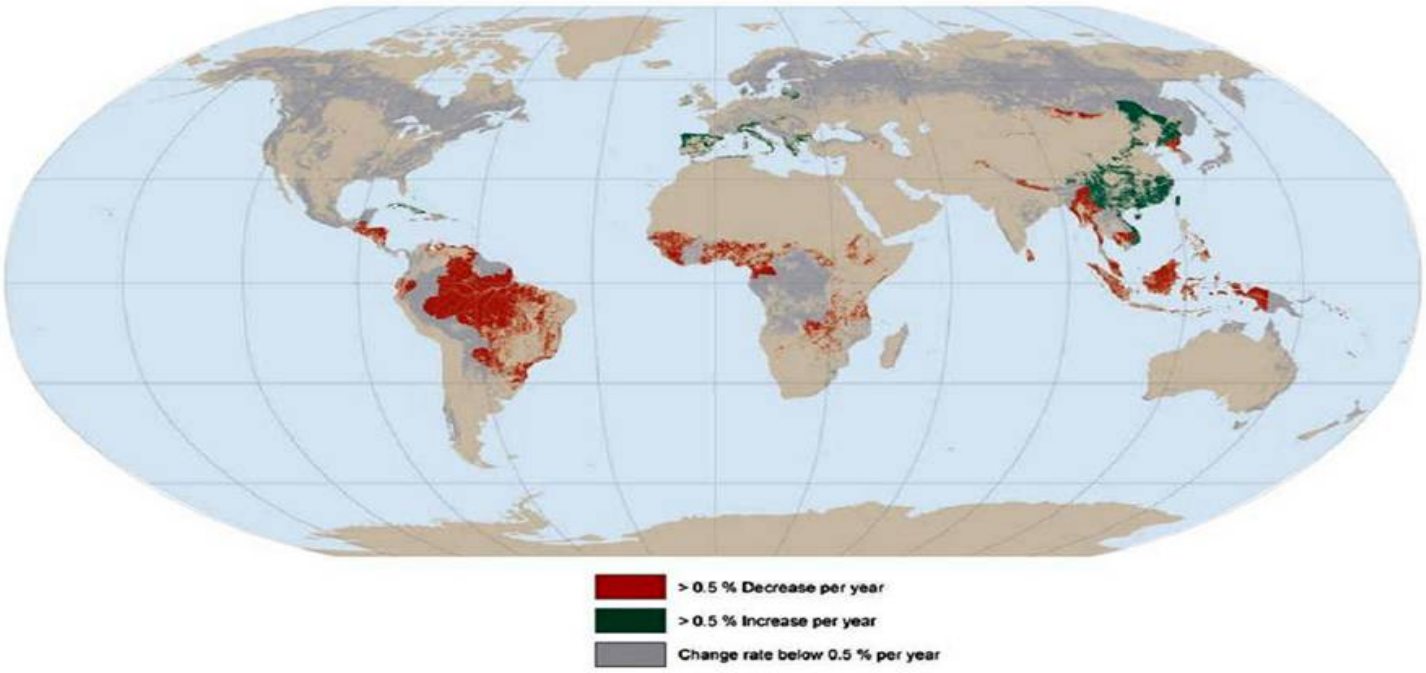
- From 1990 to 2000, the net forest loss was 8.9 million hectares per year;
- From 2000 to 2005, the net forest loss was 7.3 million hectares per year - an area the size of Sierra Leone or Panama and equivalent to 200 km^2 per day;
- Primary forests are lost or modified at a rate of 6 million hectares per year through deforestation or selective logging;
- Plantation forests are established at a rate of 2.8 million hectares per year.

8. How is deforestation distributed across the world?

Major losses (more than 0.5 percent annually) occur in the tropical forests of West and East Africa, South and Central America and, South East Asia (Figure 2).

- The ten countries with the largest net forest loss per year between 2000 and 2005 (Brazil, Indonesia, Sudan, Myanmar, Zambia, United Republic of Tanzania, Nigeria, Democratic Republic of Congo, Zimbabwe, Venezuela (Bolivarian Republic of)) had a combined net forest loss of 8.2 million hectares per year;
- The ten countries with the largest net forest gain per year between 2000 and 2005 (China, Spain, Viet Nam, United States of America, Italy, Chile, Cuba, Bulgaria, France and Portugal) had a combined net forest gain of 5.1 million hectares per year due to afforestation and natural expansion of forests;
- Thirty-seven countries and territories lost 1 percent or more of their forest area each year between 2000 and 2005, while 20 countries gained more than 1 percent per year due to natural expansion of forests and afforestation.

Figure 2: Regions with large net forest area changes during 2000-2005



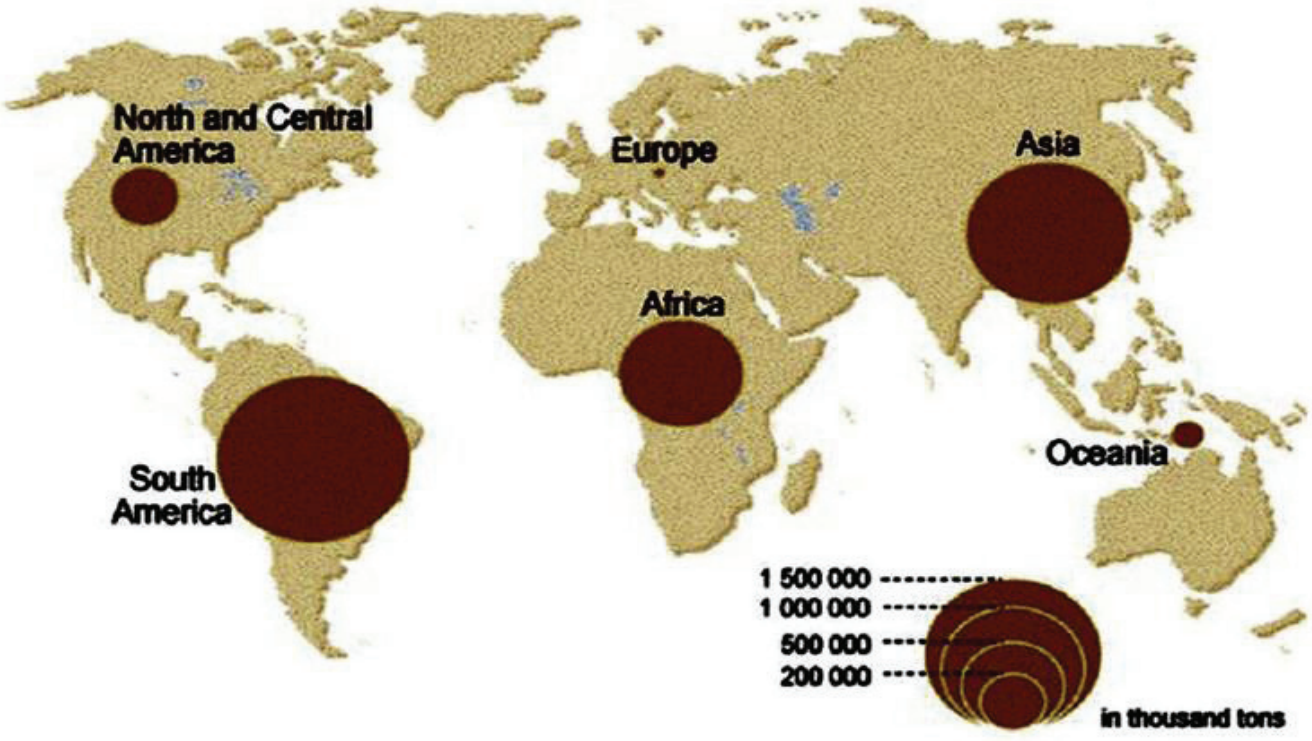
Source: FAO, 2006

9. What are the impacts of this deforestation on climate change?

Since the publication of IPCC's 4th Assessment Report in 2007, unprecedented increases in greenhouse gas emissions are generally accepted to be the major cause for the present climate change.

Amongst these greenhouse gases, carbondioxide (CO_2) is the most important (Figure 3). Deforestation and forest degradation contribute about 17 percent to global greenhouse gas emissions (nearly as much as the transport sector), and over 20 percent to global CO_2 emissions (IPCC, 2007).

Figure 3. CO_2 emissions from Land-use Change



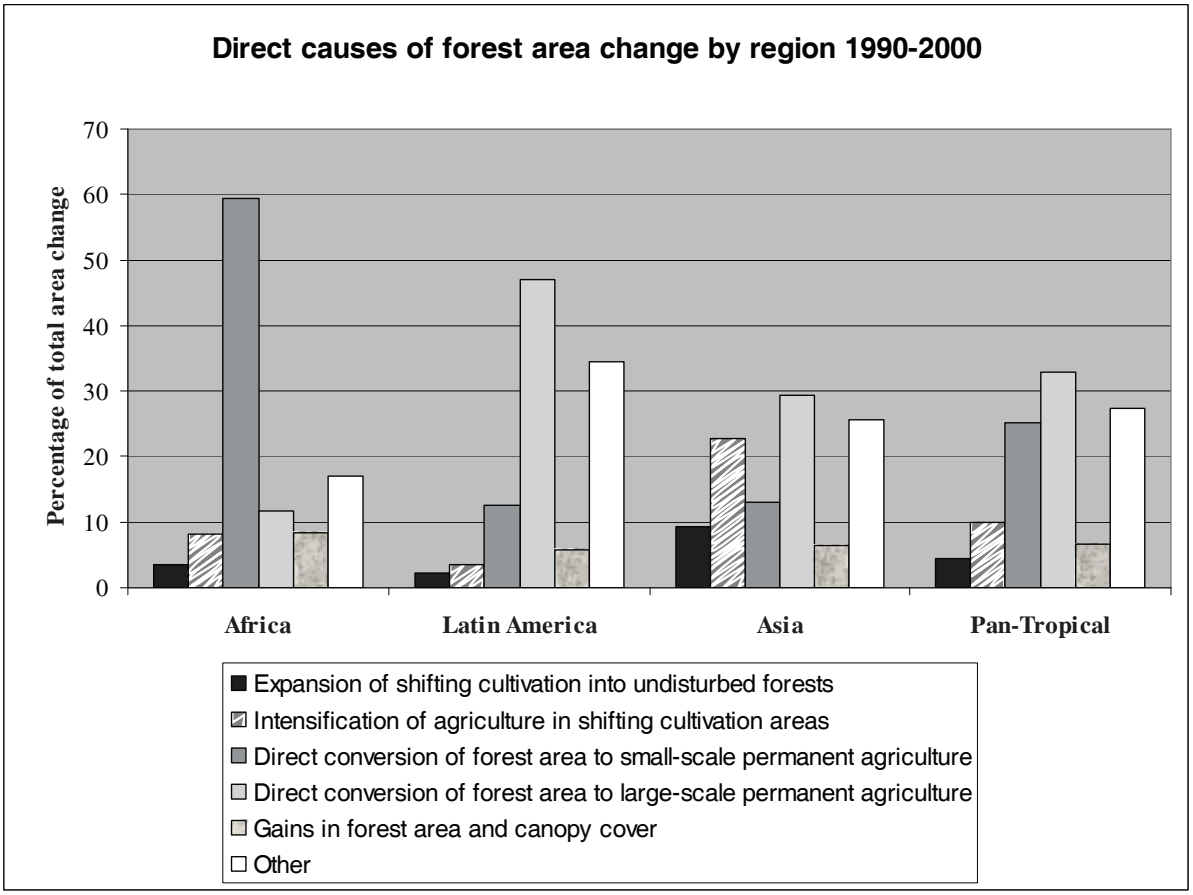
Source: FAO, 2006

10. What are the main causes for deforestation?

Deforestation has direct and indirect causes. As seen above, it is defined as a reduction of tree cover below 10 percent, or a land-use change. Significant forest degradation can take place before crossing the threshold to deforestation. A selective logging operation in the tropics does not usually reduce forest cover to that extent, leading to forest degradation rather than deforestation. However, forest degradation can lead indirectly to deforestation by providing easier access for farmers (Kanninen *et al.*, 2007).

The main driver for deforestation is the conversion of land to agricultural land and to pasture for livestock grazing, Depending on region and location (Figure 4), the cause of deforestation may be land conversion both for subsistence agriculture and for large scale agricultural production. Depending on the source, conversion of forests to agricultural and livestock land accounts for 70 to 90 percent (Kanninen *et al.*, 2007) of global deforestation.

Figure 4. Direct Causes of forest area change by region 1990 – 2000



Source: FAO 2000

Other causes for deforestation are conversion of forests for mining, infrastructure or urban areas.

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Item 5. Soaring Food Prices and Food Security

Background

The recent rapid rise in food prices has had an immediate impact that affecting all countries, but particularly Low-Income Food-Deficit Countries, where it is raising the cost of food imports and exacerbating the balance of trade. It is causing greater hardship for poor families in both developed and developing countries. Hundreds of millions of people in developing countries already face hunger and malnutrition on a daily basis, and many more will be added to their number. Even in wealthy countries, consumers are scaling down on quality and scaling up on quantity so as to contain their food costs.

The current rise in prices also raises fundamental questions about the adequacy of the current global food management system to ensure world food security, and about the long-term sustainability of production and distribution systems on which the world's food supply is currently based. The new

challenges posed by climate change and the emerging market for biofuels make it all the more urgent to begin addressing these long-term strategic issues that will determine whether the world can assure adequate food for its burgeoning population.

The persistence of widespread food insecurity and malnutrition is negatively influencing economic growth where it is most needed and creating conditions that are bound to breed social and economic instability and, potentially, political insecurity worldwide. While some countries have made rapid progress towards reducing hunger, far too many people remain chronically undernourished and many more suffer from various forms of malnutrition. As a result of the current price rises, any gains made so far risk being wiped out, and many more people's lives are at serious risk.

This document provides information about some fundamental issues affecting food security.

The Food Price Crisis[1]

The world is experiencing a dramatic increase in international prices of basic food commodities. The increase has been rapid, sustained, and across all major crops. In the first three months of 2008, international prices reached their highest point, in real terms, in nearly thirty years, for all major food commodities. Projections suggest that prices are likely to remain high for the next few years, and that this will affect most developing countries' markets. The indications are that the observed long-term decline in real prices could come to a halt, signalling a structural change in agricultural commodity markets, though it is too early to be certain. The FAO Food Price Index rose by 8 percent in 2006 and by a further 24 percent in 2007. The index average for the first three months of 2008 was 53 percent higher than for the same period in 2007. Over the same period, the price of vegetable oils rose by 97 percent, grains by 87 percent, dairy products by 58 percent and rice by 46 percent. Sugar and meat prices also rose, but to a lesser extent. There was much greater price volatility than in the past, which has lasted longer than in past high price events. The World Bank estimates that some 100 million people have been pushed into poverty as a result of high prices over the last two years.

Impacts of rising food prices

Balance of payments situations have worsened. Large increases in food and fuel prices threaten macro-economic stability and growth, especially in low-income, net-importing countries, which are especially vulnerable, due to a combination of chronic hunger and dependence on imports of petroleum, and, in many cases, of cereals and oilseeds. The total cost of food imports for developing countries was US$ 254 billion in 2007, some 33 percent higher than 2006, which was already 13 percent higher than 2005. These countries' annual food imports could now cost over twice what they did in 2000. Low-Income Food-Deficit Countries are expected to face cereal import costs in the 2007/08 that are 56 percent higher than the previous marketing year. Africa is particularly affected. In some poor countries, the increased costs lead to a substantial deterioration in their current accounts, sometimes by over 3 percent of GDP in a year. A negative balance of payments places a heavy burden on developing countries, as higher food and energy prices compound existing problems of under-nourishment and further reduce the availability of funds for essential investments.

Household food insecurity and malnutrition have been aggravated. Rising prices are bound to deepen the already unacceptable level of food deprivation suffered by 854 million people (SOFI, 2006), and risk adding many more millions to their numbers. The impact of domestic food inflation on food security in developing countries, where food represents over half of consumer spending and as much as 70-80 percent of expenditure by low-income families, is severe. Malnutrition is worsened, when the poor are unable to afford higher quality foods, including meat, dairy products and vegetables. The impact of soaring food prices on households depends crucially on their position in agricultural output food markets as producers and consumers: taking an unweighted average across countries, only 23

[1] A detailed analysis is available in *Soaring food prices: the need for international action* (HLC/08/INF/1)

percent of all households and 31 percent of rural households are net food sellers, indicating that a majority of households are net buyers of staple foods: this means that the majority of the poor stand to lose from rising prices.

Agricultural production, for net exporting countries and net-sales households, will usually benefit from rising prices. They can raise incomes, induce an expansion in production, and encourage additional investment in productive assets. For this to be the case, price rises must be allowed to reach farmers, and they must have confidence that high prices will continue in the medium term. The current price rise should therefore trigger a spontaneous growth in world food production, in both developed and developing countries, and provide a unique opportunity to re-launch agricultural investment and increase agricultural productivity in developing countries. The risk, however, is that this stimulus will be dampened if governments adopt policies that unduly lower prices, in order to protect consumers from hunger and malnutrition, by measures such as the removal of import tariffs, export restrictions, or the sale at low prices of government-owned food stocks. Rising energy and input prices will also dampen production responses, if higher farm-gate prices do not compensate for them.

Factors behind the food price crisis

Supply scarcity. There were production falls in cereals in some major exporting countries, by 4 percent in 2005 and 7 percent in 2006, though there was an estimated 5 percent increase in cereal output in 2007, at the expense of a decline in oilseed output. Most of this decrease is the result of adverse weather in major producing countries but some can be attributed to long-term declines in the profitability of farming, given a falling trend in food prices that is only now being reversed. Climate change (rising temperatures) and climate variability (droughts, floods) are expected to exacerbate food supply instability.

Food stocks decline. A growing imbalance between world food output and a progressive rise in food demand due to a growing world population and a rise in average disposable income levels, combined with a reduction in the size of publicly owned reserves, has reduced world stock levels by 3.4 percent yearly since the last high price event in 1995. World stocks are now at the lowest level since the 1970s, at an estimated 18.8 percent of annual utilization[2]. By the end of the 2008 main production seasons, they are expected to decline by a further 5 percent.

*High energy price*s. Increasing fuel costs (which have more than tripled since 2003) have fed through to increases in the costs of agricultural inputs (particularly some fertilizers, which rose over 160 percent in the first two months of 2008, compared to a year earlier), transport and farm machinery operations. Freight rates doubled in the year up to February 2007, adding to food import costs.

Biofuel demand. A new factor has been the rapidly expanding use of agricultural commodities for the production of liquid biofuels. The rising demand for maize for bioethanol production and rapeseed for biodiesel has been the principal new factor behind rising food prices. Increased plantings of individual crops for biofuel leads a reduction in planting of other crops, and to price rises in these. Increased conversion of tropical forests to oil palm plantations is being driven by high demand for palm oil for biofuel. This results in greenhouse gas emissions, particularly when the draining of peat swamp forests is involved.

Speculative transactions. The abundance of liquidity among certain countries, matched with a collapse in other formerly attractive areas of investment, low interest rates and high petroleum prices, made agriculture-based derivative markets a magnet for speculators looking to spread their risk and pursue more lucrative returns. This influx of liquidity seems to have affected the decisions of farmers, traders and processors of agricultural commodities, thus contributing to price volatility.

[2] This has severely reduced the availability of food for use by WFP in emergency activities, from 15 million tons in 1999 to 7 million tons in 2006.

Exchange rate swings. The decline of the US dollar, in which most agricultural commodities are quoted, has had critical effects in agricultural markets and trade patterns. Short-term policy responses by Governments, in banning or taxing exports, have exacerbated market volatility.

The way forward

Food security in its four dimensions food availability, food accessibility, food stability and food utilization will be further affected by the impacts of climate change. The nexus of food security, climate change, and bioenergy will be discussed by world leaders at the High Level Conference on World Food Security: The Challenges of Climate Change and Bioenergy (http://www.fao.org/foodclimate/) which will be hosted on June 3- 5 by FAO. At that meeting the international community is expected to come up with some suggestions for the way forward.

The 49th session of the ACPWP will be briefed on the results of the High Level Conference.

Item 6. The image of the forest industry

EXECUTIVE SUMMARY

This summary is based on the paper "Public Perception of Forestry Industry and Environment", which was presented at the 48th session of the ACPWP in Shanghai, China on 6 June 2007 under item 8. A revised version was prepared early in 2008 and includes additional information and recommendations.

WHAT IS IMAGE?

"Image" describes a sentiment, picture or instinctive impression of a certain subject, a person, an organization, a product or an industry. An image can be negative or positive and tends to stabilize over time, but is also subject to dynamic changes.

"Image" is a keystone of successful marketing, be it of a product or of whole industries. Positive image requires permanent maintenance and periodical improvement by image campaigns. Once the image of a product, a company or an industry is damaged, for whatever reason, it is very difficult to rebuild public trust and a good image.

In common with "image", the term "perception", which was used in the previous paper at the 48th session, expresses a belief or opinion that one holds as a result of realizing or noticing something, especially something which is perhaps not obvious to other people.

FACTS ARE FACTS, BUT PERCEPTION IS REALITY

Over recent decades, discussions about the causes of deforestation and ecological risks have taken place in many fora. Some environmental groups claim that the forest products industry is one of the sectors most responsible for high deforestation rates, particularly in tropical countries. Press articles, reports and other documentary material directly link environmental risks with the forest products industry. Therefore, the public perception is that the more paper or wood products are consumed, the more deforestation is going to take place. This conclusion is a simplification and incorrect, but easily believed by a majority of people. The substitute product industries (metals, plastics or cement) profit from these negative perceptions and use them to gain market shares. Public perception and wood competition work here in concert and have a negative impact on the forest products industry, even though wood and paper products are ever more frequently certified as originating from sustainably managed forests or plantations.

To date, the forest products industry has not been very successful in communicating with the public about their efforts to conserve forest resources and use them sustainably, not only conserving existing resources, but also rehabilitating degraded lands, converting them into forests or increasingly making use of recycled resources.

There is a need to correct this public perception. The forest industry sector is aware of this and corporate publicity strategies have been developed accordingly.

Objective

The aim of this note is to provide an understanding of the communication strategy used by forest industry stakeholders and of the current public perception of the relationship that exists between forestry industry and the environment. The paper reviews public perception of deforestation and environmental risks and recommends further steps required to improve the image of the forest industry.

THE IMAGE OF THE FOREST PRODUCTS INDUSTRY

Consumers have been on "red alert" in recent years. They are highly critical of how wood is being produced across the globe. Bridging the gap between public perception and the reality of the wood chain is a major challenge for industries, governments and politicians. Forest industries, environmental groups, consumers, the media, policy makers and others can work together to close this gap.

Questions about how wood is grown, transported and marketed need to receive transparent and substantive answers because consumers are highly critical of the ways in which wood is produced, mostly believing that its production is the root cause of deforestation in many tropical forest countries.

STRENGTHS AND POSITIVE PERCEPTIONS

The pulp and paper industry is in the unique position of being able to rely on its own internally-generated fuels from renewable biomass sources for more than half of its energy requirements. Wood residues and black liquor are carbon neutral. The industry is pursuing the concept of "closed cycle" operations in the bleaching cycle, in order to minimise liquid and gaseous emissions. This industry plays an important role in sustainable development because its chief raw material - wood fibre - is renewable. The industry provides an example of how a resource can be managed to provide a sustained supply to meet the current and future needs of society. In the U.S.A., the standard practice of using bark, wood waste and black liquor as fuel eliminates about 54 percent of the demand for fossil fuel in the forest products industry as a whole, including integrated pulp and paper and non-integrated mills.

With the increasing worldwide concern about climate change, governments are beginning to implement policies to increase use of biofuels, including wood. European Union Member States are introducing policies so as to achieve the new EU target of 20percent renewable energy by 2020, with consequences for the forest sector, both positive and negative, depending on viewpoints.

The entire wood supply chain is involved in development and implementation of appropriate policies for promoting renewable energy sources (RES). Energy, climate change and food security are amongst the hottest topics on the global political agenda in 2008. Fuel prices are rocketing; concerns are raised about energy security in the regions, and the debate on climate change and food security is gaining momentum. This is prompting widespread discussions on renewable energy sources (RES), placing the pulp and paper industry firmly on centre stage as the foremost industrial generator and user of RES in Europe. With the increasing competition in Europe for wood fibre from the paper and pulp sector, the panel sector and the energy sector, CEPI is concerned about market distortions caused by subsidies and the need for greater wood mobilization.

Conversion of forest resources to wood and paper products creates four times the added value of simply burning wood fibre for energy, in addition to six times more jobs.
Wood is the most renewable and sustainable of the major building materials. When comparing the environmental effects of common building materials, wood has the least impact on total energy use, greenhouse gases, air and water pollution and solid waste.

WEAKNESSES AND NEGATIVE PERCEPTIONS

Some environmental groups try to convince the public that they contribute to forest loss when using wood. This widespread assumption is misleading. European forest area is constantly growing; in the case of North America's forests, there is about the same amount of forest cover today as there was 100 years ago, even though the wood consumption per capita is higher than in any other region in the world (Moore P., 2002).

Unfortunately, illegal logging can be a profitable activity, both for the producer's and consumers, to meet the increasing demand for timber in Europe, North America and Northeast Asia. Forest industry is seen by many observers as a source of substantial risk for ecology and legality.

Some environmental NGOs consider that forest plantations are not "real" forest. Forest plantations have in some countries substituted natural forests, or their establishment has caused local populations to move to other areas, often connected lands-use change and deforestation at the new location. They also perceive forest plantations, as monocultural deserts, which threaten the biodiversity and causes damage to soil and water sources as well. Another issue is the growing recognition of indigenous peoples' rights. Increasingly, the public is also questioning conventional industrial practices and their negative environmental impacts. Various actors have translated these concerns into a variety of protests against forestry operations.

Plantations and monocultures are controversial as regards their environmental impacts, e.g. potential lack of biodiversity, occasional use of non-native species and fertilization. Hence, certification of large-scale forest plantations, although increasingly taken up by the main certifiers, is a complex issue. Management of natural forests and forest plantations in tropical regions in the world are of particular interest for certification activities. The wood of fast-growing species such as eucalyptus, pine, bamboo, or hybrid poplar is in demand by both the bioenergy sector and the wood and paper processing industry. Forest plantations are seen as a major contributor to meeting predicted future high demand for forest resources (Kraxner,2007b), already in 2005 they covered about 60 percent of the global industrial roundwood consumed (FAO, 2008).[3]

OPPORTUNITIES

Forest certification was originally introduced to promote sustainable forest management and to reward good forest practices. In later years, social and legal aspects were added to the environmental prescriptions of forest certification. Signing up to "responsible environmental stewardship" aiming to "preserve forest habitats for future generations" and "preserve life through the protection of wildlife habitats" will certainly broaden the acceptance of industrial practices and products.
An important instrument to address negative perceptions is education. Numerous polls over the past decades have indicated consumers'growing environmental awareness. These polls, taken by Gallup, Wirthlin, Roper, and others, present sobering conclusions:

- loss of habitat and species is a concern, including the disappearance of forest cover at an alarming rate;

[3] Page 22 http://www.unece.org/trade/timber/docs/fpama/2007/fpamr2007.pdf

- the environment is so important that continuing improvement must be made regardless of cost;
- more government regulation will provide a better environment.

It is readily apparent from the above that achieving public acceptance is essential to protection of our raw material source, the forest. Public acceptance, or the lack of it, will define what products we make and how we operate our mills. (Baldwin, Richard F. 2004).

THREATS

A worst case scenario for both the forestry sector in general and the paper and wood industry specifically demonstrates the case of a company operating in South East Asia. Besides unsustainable investments in infrastructure and wood resources from illegal logging, the resulting products are also illegally traded and marketed, jeopardizing undisturbed operations of the forestry and wood industry in general, because of the total lack of acceptance of these practices by the end consumers and the public. Needless to say, these poor practices are rejected by the majority of the industry.

"Logging companies promise us wonders: work, schools, hospitals, but actually, they seem to be only interested in their own short term profits. What will happen when our forests have been emptied? They will leave and we'll be the ones left with damaged roads, schools with no roofs and hospitals without medicine." (Pasteur Matthieu Yela Bonketo, CEDEN[4], Congo)

Certainly it could also be asked, why governments do not in first place fulfil their responsibility to provide their population with roads, schools and hospitals, and instead leave it to the private sector? According to the Global Forest Watch, nearly ¾ of the rainforests in a South East Asian country have now been destroyed. It has been estimated that 40 percent of the wood consumed by the local pulp and paper industry is likely to have come from illegal sources. Friends of the Earth claim that paper of one of the companies accused of illegal acts is in widespread use in the United Kingdom, anonymously and with the support of British banks.

All this reflects not only in the image of the paper industry, but of forestry as a whole. It does not help much to complain about other industries like the steel, concrete, plastics or oil industries, which are based on non renewable resources and involve heavy energy input to manufacture and use their products, thus contributing significantly to greenhouse gas emissions.

It seems to be a contradiction, that one of the few industry sectors depending on renewable resources and on a significantly high amount of recycled material is blamed most by consumers and the public for operating in an irresponsible and unsustainable manner. It is a public belief and perception (or perhaps rather a dream), that forests should be kept dominantly untouched or only slightly used. Only in a very few countries is public opinion of the forest industry friendly and based on facts.

Once the image of a product, a company or an industry has been damaged, for whatever reason, it is very difficult to rebuild public trust and a good image.

RECOMMENDATIONS

Government, legislators, forestry companies, local actors and consumers of forest products and services all need to work together to ensure the long-term integrity of the world's forests, which deliver such a wide range of goods and services to society, both locally and globally. It is critical for producers and importers of timber to move their business to the forefront of sustainability by

[4] Congolese NGO active in Equateur province

endorsing socially and environmentally responsible practices. Such statements by leading companies and their CEOs represent a significant step forward. [5]

Sustainable forest management (SFM) is often called into doubt by the public and this particularly affects the image of forestry. The idea that certain sectors of the industry are highly polluting is generally accepted (in particular the pulp and printing industries). However, efforts to improve this should be based on mutual trust, collaborative learning, mutual recognition, communication strategy and constructive co-operation among industries people, stakeholders and actors from the forestry sector.

Environmental sustainability is both an issue for producers and consumers. Companies that do not adequately address environmental challenges could face limits on growth and suffer serious, negative consequences for their reputations. Companies are now expected to provide an "environmental pedigree" for their products, detailing the supply chain from the tree to the final consumer product. They are also expected to communicate this information to their stakeholders, for example through a sustainability or corporate social responsibility report.
Forestry industries should work cooperatively towards their collective goal of achieving sustainable forestry at a global level. Through a series of cross-country public activities, they should communicate and disseminate their values and identify strategic directions, objectives, and actions required to further advance this goal. It is important to communicate to the public the fundamentally important role the industry has in the economy and in society at the national, provincial and even local level, both now and in the foreseeable future. Communications messages need to stress both the current strengths of the industry and address the perceived weaknesses, in terms of resource management, environmental performance and the use of advanced technology. The existing gap in knowledge, belief, attitudes and action of forestry industry has generated the need for strategic communication.
Strategic, professional communication requires:

- Relevance: - focus on the people, - get the people‘s attention, talk about things that are relevant to them; - adapt the message or delivery to the audience and adapt it over time (e.g. societal evolution);
- Consistency: - ensure consistency of the message within an organization; - make the message consistent with organisation’s image (and vice versa);
- Clarity: - use a language that people understand; - use simple messages and images; - talk to people and not for people;
- Continuity: - develop a long-term perspective, - repeat action over time; - ensure sustainability of messages and actions;
- Honesty: - no propaganda; - give the whole picture; - admit mistakes;
- Reliability: - base your information on sound knowledge; - keep to your promises, policies, plans; - do what the people expect from you;
- Openness and transparency: - give as much information as necessary, as quickly as possible;
- Listening and learning: - listen to the audience and learn from the process; - interact with your public; - know your audience and listen to its concerns, (raising awareness of forests and forestry, Report of the FAO/ECE/ILO team of Specialists on Participation in Forestry and the FAO/ECE Forest Communicators Network, 2003), (G. Jansen, EFI. 2005).

Some suggestions for better communication:

- UNEP guidebook on producing effective environmental campaigns;
- Best practices in Forest Communication – European Forest Institute;
- A recent study in the US shows that the concept of renewability related to forests is not well-received. The concept of recycling and replanting is much more positive and likely to offset the negative perception of forestry.

[5] Adapted from GLOBE International

All strategic communication planning should involve some variation on these steps:

- Identify the problem and determine whether communication should be part of the intervention;
- Identify the audience for the communication programme and determine the best ways to reach them;
- Develop and test communication concepts, messages, and materials amongst representatives of the target audiences;
- Implement the forestry communication programme based on results of the testing;
- Assess how effectively the messages reached the target audience and modify the communication programme if necessary.

Target Groups

- Schools: Youth initiatives. Special attention to attractive teaching materials (DVDs, internet) and by visits to forests;
- Media;
- Architects and builders: organizing competitions for constructing building with wood, etc.;
- Universities;
- NGOs.

Messages

- Forest sector should identify joint messages or joint interests to fuel message;
- Forest sector are starting to use simple messages that evoke positive images: "More wood is growing than is being cut", "Wood is recyclable";
- Visual methods are needed to convince the public; simple slogans are very useful, something NGOs have understood already for a long time.

Responsibilities and cooperation in communication

Interested parties have undertaken standard polling to clarify public attitudes towards forest industry activities, but little if any research has been conducted about the underlying factors that shape public perceptions of ecological impacts from these activities. A clearer understanding of the fundamental influences shaping lay perceptions and differences between lay and expert views would be helpful in many contexts: predicting and diagnosing conflicts about forestry practices, designing risk communication efforts regarding ecological impacts associated with forestry, and clarifying the public values that should be considered in making ecological risk management decisions (McDaniel *et al*., 1997).

A full range of suggestions for better communication can be found in the paper "Public Perception of Forest Industry and Environment".

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Item 7a. Forestry and climate change after Bali

Presented by Mr. Wulf Killmann, Director, Forest Products and Industries Division, Forestry Department, FAO, Rome

Background

The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), released in 2007, indicates that in the 1990s nearly one fifth of greenhouse gas emissions resulted from land-use change, primarily deforestation. This awareness has raised the prominence of forest conservation and sustainable forest management in global climate change discussions, and in particular in recent negotiations under the United Nations Framework Convention on Climate Change (UNFCCC).

The United Nations Climate Change Conference, which included sessions of the Conference of the Parties (COP 13) to UNFCCC, its subsidiary bodies for Scientific and Technological Advice (SBSTA) and for Implementation (SBI), and the Meeting of the Parties to the Kyoto Protocol (MoP KP), was held in Bali, Indonesia, from 3 to 14 December 2007. The combined meetings drew more than 10 000 participants. The role of forests was discussed intensively. COP 13 culminated in the adoption of the Bali Action Plan, which outlines actions to 2012 and beyond.

Forest relevant decisions

The Bali Action Plan (http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf) specified an area for action related to forests: "Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries".

The COP also adopted a specific decision on reducing emissions from deforestation and forest degradation (REDD), which emphasized the urgency of taking further meaningful action to reduce emissions from deforestation and forest degradation in developing countries. Parties were encouraged to explore a range of actions to address the drivers of deforestation, including through demonstration activities. The UNFCCC Subsidiary Body for Scientific and Technical Advice (SBSTA) is requested to undertake a programme of work on methodological issues related to policy approaches and positive incentives.

Furthermore, the COP adopted a decision revising the limit for small-scale afforestation and reforestation project activities under the Clean Development Mechanism (CDM) – an effort to stimulate more small-scale projects of this type. The decision increases the upper limit of annual greenhouse gas removals eligible for emission reduction credits from 8 to 16 kilometres.

The conference also approved an adaptation fund to strengthen the resilience of poor and vulnerable people and countries and help them cope with the effects of climate change. The fund is intended to finance adaptation projects by, *inter alia*, improving water supplies for drought-prone areas and conservation and restoration of mangroves for coastal protection. The fund will be administered by the Global Environment Facility and overseen by representatives from both industrialised and non-industrialised countries. Funding will come from a two percent levy on revenues, generated by the CDM, and thus will not depend on aid budgets.

Forest Day

To draw attention to forest issues and inform the discussions related to forests under negotiation at COP 13, on 8 December 2007, the Center for International Forestry Research (CIFOR) organised a Forest Day which was co-hosted by the partners of the Collaborative Partnership on Forests (CPF).

Four main sessions addressed methodological challenges in estimating forest carbon; market and governance; equity versus efficiency; and adaptation. In addition, 25 side events focused on diverse climate-change related topics, including carbon emission abatement costs from reduced deforestation; the future of the land-use sector in carbon markets; funding for REDD; biofuels for climate change mitigation; and national experiences in baseline analysis of deforestation. Forest Day was attended by more than 800 people, including scientists, policy-makers and representatives of intergovernmental and non-governmental organisations. Forest industry, through ICFPA, organized a side event on Forest Day, jointly with FAO and other partners.

CPF presented key recommendations to the Executive Secretary of UNFCCC related to the role of forests in combating climate change, including the need for:

- addressing the drivers of deforestation, including those beyond the forest sector, for the success of mechanisms based on REDD;
- a combination of market and governance-based approaches;
- simple mechanisms with low transaction costs;
- clarified land rights and legal rights to carbon to ensure equity in the distribution of benefits from REDD;
- immediate adaptation focused on the most vulnerable, including forest-dependent people.

Initiatives launched in support of reducing emissions from deforestation and forest degradation

The World Bank launched the Forest Carbon Partnership Facility (FCPF), a ten-year initiative to establish a forest carbon market that economically favours forest conservation and benefits developing countries. Nine industrialised countries have pledged US$ 155 million to start. Currently, developing countries cannot sell carbon credits from avoided deforestation or degradation; however, FCPF will support pilot efforts intended to help inform related decisions for the post 2012 climate change regime and for a potential carbon market mechanism.

Also at Bali, the Government of Norway announced that it is ready to provide funding of 3 billion Kroner (about US$ 570 million) per year over a five-year period to support REDD efforts.

It is important to make use of the window of opportunity offered by the Bali Action Plan to the forestry sector. Two complementing initiatives are at present under way, one process led by The Forest Dialogue, and another by the Collaborative Partnership on Forests, to develop common positions on this issue for the forestry sector and to ensure that our voice will be heard.

Item 7b. Working with Countries to Reduce Deforestation and Forest Degradation: Taking Climate Change Action through Sustainable Forest Management

1. BACKGROUND

The United Nations Framework Convention on Climate Change (UNFCCC), at its thirteen session of the Conference of the Parties (COP13) held in Bali in December 2007, adopted a decision on reducing emissions from deforestation in developing countries. The decision invites Parties to further strengthen and support ongoing efforts to reduce emissions from deforestation and forest degradation (REDD) on a voluntary basis, including actions related to assessing and monitoring emissions from deforestation and forest degradation and undertaking demonstration activities to address the drivers of deforestation relevant to their national circumstances. COP 13 also adopted a decision on the Bali Action Plan (1/CP.13) for the negotiations that will take place over the next two years related to the post 2012 climate change regime. including "policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries, the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries."

Countries, in many cases with assistance from the international community, have been trying for the past two or more decades to reduce unplanned deforestation, stem forest degradation and implement sustainable forest management. Despite some success stories, the challenges have proven to be considerable. Tropical forests are continuing to disappear at an alarming rate. Between 1990 and 2005 an average of 13 million hectares per year were lost, mainly in tropical countries. The underlying causes of deforestation vary from country to country and even within a country and are often complex in nature. FAO data highlight major causes by region: the primary cause of deforestation in Latin America was a conversion of forests to large scale permanent agriculture, in Africa by conversion to small scale permanent agriculture and in Asia conversion of forests to large scale permanent agriculture was also a main factor, but there was a mix of other direct causes. The underlying causes are often even more intractable, ranging from lack of good governance, non conducive land tenure systems and weak law enforcement, to ineffective capture of the values of forests and inequitable sharing of the benefits, to poverty and greed. Solutions need to be tailor-made to the environmental and socio-economic conditions of each country and their institutional capacity.

2. FAO SUPPORT TO COUNTRIES IN SUSTAINABLE FOREST MANAGEMENT

Positive incentives for reducing greenhouse gas emissions from deforestation and forest degradation[6] (REDD) may provide crucial impetus for implementing sustainable forest management[7] (SFM) and help stem the loss and degradation of forests and their ecosystem services. Efforts around the world to advance towards SFM provides a wealth of knowledge, experience, best practice guidance, tools, mechanisms and partnerships that can be applied to meeting climate change challenges, including REDD. Using SFM as an overall framework, climate change issues can be addressed in an integrated way. Mitigation and adaptation efforts should provide synergies with other local and national objectives of forest management and with international commitments made on forests (e.g. in UNFF, CBD, UNCCD).

Building on its experience over the past 60 years, FAO is supporting sustainable forest management worldwide through a comprehensive programme covering aspects of forest management and conservation, environmental and economic aspects of forest utilization, and policy and institutions. FAO provides information on all aspects of SFM, direct technical support to countries through normative and field programme activities, develops best practice guidelines and technical tools, strengthens country capacity, catalyzes regional and international cooperation, and serves as a neutral forum. It works directly with countries, with sub-regional, regional and international processes; and through many partnerships and collaborative programmes. Activities particularly relevant to REDD and FAO mechanisms and structures available to facilitate REDD readiness programmes are described below.

Strengthening forest policy frameworks: national forest programmes

FAO facilitates development and implementation of national forest programmes (nfps) in 58 countries and with three sub-regional organizations. Nfps are a commonly agreed framework for planning and implementation of forestry activities in pursuit of SFM at the country level. They seek to foster inter-sectoral coordination and complement broader development goals. Nfps are an ideal vehicle for formulating climate change related forestry strategies, including for REDD. FAO helps countries in the development and implementation of nfps, including capacity building and the formulation of appropriate policy, legal and regulatory frameworks. This is done through FAO's regular programme, trust funds and through the National Forest Programme Facility, a multi-partner mechanism.

[6] In the context of REDD, forest degradation constitutes a reduction in the carbon content of a forest or reduction in the capacity of the forest to sequester and store carbon.

[7] Sustainable forest management (also including protected area management) addresses social, environmental and economic aspects and benefits of forest management and related needs of stakeholders to leverage sustainable development. The concept embraces on-site management as well as policy and institutional aspects of forests and forestry.

Global and regional sector outlook studies

FAO in collaboration with its member countries and other institutions have implemented a series of global and regional forest sector outlook studies, assessing the drivers of change and the long term scenarios of development. While the global outlook study forecasts the demand for wood and wood products, the regional outlook studies analyses region-specific issues relating to the future trajectories of sustainable forest management and what may happen in the context of the larger changes. Key factors like demographic, economic, political, institutional, environmental and technological changes are analysed, alternative scenarios identified and the implications of the different scenarios on the forests and forestry outlined. These global and regional outlook studies along with the various background documents could provide a good framework to analyse the regional and country level potentials and constraints in implementing climate change mitigation measures like REDD.

Facilitating forest law compliance and good governance

Weak governance and lack of law compliance in the forest sector constitute disincentives for SFM, thus contributing to deforestation and forest degradation. FAO is assisting 40 countries in developing and implementing strategies and appropriate measures to combat illegal forestry activities by promoting best practices, enhancing stakeholder dialogue and fostering regional collaboration. "Best Practices for Improving Law Compliance in the Forest Sector", published jointly with the International Tropical Timber Organization (ITTO) in 2005, served as a basis for regional dialogue in the Amazon region, Central Africa, Central America and Southeast Asia involving 35 countries.

Implementing best practices for sustainable forest management

FAO leads the development of strategic policy tools facilitating multistakeholder processes for implementing SFM, including the following that are directly relevant to REDD:

- Codes of practice for forest harvesting developed for Asia (1999) and Africa (2005). National codes, adapted from the Asian code, have been developed in Laos, Myanmar and Cambodia.
- Voluntary guidelines for fire management (2006)[8]
- Voluntary guidelines for responsible management of planted forests (2006)
- Case studies and best practices in forest management

The guidelines encourage multi-stakeholder participation in policy dialogue, strategic planning and integrated actions across stakeholder groups, sectors, disciplines and landscapes and at the national, sub-national and field levels. FAO is providing technical support to countries to strengthen their capacity and capability in the identification, prioritization and implementation of key actions in SFM, including fire management, management of planted forests and integrated management of forested watersheds. FAO's long-standing and extensive field programme encourages the implementation of best practices.

Improving livelihoods through forestry

Lack of alternatives for the millions of forest-dependent poor people, including indigenous groups, often leads to unsustainable land use practices resulting in deforestation and forest degradation. FAO is promoting pro-poor policies, and the inclusion of forestry in national poverty reduction strategies. FAO's support to small scale forest enterprises in more than 20 countries helps poor communities and local groups generate income from forests, thus providing them with an incentive to manage them sustainably. An important precondition is secure forest tenure. FAO is making the case for more

[8] The Fire Management Actions Alliance was established by 40 founding members at the 4th International Wildland Fire Conference in May 2007 to facilitate implementation of the voluntary guidelines and enhance international collaboration in for fire management. A similar mechanism is being considered for planted forests.

diversified tenure systems that enhance access to forest resources by local communities' forest managers and sustained economic benefits from their sustainable management.

Forest monitoring and assessment and reporting

Monitoring forest carbon is necessary to design and follow-up climate change commitments in forestry. Considerable synergies can be achieved by integrating carbon monitoring requirements in overall forest inventory and monitoring efforts that address the full range of goods and services from forests. FAO has two major programmes working at country and international levels.

National forest monitoring and assessment

FAO works with countries to support national forest monitoring systems for cost-efficient collection of robust, reliable and validated information on forest resources, and promote the use of the information in national decision-making and policy dialogue, such as national forest programmes. This includes information needed for forest carbon monitoring, as well as for forest management adaptation to climate change. Since 2001, FAO has worked with over 50 countries in defining, establishing and/or implementing national forest inventories. The programme includes considerable capacity strengthening and south-south collaboration, which will assist countries not only report to UN conventions and to the global Forest Resources Assessment, but will also better enable them to address REDD-related carbon monitoring needs.

Global forest resources assessments

FAO has carried out global forest resources assessments (FRA) at 5 to 10 year intervals since 1946. Data are now compiled on more than 100 different variables covering 20 key topics related to the status and trends of forest resources and forest goods and services. Building national capacities is a crucial part of this process. In conjunction with FRA 2005, FAO organized global and regional training workshops and assisted more than 170 countries to report on changes in forest area, biomass and carbon stocks, following established international standards.[9] FAO will follow the same approach for FRA 2010. In addition, FAO is setting up a system for global monitoring of forest and land use changes through remote sensing aimed at substantially improving the knowledge on land use change dynamics, addressing international information requirements on forestry. Using a participatory process, the capacities of countries to determine historical trends in deforestation rates and to monitor future rates using a common framework and methodology will be considerably strengthened thus enabling them to take advantage of current and potential future mechanisms under the UNFCCC and the Kyoto Protocol.

3. FAO'S INSTITUTIONAL STRUCTURES AND MECHANISMS AVAILABLE TO FACILITATE REDD PROGRAMMES

Various structures and mechanisms of FAO can be used to support REDD readiness actions, including:

- Global and regional technical networks on forestry thematic issues (e.g., wildland fires, invasive species, forest resources assessments, etc.)
- Programmes in various sectors and on cross-cutting issues (i.a., agriculture, economic and social development, climate change, bioenergy, biodiversity), which enables FAO to address intersectoral issues

[9] The good practice guidance for land use, land use change and forestry of the Intergovernmental Panel on Climate Change (2003).

- Extensive geographical presence (five regional offices, nine sub-regional offices, five liaison offices and 74 country offices), which can support action worldwide and at various levels
- An active network of forest resources assessment specialists in 175 countries
- Committee on Forestry and six Regional Forestry Commissions, which meet biennially and facilitate global and regional discussion and intra-regional cooperation on key forest issues
- Partnerships at national, regional and global levels to enhance multidisciplinary and participatory approaches
- Databases and information repositories covering a wide range of topics relevant to REDD
- Communication mechanisms (web, publications programme, journals)

4. FAO'S ACTION PROGRAMME IN SUPPORT OF REDD

FAO, through its programmes described above will provide assistance to countries in their REDD efforts. The current or planned activities are summarized below.

Support for forest and forest carbon monitoring

FAO will continue to provide a comprehensive response to the needs related to forest carbon assessments, drawing on its global and national assessment efforts, as follows.

- Through a global remote sensing survey undertaken as part of the global Forest Resources Assessment 2010, generate baseline information at the global, biome and regional levels on the status of forest area and trends in the rate of deforestation over the past 30 years (including satellite data from 1975, 1990, 2000 and 2005). This activity will provide capacity strengthening to national teams and involve all countries in the interpretation of the remote sensing imagery. This initiative is expected to form a pilot for the establishment or strengthening of national remote sensing based monitoring systems in developing countries. It will also help identify the major causes of deforestation in different regions over time.

- A series of regional and sub regional workshops will be held to train the 175 officially nominated national correspondents to the FRA process on how to report on forest area change and changes in carbon stock in forests using the latest IPCC Good Practice Guidance.

- A "special study" on forest degradation will identify different parameters of forest degradation and best practices for assessing these and facilitate the sharing of practical experiences between countries.

- Through its programme on national forest monitoring and assessment (NFMA), FAO is a partner with countries in carbon stocks monitoring, which is being intensified to meet the needs for REDD monitoring. NFMA will be a critical component of any carbon monitoring or REDD initiative. FAO is currently providing support for national forest monitoring and assessment to 13 of the countries that have indicated interest in being involved in the FCPF. The number of countries could be expanded.

Support for development of national REDD strategies

Working through FAO programme for forest policy support as well as through the National Forest Programme Facility, hosted by FAO, the organization intends to assist countries carry out the following:

- Drawing on existing information to the extent possible, identify the major causes of deforestation and forest degradation, identify sources of forest emissions, and analyze the opportunity costs of alternative land uses

- Analyzing the best practices guidelines and other management tools applicable to effort to reduce deforestation and forest degradation
- Using the above mentioned analyses, and working through NFP processes, develop a national REDD strategy that is consistent with national policies and international commitments. The strategy would identify major actions in applying best practices to be taken and priority geographic areas for action, costs for implementing the elements of the REDD strategy; incentive systems (including through policy measures, investments and financial incentives); mechanisms and sources for financing the REDD activities; identification of actions needed in other sectors and mechanisms to ensure intersectoral coordination and complementarity; and monitoring and assessment of the effectiveness and impacts of the REDD strategy
- Strengthen stakeholder consultations that would contribute to the development of a national (or sub-national) REDD strategy(ies) and to the establishment of a national reference scenario for REDD.
- Increase the capacity of forestry departments and other relevant stakeholders to engage effectively in REDD negotiations and related actions at international level, and to undertake effective action on REDD at national level.

Forest sector awareness and capacity strengthening

In many countries, the forest sector has not been adequately aware or engaged in negotiations on climate change and forests, including related to REDD. Climate change is on the agenda of all six of FAO's regional forestry commissions meetings in 2008, and special sessions were organized in conjunction with the Africa and Near East Forestry Commissions (a joint meeting) in Khartoum, 17-21 February and the Asia and Pacific Forestry Commission in Hanoi, 21-26 April, and also will be at the European Forestry Commission in Rome, 20-24 October.

FAO welcomes partners and funds to organize a series of regional meetings in 2009 to brief forestry departments and other stakeholders in developing countries on developments/discussions of methodological issues related to REDD and the key forest-related issues for negotiation at COP15 (Copenhagen, December 2009). The objective is to increase the ability of forestry departments and other stakeholders engage more effectively in the discussions at country level of the countries' positions on REDD and on the post-2012 climate change regime under UNFCCC.

5. WORKING WITH PARTNERS FOR COORDINATED REDD SUPPORT

UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

FAO, UNDP and UNEP are embarking on a joint programme to provide coordinated REDD support to countries, as consistent with the "One UN" approach. The Joint Programme will provide support for REDD-readiness actions and implementation of REDD strategies. The agencies are discussing both with the Coalition of Rainforest Nations and the World Bank's Forest Carbon Partnership Facility to ensure optimum response to countries' needs and that it and the Joint Programme and FCPF are mutually supportive.

Collaborative Partnership on Forests' Strategic Framework on Forests and Climate Change

In April 2008, the 14 members of the Collaborative Partnership on Forests agreed to develop a "CPF Strategic Framework for Coordinated Response of the Forest Sector to the Climate Change Agenda." This is intended to contribute to a comprehensive and integrated vision and approach to the international discussions, increased assistance to national and local action on forests and climate change issues, and to coordinated support from the CPF members. CPF members requested FAO to take the lead in coordinating the development of the strategic framework. It is expected that this will

be available in time for the UNFCCC COP 14 (December 2008), but also be provided to FAO's COFO meeting (March 2009), UNFF 8 (April 2009), as well as meetings of the governing bodies of other CPF member organizations and be used to facilitate coordinated action plans among the CPF members.

For more information please contact:

Susan Braatz
Senior Officer, Forests and Climate Change
FAO Forestry Department
susan.braatz@fao.org

Item 8. Planted forests in the world

FAO recently finalized its *Global Planted Forests Assessment 2005*. The results will be published soon, and a paper is presently under peer review for printing in the Forest Products Journal later this year. The abstract for that paper is as follows:

> *Planted forests constituted only 7percent of the global forest area, or about 271 million hectares, in year 2005, but they contribute a higher proportion of overall forest goods and services. In recent years, the significance and importance of planted forests have been recognized internationally, and standards for their responsible management have been established, relating to social, environmental as well as economic benefits. As one of the important provisions from planted forests, this study examines the future supply of wood. From a baseline survey of 61 countries, 666 management schemes were established, taking into account tree species, rotation lengths, production potential and end uses of wood. With an average efficiency rate of 70percent, the potential industrial wood supply in 2005 from planted forests was estimated at 1.2 billion m^3 or about two thirds of the overall production in that year. Scenarios until 2030 (detailed) and 2105 (simplified) were developed, indicating that wood supply from planted forests may increase considerably. Results are provided with breakdowns by region, species groups and end use categories. It is concluded that the significance of planted forests, and recognition of their contributions to a range of development goals, are likely to increase in coming decades.*

In view of the forthcoming publication, no written document will be provided at this time. However, a presentation will be made to the participants at the ACPWP session and a CD with the data sets will be distributed.

Item 9. Summary of country reports, including the social impacts of forest industries

The following is a summary of the main emerging issues and business developments that the wood and paper industry is facing around the world, as described in the country briefs prepared by ACPWP members.

The country reports mostly focus on the economic situation of the industry for the year 2007, but also cast a light on national and regional policy developments and trends, as well as social aspects. Some country reports also cover social aspects of the industry.

The ACPWP members were asked to report on the following questions:

1. What are the emerging issues facing the industry in your country?
2. What are the most important business developments within your industry over the last year?
3. Formal and informal employment generated by the paper and wood products industry.

4. Trends and status of the benefits generated by industries in: contribution to rural and urban development, health, education, poverty alleviation, training and professional upgrading; cultural, local community and indigenous support; environment, sports, recreation, etc.
5. Trends and status of the Corporate Social-Environmental Responsibility (CS-ER) policies of the industry (common, uncommon but growing, still relatively unknown).

Most of the country reports reply to the first three questions and provide important information. The two questions dealing with the social contribution and the trends in Corporate Social-Environmental Responsibility (CS-ER) within the industry were not easy to answer, either for countries or for FAO or ILO (which is the UN agency specializing in labour and employment aspects). Nevertheless, the country reports and a summary on "Employment in the Forest Products Industry", prepared by the Forest Products and Industries Division, attempt to provide some general information on these points.

Emerging issues facing the industry

In additional to economic challenges, during 2007 most countries faced challenges relating to climate change, emissions trading schemes, water, certification/codes of conduct, energy markets and aspects involving corporate social responsibility.

Climate change

Awareness of the significance of climate change within the industry and the general public is reported as increasing in all member countries. Australia ratified the Kyoto Protocol in November 2007. Consequently the Australian government has begun preparing an action plan to provide a national strategic framework for industry decision making and business planning in the area of climate change management. This will allow the industry to respond to climate change through mitigation and adaptation. The plan includes sectors like tree planting for commercial purposes, native forest management and processing facilities. The European forest based industry will need to conform to an action plan released by the European Commission in 2007, requesting ambitious and binding targets concerning the reduction of GHG emissions, energy efficiency gains, a 20 percent share of renewable energies and a 10 percent bio-fuels target, to be accomplished by the year 2020.

Emission Trading Schemes

Closely related to climate change issues are the concerns of the European pulp and paper industry and also that of some other countries regarding large scale emission credits auctioning planned for the period after by 2013 in the EU. Some countries and regional organizations predict that this will lead to market imbalances.

Water

Some countries, including Australia, have faced their worst droughts in recent years with a significant impact on water allocation and forest plantations. But even in countries with sufficient or increasing water supply, the debate on industry's impact on water quality is emerging. In particular, intensive farming operations with their high nitrogen discharge levels are held responsible for negative impacts on the water quality.

The gravity of forest fires is closely related to the availability of water. Due to a rainy summer in Portugal in 2007, previous heavy losses of forest plantations due to fire did not recur. (In recent years, Portugal alone lost more than 500 000 hectares of forest plantations.)

Certification

Independent, third-party certification has continued to grow in many countries. New Zealand reported that over half of the country's forest plantations are now certified. Germany reported 100 percent of the wood supply and 75 percent of the pulp supply as having proofs of origin, documenting that the resources are from sustainably managed forests. In Australia, two thirds of the forest plantations are certified. It is hoped that this positive trend will improve the image of the industry, convincing the general public that industry is managing and using the forest resources in a responsible and environmentally friendly manner.

India has reported difficulties faced by industry relating to forest certification. The bulk of the raw material is obtained from small farm and agro-forestry holdings, with tens of thousands of private owners, and it seems to be practically impossible at present to get these smallholdings certified.

Energy market

Due to high energy costs and political directives at national and regional (EU) level, growing competition between use of wood for industrial processing and for energy is giving rise to concern about availability and accessibility of wood at reasonable market prices. It is estimated that in the EU alone an annual gap in the supply of wood could amount to 260 million cubic metres of roundwood by the year 2020.

Industry therefore proposes the mobilization of all wood resources available and, in addition, the establishment of fuelwood plantations for energy generation.

To ensure that sufficient wood resources are at the disposal of the processing industry, some countries now request codified priority settings in favour of wood for the production of wood based products.

Corporate Social Responsibility

Corporate social responsibility has been defined as the ethical behaviour of a company towards society, in recognition of the fact that not only shareholders, but multiple stakeholders, have a legitimate interest in the activities and performance of a business and that companies need to be responsive to their concerns.

This public interest is increasing and is being addressed by certification schemes and national initiatives. Important steps forward have been made in many countries, in particular those countries with a significant indigenous population, in order to increase involvement in the forest industries sector. This includes changes in land ownership and business and employment opportunities.

Business developments

Economic situation

On the one hand, energy and raw material costs were reported as hampering overall economic development in most countries, having a significant impact on production and distribution. This also includes a general increase in operational costs, such as labour. On the other hand, the production of paper products increased in most of the member countries.

Long-term trends suggest that the pulp and paper industry will continue to be a growth sector, although there will be shifts among countries. Demand for paper products will accelerate due to rapidly developing economies.

Changes in taxation systems and restrictions related to carbon trade lead to uncertainties and could disrupt current market structures in favour of industries with lower standards. The supply of softwood to North America, Australia, and New Zealand has remained stable, but consumption is now slowing down since housing markets, especially in the US, are undergoing a significant correction due to the financial crisis. An oversupply in these markets is expected to remain for the next few years to come.

EMPLOYMENT IN THE FOREST PRODUCTS INDUSTRIES

SCOPE, METHODS, SOURCES

This study focuses on formal employment in the forest industry sector during the period 1997-2006. It includes manufacture of wood and of wood products as per ISIC classifications (International Standard Industrial Classification of all Economic Activities). Data used mainly originate from the International Labour Organization (ILO) and the United Nations Industrial Development Organization (UNIDO).

Formal employment generated by the paper and wood products industry was analysed, as were global employment trends in 35 countries[10]. Gender was included in the analysis.

MANUFACTURING (classification)

Division 20: Manufacture of wood and of wood and cork products, except furniture; manufacture of articles made of straw; and planting materials
- Group 201: Sawmilling and planning of wood
- Group 202: Manufacture of wood, cork and straw products, and plating materials
  - *Class 2021:* Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board and other panels and boards
  - *Class 2022*: Manufacture of builder's carpentry and joinery articles
  - *Class 2023:* Manufacture of wooden containers
  - *Class 2029: Manufacture of other wood products; manufacture of cork and straw articles, and plaiting materials*

Division 21: Manufacture of paper and paper products
- Group 210: Manufacture of paper and paper products
  - *Class 2101:* Manufacture of pulp, paper and paperboard
  - *Class 2102: Manufacture of corrugated paper and paperboard and of containers of paper and paperboard*
  - *Class 2109*: Manufacture of other paper and paperboard articles.

Division 36: Manufacture of furniture; manufacturing n.e.c. (not elsewhere classified)
- Group 361: Manufacture of furniture
  - *Class 3610*: Manufacture of furniture

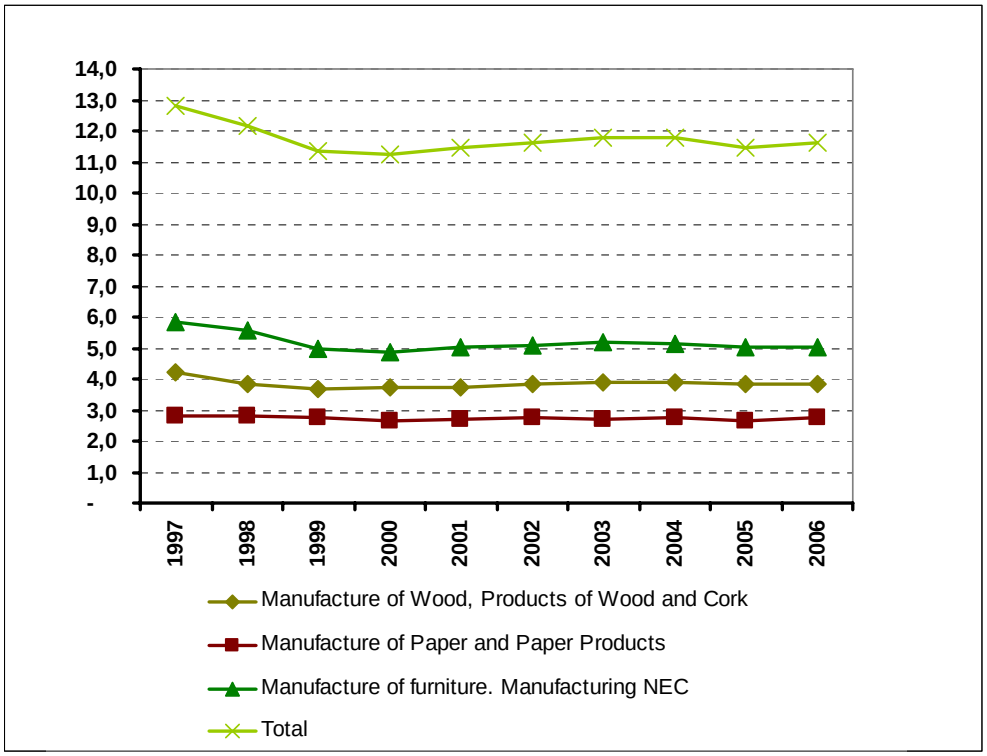
EMPLOYMENT IN THE FOREST INDUSTRIES

Across the world, forest industries mainly generate formal employment. Some sub sectors of the industry, however, are related to the informal economy and thus provide informal employment. Since logging includes harvesting of fuel wood and wood for personal consumption, it contributes significantly to the informal economy and employment. In 2006, around 11 million people were

[10] The ILO database does not present data on manufacturing wood, paper and furniture products in South Africa, Chile or Malaysia from the 35 countries chosen for the study. In the meantime FRA (FAO 2005) data is available for this group of countries for the year 2000. In **South Africa** the number of people employed in the forestry sector was 321,000 by the year 2000 (66 000 in the production sector and 255 000 in the Forest Service, FRA 2005). In **Malaysia** forest sector employment amounted to 67 000 people (2 000 in the Forest Services and 65 000 in the production sector) and in **Chile** the people working by 2000 corresponded to 40 000 persons by the Production sector and 13 000 in the Forest Services.

employed in the manufacture of paper and wood products in the 35 countries[11] selected. However, employment in this sector continues to decrease, particularly in the case of furniture manufacturing. On the other hand, employment in the manufacture of paper and paper products has slightly increased during recent years (See Annex 2 and Figure 1).

Figure 1. Employment in Manufacture of Wood and Paper Products



Source: ILO database and others

It can be observed from Figure 1, that rapidly changing trends in one single country have a significant impact on global trends in forestry sector employment. In China, the number of people employed in forest industry dropped sharply, from 3,2 million people in 1997 to only 1,3 million people in 1999. In view of the social importance and relevance of forestry sector employment in this country, this dramatic loss of employment in such a short period represents a considerable social challenge.

In the late 1990s, the Chinese government began implementing an environmental protection initiative, which resulted in a logging ban on more than half of the area of national forests in the country. Following this, in 1998 alone, 30 percent or nearly 1 million people working in the forest service and the forest products industry lost their jobs due to heavy supply gaps at small and medium sized wood processing facilities, which had to close down. This reduction alone accounted for much of the fall in employment at the global level in 1998 and 1999 (FAO, 2004).

Contribution of manufacture of wood, furniture and paper sub sectors to the total employments

In the current prevailing dialogue on development, economic growth is emphasised as the most important driver of poverty reduction. However, the role of the forestry sector in lifting significant numbers of people out of poverty by contributing to employment generation, trade and economic growth is remarkably poorly

[11] Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Czech Republic, France, Finland, Germany, Hungary, India, Indonesia, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Peru, Portugal, Romania, Russian Federation, Slovak Republic, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States of America., Austria, Belgium, Czech Republic, The Netherlands, Norway, Poland, Slovak Republic, Spain, Switzerland, U.K., India, China, Indonesia, Peru, Romania, Canada, Chile, Malaysia, New Zealand, South Africa

analysed. Forest industry's role in many economies is certainly significant – it provides 10 percent or more of the GDP of some of the poorest countries and 5 percent of GDP for many other developing countries (Steele and Kragt, 2006). For all developing countries, the average forestry share in measurable GDP is around 2 percent, and forestry's share of exports is about 3 percent (FAO, 2005).

Annex 2 presents more information about the contribution of wood, furniture and paper manufacturing to employment in the 35 countries selected for the study. It shows that the industrial forestry sector's contribution to the economically active population is around 1 percent in a majority of countries. In some countries, however, such as Canada, Italy, Netherlands, New Zealand, Norway, Poland, Russian Federation, Spain, Switzerland, United Kingdom, the industrial forestry sector contributes slightly more, corresponding to 2 percent of the economically active population.

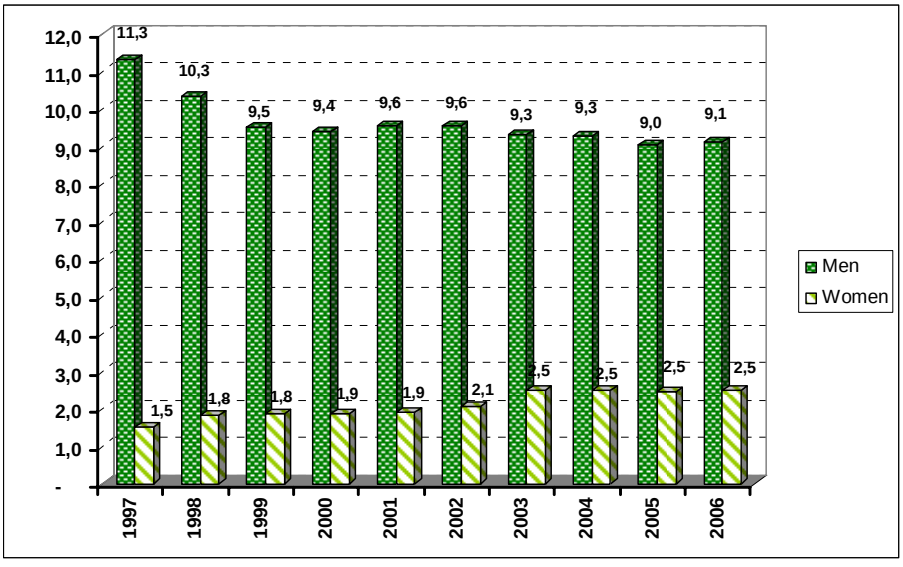
In Austria, Czech Republic, Finland, Portugal, and Slovak Republic, forestry industry significantly contributes to total employment, corresponding to about 3 percent of total employment. This contribution exceeds that of other European countries, and of the world as a whole. In some countries, such as Mexico, Norway and United States, the percentage has decreased from 2 to 1 percent over the last few years.

Gender

Data on employment in manufacture of wood, furniture and paper, by gender, were reported by 28 of the 35 countries analysed. In most countries, women account for 20 percent of the jobs (Figure 2). In Czech Republic, Italy, Romania, Russian Federation, and Slovak Republic a larger share (up to 30-40 percent) of female employees is reported, although female employment in the Slovak Republic has decreased in recent years.

In most of the countries, furniture manufacturing employs the highest percentage of woman compared to other sub-sectors. In some countries like Czech Republic, Mexico, Peru, Russian Federation and Slovak Republic, however, it is the manufacture of paper products, which employs a higher proportion of women. Interestingly, all countries, except Romania, Slovak Republic and United States report an upward trend in the share of women employed in the wood, paper and furniture sectors (See Annex 3). Between 1997 and 2006, the difference between male and female employment was decreasing. During this period, the percentage of women went from 12 to 21 percent of the total economically active population for the 28 countries analysed. The gender gap in labour force participation could be seen as another indication of women's more limited chances to take part in the world of work.

Figure 2. Employment figures for the wood, paper products and furniture manufacturing sector (millions employed)



Source: ILO database and others

Figure 3 presents 32 countries' manufacture of forest industries state by 2005. This shows that Brazil, China, Russian Federation and U.S.A., have the highest number of employees in the forest industries sector as a whole. Manufacturing of paper and paper products is significant in Russian Federation and the U.S.A. while furniture manufacturing employs greater numbers of people in Brazil and China.

Figure 3. Forestry Manufacturing Industries

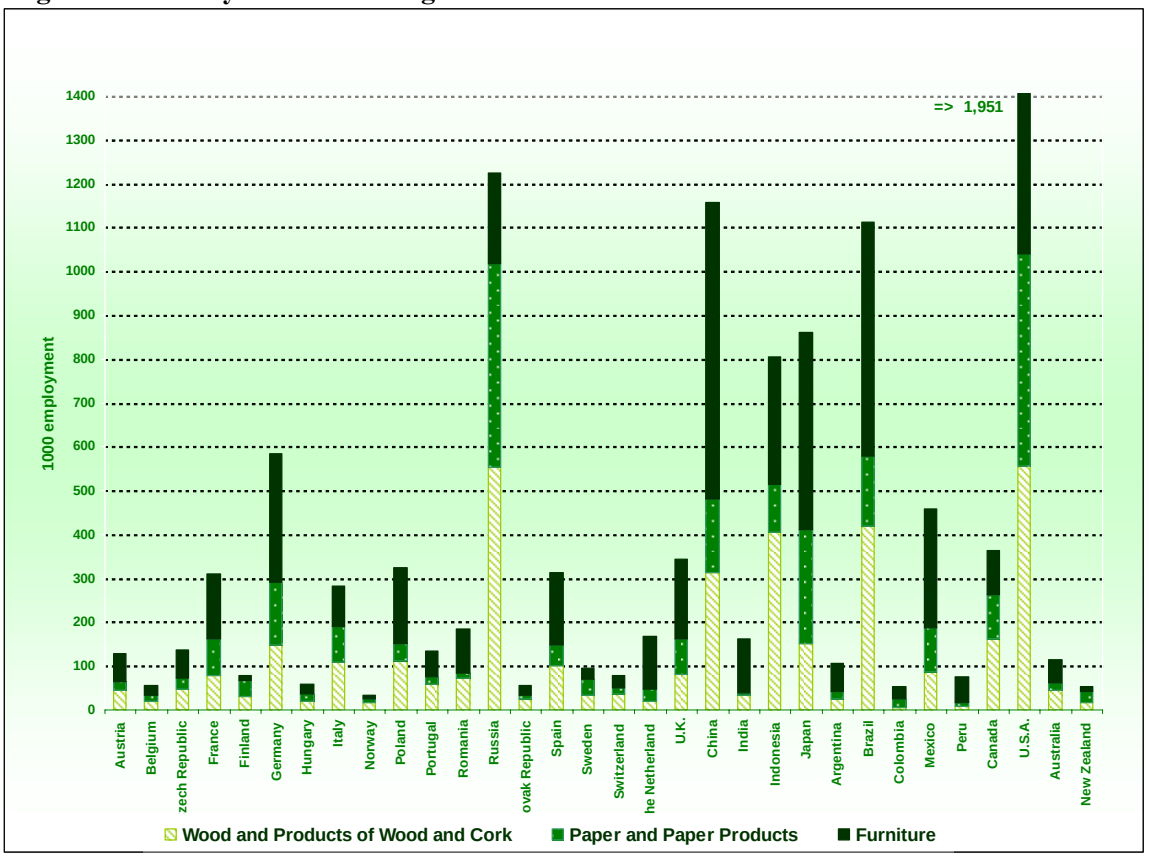
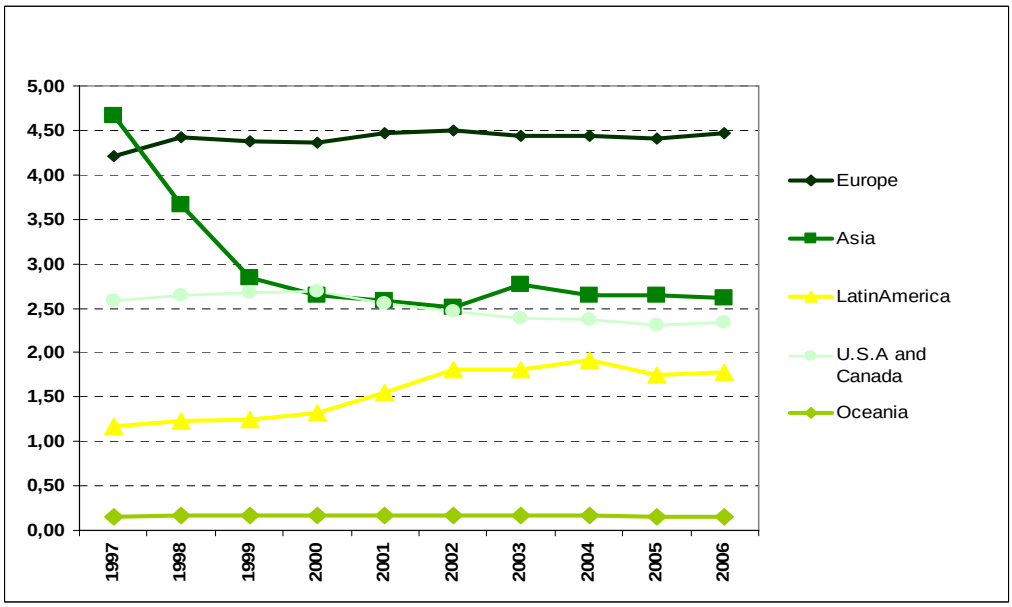


Figure 4. Employment in manufacture of wood, furniture and paper products by region (millions employed)



Source: ILO database and others

The figure above shows some interesting and important differences between regions (considering the 35 countries analysed, for Africa no data are available). Africa still suffers

The figure above shows some interesting and important differences between regions (considering the 35 countries analysed, for Africa no data are available). Africa still suffers from a significant lack of industrialisation and general development, due to a variety of political, economic and structural problems(except South Africa, where the sector is growing steadily) (FAO, 2004).

Employment in the sector is declining in Canada and U.S.A. but this is largely due to the substitution of capital for labour. The only countries in Europe which have increasing number employment in the forest industry sector are Poland, Romania and Russian Federation, thus influencing last year's trend in Europe slightly. Latin America and Asia are the only two regions where the forest industry sector has been expanding on all fronts over the last decade. This expansion has been driven by various factors, including abundance of cheap skilled labour, relatively abundant forest resources, high rate of economic growth, specific polices to encourage development and investment in the sector and a general improvement of the investment climate.

CONCLUSION

When comparing regions, the contribution of the forest products manufacturing industry to employment is relatively more important in Canada, Europe, and the U.S.A. This is partly because of the employment generated in the forest processing sector, which is generally less significant in the developing countries. The forest industries sector has grown in Latin America and remained about the same in the other regions. In the developed regions and in Eastern Europe, the amount of employment in the sector has declined.

It is difficult to present employment data on the collection of woodfuel and non-wood forest products related to the generation of employment and value-added activities in the informal sector. Additional work on the contribution of the informal forestry sector activities would give a much better and more balanced picture of the importance of the forest industrial sector at the global, regional and country levels. For many developing countries, these informal activities are significant but not always captured in published statistics. Therefore, it is probably correct to state that the figures presented here only cover activities in the "formal" forest industries sector. The contribution to employment of these activities does not reflect the real contribution to the society, since indirect employment is generated by forest industries, including the sub sectors of wood industries, pulp and paper and furniture industries. The forest products industry is a driving partner in many other industries, including vehicles, information technology, telecommunications, transport, chemistry, energy, technique and installations, mechanics, building, bank and finance, graphics, packaging, biotechnology, nature and tourism, environment, and consulting.

Forest industries create many jobs amongst suppliers and in the pulp, paper and sawmill industry. In countries such as Sweden, the industry is involved in local, community activities (shareholders and board members in local development companies, ports, research councils, universities and research institutes, local and regional Chambers of Commerce, property owners and landlords, cultural and sports sponsorship).

SUMMARY OF COUNTRY REPORTS

Even though the **Australian** country report mentioned that 83 000 people are directly employed in the Australian forestry and logging industry, ILO data showed a higher number, 113 200 people in 2006. A significant part of the territory depends on the timber industry. It was furthermore mentioned that a memorandum of understanding with the indigenous community and a National Indigenous Forest Strategy has been endorsed.

Brazilian companies are addressing social environment responsibility with determination. Generating 110 000 direct jobs and 500 000 indirect ones, the sector has a history of social actions for employees and communities. ILO database shows that around 1 million people are employed in the manufacturing wood, paper and furniture sectors. In 2007, social environmental responsibility contributions undertaken by companies reached around US$ 585 million, spread amongst health, economic development, professional training, education, sports and culture, community support, forest fostering programmes, environment preservation and control, salaries and social taxes, among others.

Finnish forest industries accounted for 77 000 people in direct employment in 2007 (ILO database). The national report explains that Finland employs, directly and indirectly, almost 200 000 Finns and that in Finland one in ten Finns makes a living either from forest industry (pulp and paper industries in addition to the wood products industries) or from the sectors that serve the industry.

France highlights the importance of the pulp and paper industry, which generates many indirect jobs and regarding CSR it was cited that at international level companies are incorporating Corporate Social Responsibility policies and reports.

Although **Germany** accounts for around 600 000 jobs in the forest industries in 2006 (ILO database) the country report did not mention the employments generated by the forest industries. It was stated that the European Pulp and Paper Industry Federation had adopted its code of conduct against illegal logging, relating this subject with corporate social and environmental responsibilities.

Forest Stewardship Council (FSC) certification is becoming a non trade barrier for Indian paper companies. As the bulk of the raw material is obtained from farm and agro- forestry, the farmers (huge numbers, running into hundreds of thousands with smallholdings) find it practically impossible to form groups and obtain the FSC certificate. Though farm forestry is a sustainable model promoted by the paper industry, the FSC principles and criterions are difficult to be met. To find a solution for this, the Government of India is considering establishing a specific Indian FSC scheme l to support the process of certification.

Forestry and sawmilling employ approximately 20 000 people in **New Zealand**. There is potential for the current harvest of approximately 18 million cubic metres to increase by at least a third and this would result in expansion in all sectors of the forest industry according to the country report. Again the ILO database gives a much higher number, 35 000 in 2006. New Zealand's report mentioned the Environmental Code of Practice which was developed at the same time as the FAO Code of Practices for Planted Forest, now called The Planted Forests

Voluntary Guidelines. In addition, information supplied from NZFOA FSC certificate holders in New Zealand shows that around 50 percent of the volume produced by forest growing companies is currently captured by an FSC Chain of Custody. The group of "certified" plantation managers has formed an FSC cluster to co-operate on FSC issues of common interest. It has already funded, and will continue to fund, industry activities related to certification. The cluster is supported by NZFOA. The sector also has an indirect multiplier effect on supplier-industries via its purchases, and consumption-industries via forestry wages/profits being spent. Plantation forestry in New Zealand has provided particular benefits for Maori people who are significant, and increasing, owners of forests. From the 1960's, the Maori found themselves owners of large areas of relatively unproductive land that was not suitable for farming. Financial reserves for development of the land were limited and Maori land was not eligible to be used for security to raise capital for investment. There was also a significant and on-going drain of young Maori from the rural lands to the urban centres.

Portugal reported around 260 000 people in employment by 1994-95 while the data from ILO showed that paper and wood products manufacturing sector employed 131 000 people. This figure is similar to the data given by the wood and furniture sector for those years. The Business Council for Sustainable Development (BCSD – Portugal) was set up in 2001, at the initiative of the three

companies which, at the time, were members of the WBCSD - World Business Council for Sustainable Development (of which two were linked to the forestry industry). The aim of BCSD – Portugal is to turn business leadership into a catalyst of change towards Sustainable Development and to promote eco-efficiency, innovation and social responsibility within companies. Today, with more than 100 members from among the largest national companies, BCSD–Portugal brings together some of the most important companies in the wood-pulp, paper, cork and wood-board industries. The traditional activity of importing tropical woods represents a very specific exception, and in this area there have been growing concerns about combating illegal logging. One of the visible outcomes of corporate social responsibility policies is the adhesion of some of the largest Portuguese forest based industries to the Business & Biodiversity initiative promoted by the European Union and the International Union for the Conservation of Nature (IUCN), with a group in the paper industry having even subscribed to the Countdown 2010 Initiative to halt biodiversity loss until 2010.

Russian Federation represents over 20 percent of the global total and is the single largest national forest resource. The potential for increasing felling in the framework of sustainable forest management is clear. Further, Russian Federation has well educated, low-cost labour resources. Both factors could attract investment into the Russian Federationn forest sector. Employment in forest industries accounts for 2 percent of the economically active population, and is increasing.

CEPI estimates the direct employment in the paper industry to be 259 100 jobs and indirectly 1.8 million jobs. 63 percent of the jobs are located in rural areas.

The **EU** considers establishment of a "green label" to halt illegal imports of Amazon timber. According to O Estado de São Paulo, the European Union (EU) intends to tighten its timber import laws by creating a mandatory label valid in the 27 member-countries that prove the legal origin of imported timber products. Illegal logging in the Amazon varies between 50 percent and 80 percent. According to the Amazon Institute of People and the Environment

(Imazon), 36 percent of timber harvested in the Amazon is exported. The main market for this timber is Europe, which receives about 47 percent of Amazonian timber, according to the Ministry of Development. EU data on the timber industry indicates that timber smuggling causes an annual loss of US$15 billion in uncollected taxes to exporter countries.

For the timber importer, the main idea behind the label is to present chain of custody information from the country of origin to the manufacturer of the final product. The system aims to track down the timber's origin and reward importers and exporters that comply with natural resources protection and management laws. Today, forest certification is voluntary and control is not always clear to environmental authorities. According to FSC Brazil, which applies a 'green label' for good environmental practices, it is hoped the new EU label will encourage companies to work legally. The percentage of certified forests has grown, but is still small in Brazil. Monitoring will not be an easy task. Europeans are considering sending missions to exporting countries to set control systems. There is a conviction that exporters will always manage to break the rules until importers clearly show that they will no longer tolerate illegal practices. The European Commission's proposal, which will be presented by late May 2008, is likely to take several months before being adopted, since all 27 EU member-countries must review the proposal. Brussels counts on the support of France, which will hold the EU presidency from July 2008 on. France stated that it would support the proposal, especially after the pressure from environmental organizations.

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POWERPOINT PRESENTATIONS

FAO 1

WHAT IS THE S.A. FORESTRY INDUSTRY ALL ABOUT?

MR. MIKE EDWARDS

JUNE 2008

FAO 2

SOUTH AFRICA - WHERE ARE WE?

FAO 3

FORESTRY PRE-1994

- Inward looking focus intent on self-sufficiency
- Exclusion from global economy
- Impacts of afforestation of little concern
- Environmental and social concerns not an issue
- Land readily available for planting trees
- Politics favoured the privileged
- Unlimited government support (education, research, infrastructure)
- Conservation focus, exclusion of people from the forest

FAO 4

FORESTRY POST 1994

- Outward looking focus intent on globalization
- Highly regulated operating environment
- Limited government support
- Politics ensures that South Africa part of global dictates
- Global competition driver of business
- Impacts of afforestation a major concern
- Limited land available for forestry
- Focus on sustainable development and participatory forestry

FAO 5

LEGISLATIVE CONTEXT

- South African forestry governed by two acts, The National Forests Act (1998) and the National Veld and Forest Fires Act (1998)
- The cornerstone of the National Forests Act is sustainable forest management – All the provisions are interpreted and applied within the framework of SFM
- The NFA defines principles to guide decisions affecting forests and also provides for the Minister to promote and enforce SFM through regulation and/or certification
- The Minister is obliged to monitor and report on the state of the forest resources at least once in three years.
- The National Veld and Forest Fires Act 1998 was put in place to prevent and combat veld, forest and mountain fires throughout South Africa. A variety of institutions, methods and practices are provided for under the Act for achieving the purposes of the Act.

FAO 6

IMPORTANT SOUTH AFRICAN CHARACTERISTICS

CLIMATE	Generally temperate (e.g. Warm and Dry)
RAINFALL	Annual Average ± 460 mm 65% of country less than 500 mm/p.a. Erratic and unreliable Frequent droughts
LAND USE	13% only suitable for cultivation 60% semi-desert (Western parts).
SOILS	Generally poor and unstable
POPULATION	Estimated current population 48 million 57% urbanised L.T. growth rate 1.5% p.a. (i.e. double in 40 years) Unemployment rate 30% 46% of population live below poverty datum line

FAO7

COMPONENTS OF THE FORESTRY SECTOR

	LAND COVERAGE		UTILIZATION
	Ha's	% to Total	
Non-Commercial			Recreation Conservation Education
(1): Indigenous Forests	500,000	0.5%	
(2): Woodlands	42,000,000	35.0%	Conservation, subsistence, fuel wood
TOTAL	42,500,000	35,5%	
Commercial			
(1): Plantations	1,281,519	1,1%	Industrial production fuel wood

FAO 8

Woodlands contribute the bulk of wooded land area of South Africa

The potential area is in the region of 42 million hectares.
Approximately 9,2 million people live around these areas and depend on them for goods and services

FAO 9

SOUTH AFRICA'S FOREST RESOURCES

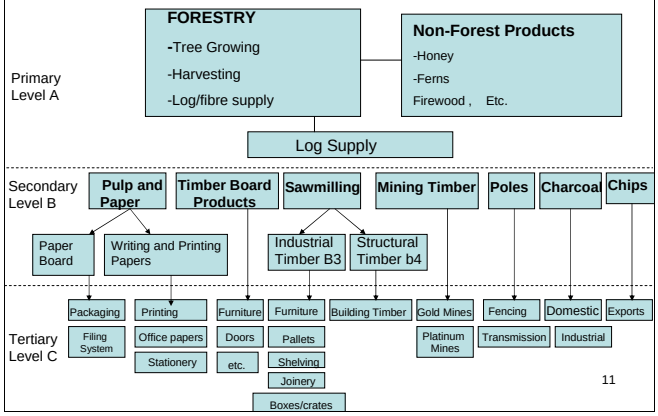
- **Indigenous Forests** cover about 470 000 hectares.
- Almost three-quarters of this forest type is conserved either as declared State forests or within formal protected areas
- Access and harvesting of products was typically restricted for decades, until significant policy shifts post 1994 when more participatory policies and programmes came into being

FAO 10

THE COMMERCIAL FOREST SECTOR IN SOUTH AFRICA

FAO 11

Structure of the Forestry, Forest Products and the Downstream Sectors



FAO 12

FORESTRY SOUTH AFRICA

THE FORESTRY SUB-SECTOR

FAO 26

PROBLEMS IN BEING ABLE TO MEET PLANTING REQUIREMENTS

- Availability of suitable land.
- Competition from Agriculture.
- Land reform imperative.
- Water licensing restrictions.
- Environmental consideration.
- No tax or afforestation incentive schemes

SA Particularly Risk Prone to Pests & Diseases

- S.A's entire timber production comes from plantations of fast growing exotic tree species.
- Much of the timber estate is now planted with genetically improved material.
- High growth rates, high stocking rates produce higher levels of tree stress.
- S.A. is a semi arid country with lower than average rainfall. Most plantations are situated in areas of rainfall of less than 1000 mm/p.a with periods of drought being common.
- Fire damage is severe.
- Global trade is increasing, hugely escalating threats of importation of undesirable pests and pathogens.
- Biocontrol and monitoring at ports of entry lacking.
- Movement of timber and timber products internally is uncontrolled.

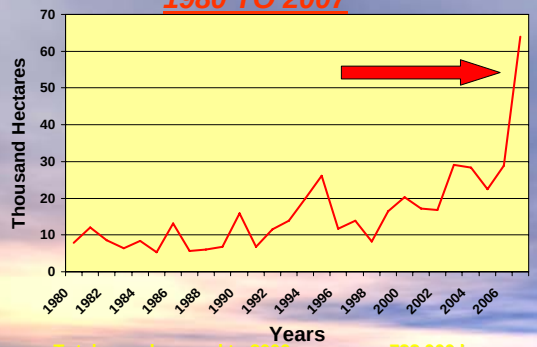
FAO 27

PESTS AND DISEASES

- It is estimated that at least 50% of Plantations are affected.
- Frequency and intensity escalating
- Lose up to 20,000/p.a. as result.

FAO 28

DAMAGE TO PLANTATIONS BY FIRES 1980 TO 2007



Total area damaged to 2006 - 733,000 ha
Total area damaged by fire to 2006 - 387,000 ha (53%)
Average fire damage 1980 to 2006 - 14,300 ha p.a.

THE ABOVE SAYS IT ALL

FAO 29

(3) CLIMATE CHANGE

FAO 30

"CLIMATE CHANGE IS NOT A MYTH, IT IS A REALITY"

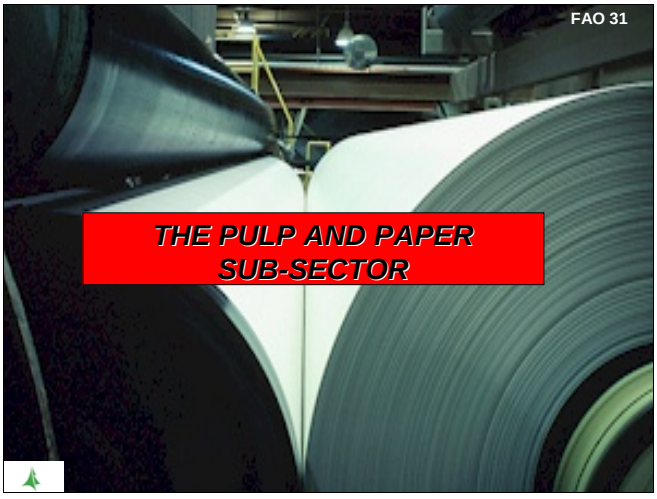
Recommendations from S.A. Forestry Climate Change Study.

(1): Seriously consider mixing species.
(2): Match species to site for both soil and climate reasons.
(3): Include climate change predictions in species selection.
(4): increase research into temperature tolerant and drought resistant hybrids.
(5): Increase research efforts on climate change.

BUT REPORT SAYS

(1): Hybrids more robust than commonly planted species.

(2): Pinus family is most robust to climate change



FAO 31

CONTRIBUTION TO SA ECONOMY

FAO 32

1. Value Addition

Sub-Sector Operating Profit	R 3,191m
Plus Labour Cost	R 2,123m
Gov. taxes (incl. VAT)	R 685m
.:. Net Value Addition	R 5,999m

2. Contribution to GDP

Sector GDP	Total R Million	Pulp & Paper	P.P. as % Total
RSA GDP	1,248,730	R 5,999m	0.5%
Manufacturing GDP	219,234	R 5,999m	2.7%

CONTRIBUTION FROM A SOCIAL PERSPECTIVE

FAO 33

ESTIMATED PULP AND PAPER EMPLOYMENT

Type of Employment	Numbers
Permanent Employees	13,200
Informal Waste Paper Collectors	10,781
Total Employment	23,981
Total Remuneration	R2.1 billion/p.a.
Employees & Dependents	95,924
Corp Social Investment	R56.7 mill/p.a.

ENVIRONMENTAL IMPACT OF PULP & PAPER SUB-SECTOR

FAO 34

Item	Cost/Impact (R million)
Electricity	138.4
Energy (fossil fuels)	720.6
Water Quality : Chemical Oxygen Demand	157.7
: Total Dissolved Solids	48.0
Landfill Waste	77.7
Air Emissions	486.9
Total Environmental Cost	1,629.3

Note: The total Environmental cost of R1,630 million accounts for 91% of total FTPP Environmental Cost

NET CONTRIBUTION OF PULP & PAPER SUB-SECTOR

FAO 35

Benefit / cost contribution	Value (R million / p.a.)
Value addition ex production	R 5,999
- Environmental Impact Cost	R 1,630
Net Economic Contribution	R 4,369

Net Foreign Trade Balance	R4.9 billion

Pulp & Paper Industry a significant contributor

CONTRIBUTION TO SA ECONOMY

FAO 37

1. Value Addition

Value of Production	R3,218
Less: Input Costs	R2,190
Plus: Remuneration	R 304
.:. Net Value Addition / GDP	R1,332

2. Contribution to GDP

Sector GDP	Total R Million	Saw-Milling	Saw. as % Total
RSA GDP	1,248,730	1,322	0.1%
Manufacturing GDP	219,234	1,332	0.6%

FAO 38

CONTRIBUTION FROM A SOCIAL PERSPECTIVE

Estimated Sawmilling Employment

Estimated Employment	20,000
Estimated Remuneration	R304 million / p.a.
Employees Plus Dependents	100,000

Environmental Impacts

Item	Cost/Impact (R mill/p.a.)
Energy Usage	R 34.5
Landfill Waste	R 92.2
Air Emissions	R 7.2
Water Quality	Not Quantified
Total Environmental Cost	R 133.9

FAO 39

OTHER SUB-SECTORS

- WOODCHIPS
- BOARD PRODUCTS
- MINING TIMBER
- TREATED POLES
- CHARCOAL

FAO 40

OVERVIEW OF FINDINGS

Benefit/Cost Contribution	Value (R mill./p.a.)
Value addition ex Production	R2,055
Less: Environmental Impact Cost	R 807
Net Economic Contribution/GDP	R1,248

RSA GDP	1,248,730	1,248	0,1%
Manufacturing	219,234	1,248	0,6%

Net Foreign Trade Earnings	R 2 billion

Estimated Employment	19,200
Estimated Remuneration	R532 million / p.a.
Employees Plus Dependents	96,000

FAO 41

ALL SUB-SECTORS COMBINED

OVERVIEW OF FINDINGS - ALL SUB-SECTORS

FAO 42

1. Net Economic Contribution

Benefit/Cost Contribution	Value (R mill./p.a.)
Value addition ex Production	12,274
Less: Environmental Impact Cost	2,352
Net Economic Contribution	9,922

2. Contribution to GDP

Sector GDP	Total R Million	Sector	Sector % to Total
RSA GDP	1,248,730	12,274	1,0%
Agricultural GDP	39,473	2,921	7.4%
Manufacturing GDP	219,234	9,353	4,3%

FAO 43

OVERVIEW OF FINDINGS - ALL SUB-SECTORS (Cont.)

3. Contribution to Employment

Total Employment Creation	170,025
Total Remuneration	R 4,136 million
No of persons Dependent on Industry for their livelihood	867,924

4. Forex Earnings

Net Foreign Exchange Earnings	R 6,960 million

FAO 44

CONCLUSIONS

(1): The FTPP cluster makes a significant contribution to the S.A. economy.

(2): Pro-poor development potential is inherent in the cluster and BBBEE opportunities are considerable.

(3): Growth in downstream processing is dependent on growth in plantations.

(4): Economic and socio-economic benefits far outweigh environmental costs.

(5): Inequities in the water regulatory environment in particular are impacting on development potential of the cluster and need to be reconsidered.

A sector growth and development strategy must be developed and implemented

FAO 45

FOREST SECTOR CHALLENGES

1. Greater equity in the entire value chain
2. Increase in the local supply of roundwood to underpin growth throughout the value chain
3. Sustainable supply and better utilisation of limited saw-timber resources
4. Increased local beneficiation
5. Greater empowerment and profitability of existing small scale forest enterprises
6. Linking forestry as a rural based industry with poverty eradication and local economic development

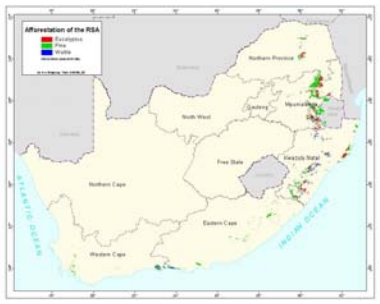
FAO 46

OPPORTUNITIES

- Forestry Transformation Charter
- Sector agreement on Charter as medium term strategy for forestry
  - ✓ Growth and transformation charter
  - ✓ Addresses sector challenges
    - Growth of sector
    - Roundwood shortage
    - Land reform
    - Skills shortage
    - Access to finance for emerging entrepreneurs
    - Forest protection
    - Research and innovation
    - Local beneficiation
    - Empowerment of emerging black entrepreneurs

FAO 13

Geographic Location of Forests



FORESTRY SOUTH AFRICA

FAO 14

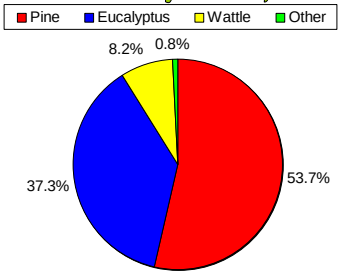
SA Commercial Forestry Estate

- *100% plantation based*
- *Genera & species planted*
  - *Pines:* *P patula, P elliottii, P taeda, P radiata*
  - *Eucalypts:* *E grandis, E nitens, E macarthurii*
  - *Acacia:* *A mearnsii*
- *Rotation lengths*
  - *Pines:* *Sawlogs (25-28 yrs) Pulpwood (12-18 yrs)*
  - *Eucalypts:* *Sawlogs (25-28 yrs) Pulpwood (7-10 yrs)*
  - *Acacia:* *Pulpwood (8-11 yrs)*
- *Yields (m^3/ha/yr)*
  - *Pines:* *16 – 18*
  - *Eucalypts:* *18 – 35*
  - *Acacia:* *8 - 11*

FORESTRY SOUTH AFRICA

FAO 15

Plantation Area by Genera, 2006

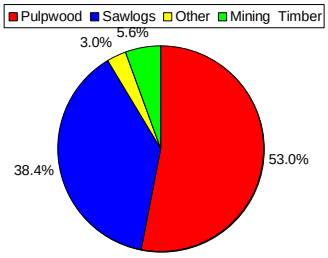


TOTAL – 1,281,519 ha

FORESTRY SOUTH AFRICA

FAO 16

What are trees grown for

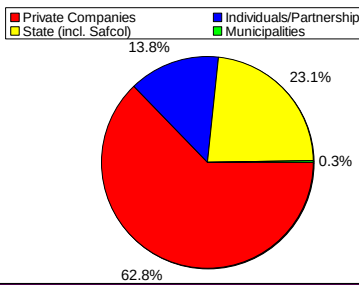


TOTAL – 1,281,591 HA

FORESTRY SOUTH AFRICA

FAO 17

Plantation Area by Ownership 2006

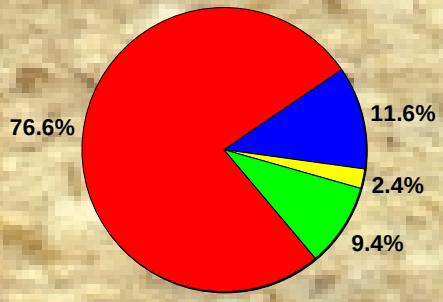


Total – 1,281,519 hectares

FORESTRY SOUTH AFRICA

FAO 18

FSC Certified Forests By Ownership: September 2007



Certified Area – 1,443,416 ha
(incl. planted & non-planted areas)

WHAT DO WE PRODUCE FROM PLANTATIONS

Product	Production		% to Total m³
	M³	tons	
Sawlogs	5,778,023	6,159,976	25,3%
Poles	478,793	345,210	2,1%
Mining Timber	911,007	634,592	4,0%
Pulpwood	15,182,720	12,046,402	66,5%
Other	476,648	386,829	2,1%
Total	22,827,191	19,573,009	100,0%

(82 % of total comes from, privately owned plantations)

FAO 19

FAO 20

CONTRIBUTION TO THE S.A. ECONOMY

1. Value Addition

Value of Production (i.e. output of Plantations)	R5,100 m
Less: Input Costs (Excl. Labour Cost)	R2,434 m
Plus: Adjustment for VAT	R 255 m
.:. NET VALUE ADDITION/GDP	R2,921 m

2. Contribution to GDP

Sector GDP	Total	Forestry	For. as % of Total
R.S.A. GDP	R 1,248,730 m	R 2,921 m	0.23%
Primary Sector GDP	R 121,708 m	R 2,921 m	2.40%
Agricultural GDP	R 39,473 m	R 2,921 m	7.40%

CONTRIBUTION FROM A SOCIAL PERSPECTIVE

Contribution to Employment

Type of Employment	Numbers
Direct (e.g. Co. employment)	37,469
Indirect (e.g. contractors)	30,000
Small Growers - owners	31,500
- employees	7,875
Total Employment	106,844

Total Remuneration	R1,2 billion
Employees & Dependents	576,000

FAO 21

FAO 22

ENVIRONMENTAL IMPACT OF PLANTATION FORESTRY

Impact	Estimated net cost (R)
Stream flow reduction (CSIR assessment)	Fully internalised
Plantation waste	Not significant
Carbon sequestration	+R89,3 million
Air emissions :Forestry transport	-R34,8 million
Biodiversity	Not quantified. Lower than annual agricultural crops
Water quality (as affected by fertilizer use)	Not significant
Soil (fertilizer)	Not significant
Soil erosion	Not quantified. Lower than annual agricultural crops
Total Benefit	+R54.5 million

THE INDUSTRY HOWEVER HAS

(1): THE NEED TO INCREASE ITS PRODUCTION.

(2): THE NEED TO PROTECT PLANTATIONS FROM PEST AND DISEASES.

(3): THE NEED TO REDUCE LOSSES THROUGH FIRES.

(4): THE NEED TO UNDERSTAND IMPACTS OF CLIMATE CHANGE

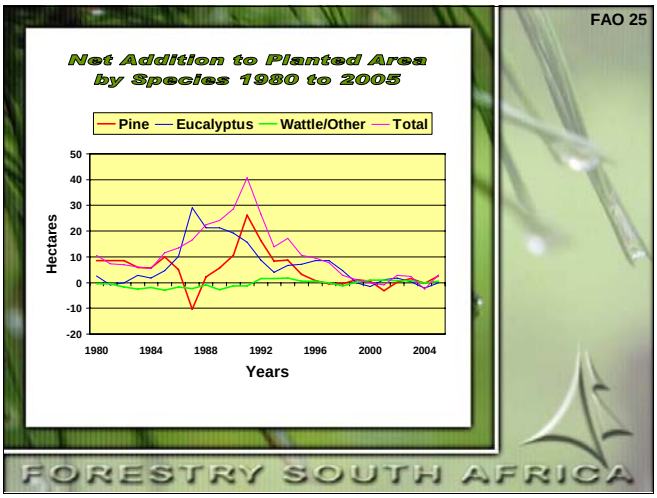
FAO 23

INCREASED PRODUCTION
LONG TERM DEMAND AND SUPPLY SCENARIO

Five Year Period	Total Supply (tons)	Total Demand (tons)	Surplus (+)/Deficit(-) (tons)	(%)
2005-2009	20,550,761	23,249,214	-2,698,453	-13.1
2010 – 2014	20,087,199	23,932,910	-3,845,711	-19.1
2015 – 2019	18,609,931	24,650,053	-6,040,122	-32.5
2020 – 2024	19,454,356	25,448,516	-5,994,160	-30.8
2025 – 2029	18,666,332	26,372,899	-7,706,567	-41.3
2030 – 2034	18,134,701	27,501,409	-9,366,708	-51.7
Estimated sustainable supply:	19,250,547	25,192,500	-5,941,953	-23.2

FAO 24

FAO 25



FORESTRY SOUTH AFRICA

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World Food Security, Planted Forests and Bioenergy

BRAZIL

June, 2008



1

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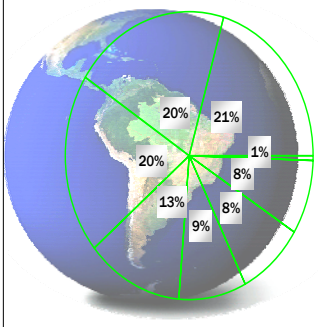
Brazilian Geographic Distribution (Occupation)



2007	Million Hectares	Share %
Federal and State Conservation Areas	176	20.7%
Grazing Areas (comprising Pasture)	172	20.2%
"Devolutionary" and other uses	171	20.1%
Indigenous Areas	107	12.6%
Rural Settlements	77	9.0%
Agriculture (crops)	72	8.5%
Available for agriculture (not comprising Amazon Forest)	71	8.4%
Planted Forests	5	0.6%
BRAZIL	**851**	**100%**

Source: IBGE, MAPA, Conab, ABRAF, INCRA and MMA

2

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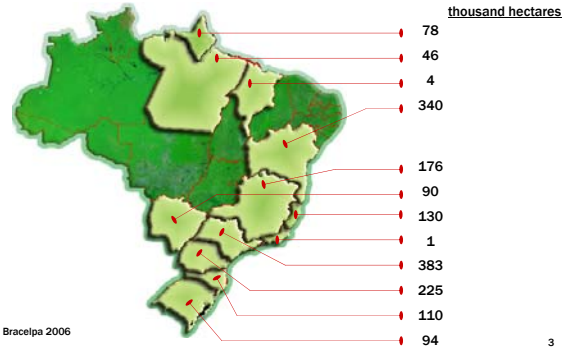
Planted Forests by the Pulp and Paper Industry Brazilian States 1.7 million hectares



Source: Bracelpa 2006

3

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Brazilian Lands - Biomass

Source: IBGE

4

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Contribution to the Environment by the Sector's Planted Forests

- ✓ 1.7 million hectares of planted area for industrial use
- ✓ 2.8 million hectares of preserved forests
- ✓ Total certified forest area: 2.2 million hectares
- ✓ Planted forests do not compete with traditional agriculture
- ✓ Restoration of degraded land
- ✓ Soil conservation
- ✓ Using land not fit for agriculture
- ✓ Mixing plantations and natural forests
- ✓ Biodiversity protection
- ✓ Watershed protection
- ✓ CO_2 sequestration
- ✓ Less pressure on natural forests

5

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Brazilian Forests Certification

- ✓ 2.2 million hectares of pulp and paper industry forests certified.
- ✓ 6.0 million hectares of certified forests in Brazil.

- ✓ Brazilian certification by CERFLOR/PEFC is recognized internationally.
- ✓ Brazilian forests are also certified by FSC.

6

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Brazilian Planted Forests – Productivity Evolution

REASONS FOR HIGH PRODUCTIVITY LEVELS

- ✓ Climate and soil
- ✓ Research
- ✓ Organized private sector
- ✓ High qualified labor force

TECHNOLOGICAL ADVANCES

- ✓ Genetics
- ✓ Biotechnology
- ✓ High quality raw material
- ✓ Socio-environmental planning
- ✓ Sustainable Forest Management
- ✓ Rotation

WOOD FOR PULP PRODUCTION

	Productivity (m^3/ha/year)				
	1980	2006	Growth Rate	Potential	Growth Rate
• Eucalyptus	24	39	63%	**50**	108%
• Pinus	19	30	58%	**40**	111%

7

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Brazilian Pulp and Paper Sector Carbon Sequestration

1.7 Million hectares of Planted Forests

1 hectare (eucalyptus)
=
18 tons of CO_2 (absorbed) /per year

Absorption

1.7 million ha x 18 = 30.6 billion tons

8

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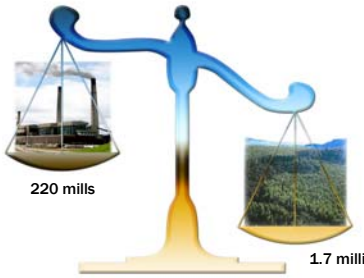
Brazilian Pulp and Paper Sector Carbon Sequestration Balance

Emission 1 ton = Absorption 3 tons



220 mills

1.7 million hectares

9

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Pulp and Paper Industry Main Investments - Brazil

2007
Completed

	Location	Product	US$ Million
Aracruz	ES	Market Pulp	200
Bahia Pulp	BA	Dissolving Pulp	400
Suzano	BA	Market Pulp	1,350
Klabin	PR	Paperboard	1,090
Total			**3,040**

2008 - 2009
Ongoing

	Location	Product	US$ Million
VCP	MS	Market Pulp	1,500
International Paper	MS	Printing and Writing Paper	260
Total			**1,760**

2010 - 2012
Investment Planned

	Location	Product	US$ Million
Aracruz (*)	RS	Market Pulp	1,800
Veracel	BA	Market Pulp	1,500
VCP	RS	Market Pulp	1,500
Cenibra	MG	Market Pulp	680
Stora Enso	RS	Market Pulp	1,500
Total			**6,980**

(*) Approved Project. Start up in August/2010.

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Pulp and Paper Investment Program 2003 - 2012

	Original Program			Finished	Revised Program		
	2003	Forecast 2012	Change 2012/2003	2003 - 2007	Investments Planned 2008 - 2012	Forecast 2003 - 2012	Change 2012/2003
Investments (US$ billion)		14.4		6.5	8.7	15.2	
Production (Million tons)							
- Pulp	9.1	14.5	**59%**	11.9		17.5	**92%**
- Paper	7.9	11.5	**46%**	9.0		11.5	**46%**
Exports (Million tons)							
- Pulp	4.5	7.4	**64%**	6.6		10.5	**133%**
- Paper	1.8	2.0	**11%**	2.0		2.0	**11%**
Exports (US$ billion)							
- Pulp/Paper	2.8	4.3	**54%**	4.7		7.5	**168%**

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Brazilian Agribusiness Map

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Brazilian Agriculture Productivity 2007

Temporary and Permanent Crops

	1990	2000	2007	% 2007/2006
Production (Mt)	381.3	481.6	702.9	84.3
Area (Million ha)	50.5	50.2	57.8	14.4
Productivity (Kg/ha/year)	7,549	9,594	12,161	61.1
Share over Total Brazil Area (%)	5.9	5.9	6.8	14.4

Source: IBGE and MAPA

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Main Brazilian Agriculture Production

Products	(million tons) 2000	2007	2008 Forecast	% 2008/2007
1. Sugar cane	326.1	515.8	557.9	8.2
2. Soy	32.8	57.9	59.5	2.6
3. Corn	32.3	51.8	57.8	11.4
4. Manioc	23.0	26.9	26.8	-0.5
5. Orange	17.1	18.5	17.9	-2.9
6. Rice	11.1	11.0	12.0	8.6
7. Cotton	2.0	4.1	3.9	-3.7
8. Wheat	1.7	4.1	4.6	12.4
9. Potatoe	2.6	3.4	3.5	3.6
10. Beans	3.1	3.2	3.5	7.8

Source: IBGE and MAPA

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Main Brazilian Agribusiness Exports 2007

	US$ Million	Million tons
1. SOYA COMPLEX	11,381.5	38.5
2. MEAT	11,294.7	5.9
3. FOREST PRODUCTS	8,819.9	15.0
- PULP AND PAPER	4,726.4	8.6
4. SUGAR-ALCOHOL COMPLEX	6,578.1	22.2
5. COFFEE	3,891.5	1.6
6. LEATHER	3,554.9	0.5
7. FRUITS (JUICE)	2,374.0	2.2
8. TOBACCO	2,262.4	0.7
9. CEREAL	2,219.9	11.7
10. FIBERS	1,557.7	0.7

Source: MAPA

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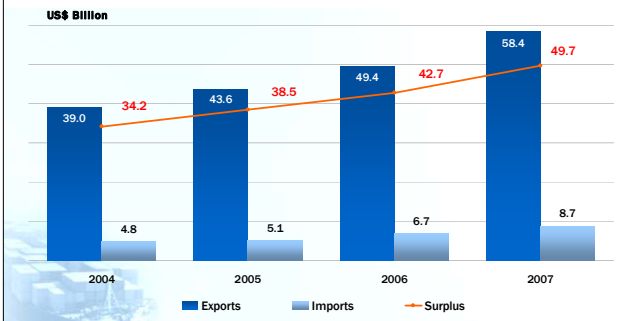
Brazilian Agribusiness Trade Balance



Source: MAPA

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Brazilian Trade Balance

	US$ Million 2005	2006	2007	% 2007/2006
Exports	118.5	137.8	160.6	16.6
Imports	73.6	91.4	120.6	32.0
Surplus	44.9	46.5	40.0	-13.8

Source: MDIC

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Brazilian GDP Growth

%	2004	2005	2006	2007	2008 *
Total Brazil	5.7	3.2	3.8	5.4	5.0
			Share %		
Pulp & Paper Industry	1.3	1.1	1.0	1.0	1.2
Agribusiness	25.5	23.6	22.9	23.5	23.7

* Estimated – IMF Projections
Source: FIESP, CNA and Bracelpa

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GDP Growth

%	Japan	USA	Euro Region	World Growth	Brazil	Emerging Economies	China
2007	2.1	2.2	2.6	4.9	5.4	7.9	11.4
2008 *	1.4	0.5	1.4	3.7	5.0	6.7	9.3

* Estimated – IMF Projections

Source: FIESP

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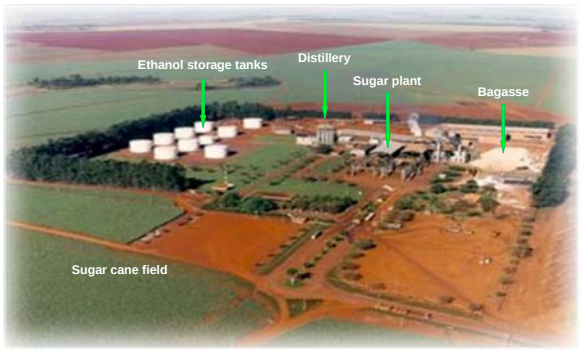
Brazilian Ethanol Production



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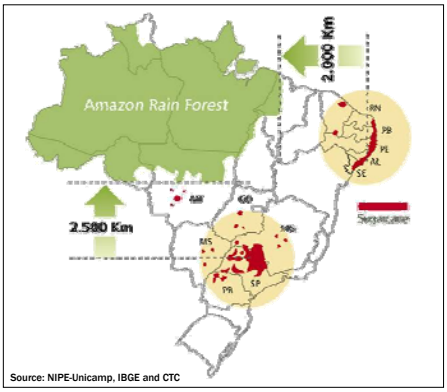
Sugarcane Production Regions in Brazil



Size Comparisons
(same scale)

Germany

850 Km

Western Europe

Source: NIPE-Unicamp, IBGE and CTC

21

Food Security: Food x Fuel

- ✓ The debate on the food versus fuel does not apply to the Brazilian case;
- ✓ The Brazilian sugarcane production will expand towards to **degradable pasture lands**, generating environmental, economic and social benefits.

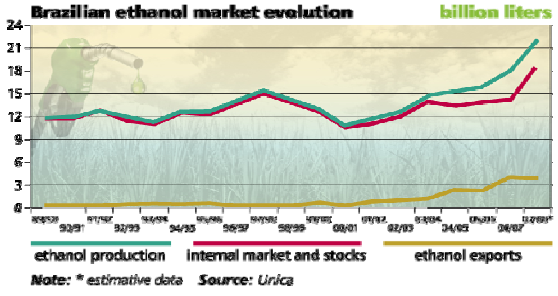
Availability of Arable Land in Brazil			
Million Hectares - 2007			
Brazil	851		
Total Preserved Areas and Other Uses *	536 (63%)		
Total Arable Land	315 (37%)	% of Total Land	% of Arable Land
1 Cultivated Land: All Crops	72.0	8.5%	22.9%
Soybeans	20.7	2.4%	6.6%
Corn	14.0	1.6%	4.4%
Sugarcane **	6.9	0.8%	2.2%
Sugarcane for ethanol ***	3.4	0.4%	1.1%
Orange	0.9	0.1%	0.3%
2 Pastures	172	20.2%	54.6%
3 Available Land (ag, livestock)	71	8.3%	22.5%

* These areas include Amazon Rain Forest, protected areas, conservation areas and reforestation, cities and towns, lakes and rivers. - ** Cultivated area - *** Harvested area for ethanol production.

Source: IBGE, CAN, Conab and UNICA

22

Brazilian Ethanol Production



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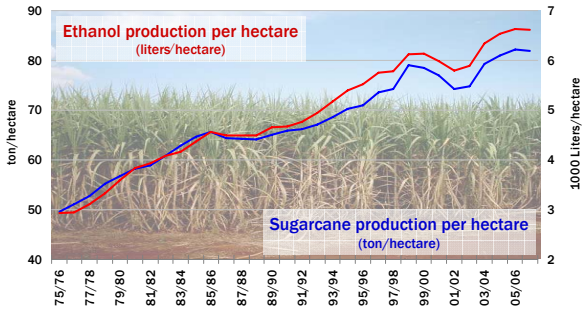
Brazilian Ethanol & Sugarcane Productivity Evolution



Source: UNICA

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Expected Sugarcane Industry Expansion

	2006/07	2010/11	2015/16	2020/21
Sugar Cane Production (M t)	**430**	**601**	**829**	**1,038**
Cultivated area (M ha)	**6.3**	**8.5**	**11.4**	**13.9**
Sugar (million t)	**30.2**	**34.6**	**41.3**	**45.0**
Domestic Market	9.9	10.5	11.4	12.1
Export	20.3	24.1	29.9	32.9
Ethanol (billion liters)	**17.9**	**29.7**	**46.9**	**65.3**
Domestic Market	14.2	23.2	34.6	49.6
Export	3.7	6.5	12.3	15.7
Bioelectricity (MW)	**1,400**	**3,300**	**11,500**	**14,400**
Share (%)	3%	6%	15%	15%

Expansion is being carried out mostly in reclaimed pasture land in the Center-South Region

Source: UNICA, COPERSUCAR and COGEN

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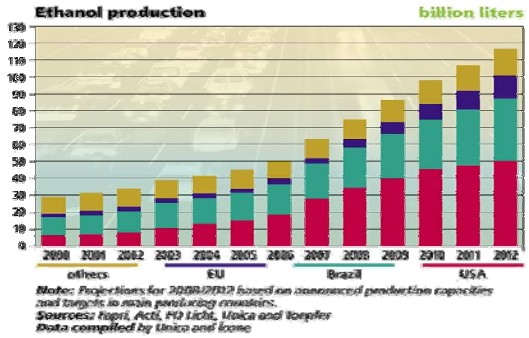
Global Ethanol Production



Note: Projections for 2008/2012 based on announced production capacities and targets in main producing countries.
Sources: Itaipi, Acti, F.O Licht, Unica and Isaplar
Data compiled by Unica and Icone

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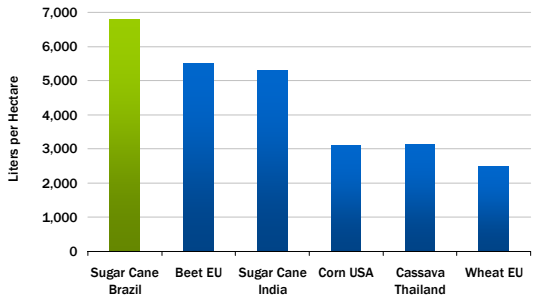
Ethanol Productivity



Source: IEA – International Energy Agency (2005)/MTEC/Icone/Unica

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Energy Balance

Feedstock	Renewable Energy Output / Fossil Energy Input
Wheat (EU)	1.2
Cassava (Asia)	1.2
Beet Sugar (EU)	1.9
Corn (USA)	1.3 – 1.8
Sugarcane (Brazil)	8.3
Gasoline/Diesel	0.8 (fossil energy output/fossil energy input)

Note: Data refers to life-cycle energy balance
Source: F.O. Licht, Macedo, I et alii 2004, NREL 2002

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Bioenergy

Sugar-Ethanol plants can produce their own thermal and electric energy through the bagasse burning and sell the excess electricity to the public grid.

bagasse

steam

electricity

Source: UNICA

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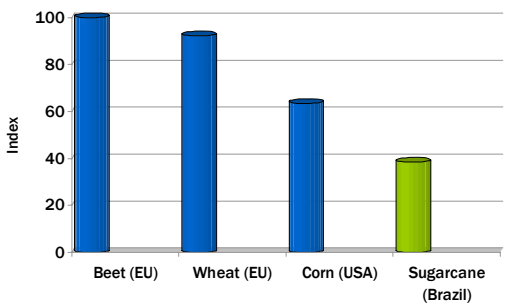
Economic Feasibility
Brazilian Ethanol Has the Lowest Cost



Source: F.O.Licht, Unica

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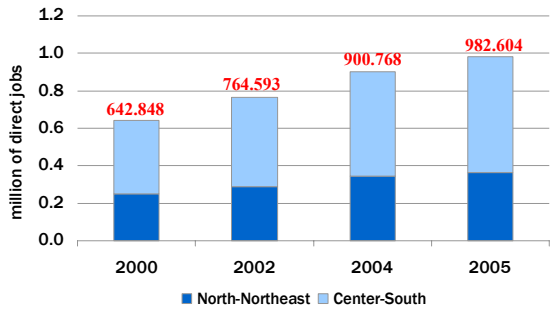
Formal Jobs
Jobs in the Sugarcane Industry



Source: MORAES, M.A.F. de, Brazil, 2007

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Environmental Merits
Selected Fuel Characteristics

	Ethanol	Gasoline
Sulfur content & sulfur compounds emission	☺	☹ $$
CO_2, CO, VOC and fine particles	☺	☹
NOx	😐	😐
Volatility	☺ / 😐☹	😐
Toxicity of fuel & combustion products	☺	☹ $$
Life-cycle Greenhouse impact	☺	☹ $$
Renewability	☺	☹
Biodegradability in soil & water	☺	☹ $$

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Worldwide Gasohol Use

Up to 5% Ethanol	Up to 10% Ethanol	More than 10%
European Union (moving to 10%) (?)	USA, Canada,	Brazil (25%)
India (moving to 10%)	China, Thailand,	Paraguay
Philippines	Australia, Pakistan,	Malawi
Ecuador	Colombia, Peru,	USA**
Bolivia	Venezuela, Jamaica,	Canada**
Japan (E-3/ETBE-7)	Dominican Republic,	Sweden**
	South Africa, Ethiopia	UK**
	Nigeria, South Korea	

Programs at different stages of development

** Flex-fuel vehicles

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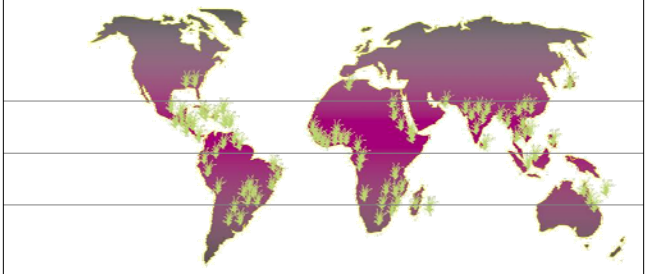
World Map of Sugarcane Production



100 countries could supply biofuels to 200 nations, while currently 20 oil producers provide fossil fuels to the rest of the world.

Source: British Sugar

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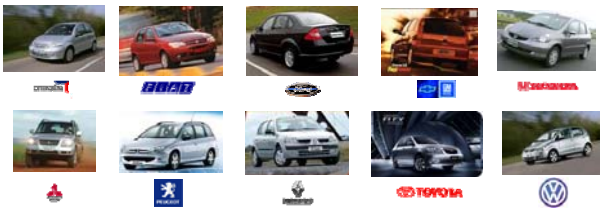
Flex Fuel Vehicles (FFV)
Introduced in the Brazilian Market in March of 2003

These vehicles are designed to be fueled with gasoline, ethanol or any blend of gasoline with ethanol.

At this moment: 10 brands and 63 models.



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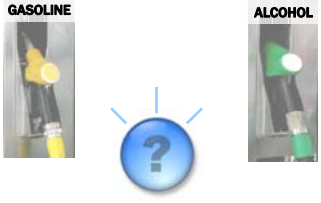
- ✓ The Total Flex Vehicles are designed to be indistinctly fueled with gasoline, ethanol or any blend of these two fuels.
- ✓ For the customers, the meaning of the Total Flex Vehicles is to choose the fuel at each vehicle refueling, according to fuel price, characteristics of quality, performance or even availability.



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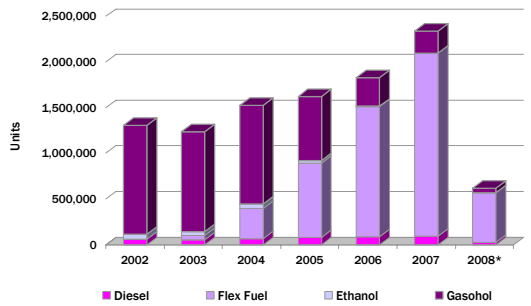
BRACELPA

Sales of Flex Fuel Vehicles



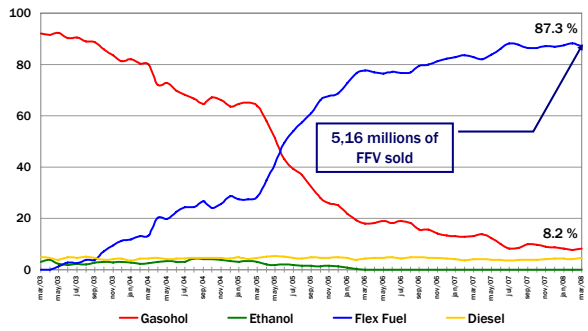
2008* => from January to March

37

BRACELPA

Flex Fuel Market Share

From March 2003 to March 2008



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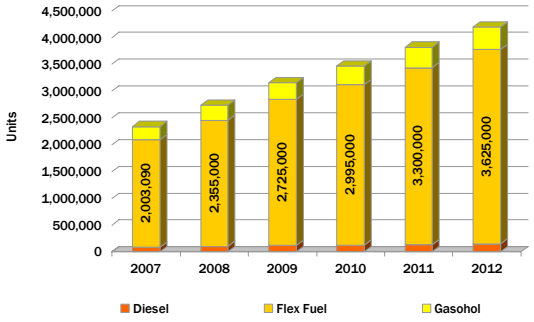
BRACELPA

Expected Flex Fuel Sales



Source: Brazilian Vehicle Manufacturers Association (ANFAVEA) & Brazilian Autopart Manufacturers Association (SINDIPEÇAS)

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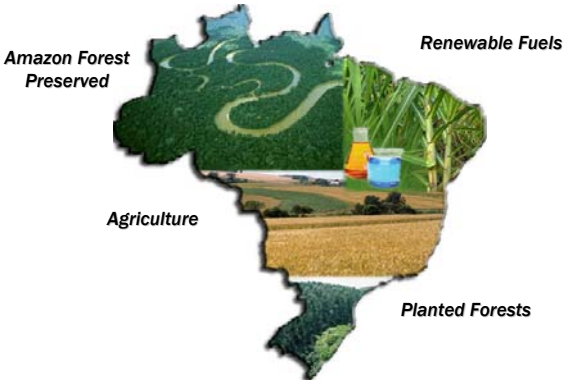
BRACELPA

Brazilian Sustainability



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BRACELPA

Thank You

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NZ Perspective on Biofuels and Food Security

Presentation to ACPWP

10 June, Bakubung, South Africa.

David Rhodes, Chief Executive Officer

New Zealand Forest Owners Association

International trends and issues

- Trend is up (US$38B investment now, US$100B by 2010)
- Strongly influenced by subsidies and policies
- Much global debate now about sustainability of this.
- Causes distortions in the supply of biofuels
- Biofuels are also contributing to food price crisis
- It is an emotive issue and FAO has been outspoken
- Role of wood is underutilised

International impact on NZ

- Corn production for ethanol production in the US estimated 33% by 2009
- Corn is a primary feed source for dairy which has flowed through to NZ land prices

NZ Government policy and issues

- Biofuels Bill before parliament (3.4% by 2012)
- Opposition widespread
- Key issues – CO2 emissions not accounted for, negative impact on domestic production
- New sustainability standard proposed but no international benchmark

Forestry biofuel potential in NZ

- Currently only surplus material used for biofuel but many wood processors use residues
- Estimated 35PJ of energy from forest biofuel out of total energy from renewable of 237PJ
- Subsidies elsewhere act against development of the resource
- Significant quantity available for use. Scion estimate enough for commercial scale ethanol refinery

Conclusions

- Biofuel will be important but current policies are creating distortions
- Greater focus needed on forestry biofuel potential
- Biofuel strategies that determine landuse outcomes need aligning with social strategies and avoid negative impacts on other sectors

Potential upside

- NZ whey is used to produce methanol
- The other use of this is in NZ Vodka

- What will this mean for the price of Vodka?

U.S. Climate Change & Bioenergy Policy

Donna Harman

President & CEO

American Forest & Paper Association

June 10, 2008

Voluntary Industry Actions

- Climate VISION –
  - U.S. power and energy-intensive industrial sectors improved their combined emissions intensity by 9.4% during 2002-2006. In 2006, GHG emissions for these sectors fell a combined 1.4%.
  - AF&PA members have reduced the intensity of their CO_2 emissions by 14% from 2000 to 2006.

Federal Regulation of CO_2

- EPA to decide on endangerment finding
- EPA developing a mandatory rule for all sectors of the economy to report GHG emissions – proposed rule due in September
- Transportation Department raises fuel efficiency standard for cars by 25% by 2015
- Interior Department lists Polar Bear as a "threatened" species under the Endangered Species Act

State and Regional Regulations

- The Western Climate Initiative
- California – AB32 Implementation
- Midwestern Climate Initiative
- Northeast Greenhouse Gas Reduction Accord
- Washington – SB2518

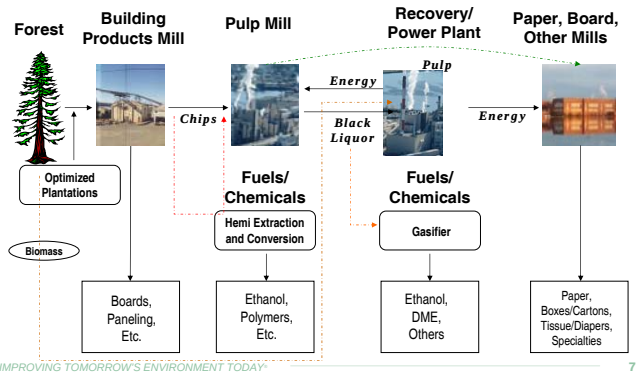
Lieberman-Warner Bill

- Lieberman-Warner Bill in Senate (revised as Boxer bill)
  - Mandatory cap and trade program
  - Approved by Senate Environment and Public Works Committee December 5, 2007
  - Debated on the Senate floor 1st week of June
  - Not particularly friendly to industry
- AF&PA is working with coalition of energy-intensive manufacturing industries in advancing changes to limit economic burden

A Strong Record On Energy Efficiency

- Seventy-four percent of U.S. wood products facility energy requirements are supplied by biofuel
- Sixty-four percent of pulp and paper mill energy needs are met by renewable energy including wood waste and black liquors
- Fossil fuel use per ton of paper production has declined by 56% since 1972 and 9% between 2004 and 2006
- Nearly 90% of the electricity generated at U.S. pulp and paper mills is cogenerated

Agenda 2020: Integrated Forest Products Biorefinery (IFBP) Concept



AF&PA Biomass Policy

- Market forces should be primary stimulant for use of wood and wood waste.
- Incentives or mandates for renewable energy should maintain regional agricultural and silvicultural capability and consider impacts to existing regional fiber markets.
- Federal R&D efforts for breakthrough technologies.
- Access to forest debris from public lands for biomass energy.
- Tax credits for renewable energy should be transparent.

National Policy Driving Bioenergy Production

- Energy Policy Act of 2005
- Energy Independence and Security Act of 2007
- Food, Conservation and Energy Act of 2008 – 'Farm Bill'

Experience of Corn Ethanol

- Increasingly used in U.S.
- Government Policies Drive Production
- Lesson for cellulosic ethanol?

ANNEX 1 - LIST OF PARTICIPANTS

Ms Marie S. Arwidson
Managing Director
Swedish Forest Industries Federation
Box 55525
Stockholm SE-102 04
Sweden
Fax: +46 8 611 71 32
Tel: +46 8 762 72 10
Email: marie.arwidson@forestindustries.se

Mr Peter Berg
President
New Zealand Forest Owner Association
Level 4,85 The Terrace
Wellingtom
New Zealand
Fax:
Tel: +6421421291
Email: p.berg@pentarch.biz

Ms Anne Brunila
President and CEO
Finish Forest Industries Federation
P.O. Box 336
Helsinki FI-00171
Finland
Fax: +358 9 1324445
Tel: +358 9 1326600
Email: anne.brunila@forestindustries.fi

Mr Luiz Antonio Cornacchioni
Institutional Relation
Sudano Papel e Celulose
Av. Brigadeiro Faria Lima, 1355
São Paulo 01452-002
Brazil
Fax: (5511) 3503 9150
Tel: (5511) 3503 9235
Email: lcornacchioni@suzano.com.br

Mr Carlos Alberto da Fonesca Funcia
President
Brazilian Society for Silviculture (SBS)
Av. Martin Luther Kinf, 2228 – Vila São Francisco
São Paolo 05358- 020
Brazil
Fax: (5511) 37144941
Tel: (5511) 37191771
Email: sbs@sbs.org.br

Ms Elizabeth de Carvalhaes
Executive President
Associação Brasileira de Celulose e Papel (Bracelpa)
Rua Afonso de Freitas, 499
São Paulo 04006-900
Brazil
Fax: 55.11.3885.3689
Tel: 55.11.3885.1845
Email: elizabeth.carvalhaes@bracelpa.org.br

Mr Bernard de Galembert
Forest Director
Confederation of European Paper Industries (CEPI)
Avenue Louise 250
Brussels B-1050
Belgium
Fax: +32 (2) 646 8137
Tel: +32 (2) 627 4927
Email: b.degalembert@cepi.org

Mr Michael Edwards
Executive Director
Forestry South Africa
P O Box 1553
Rivonia, Sandton 2128
South Africa
Fax: +27 (11) 803 6708
Tel: +27 (11) 803 3403
Email: trees@global.co.za

Mr Mikael Eliasson
Chairman
CEI BOIS c/o Setra Group
Stockholm S-10522
Sweden
Fax: 46 8 705 0320
Tel: 46 8 7050311
Email: mikael.eliasson@sentragroup.se

Mr Neil Fisher
Chief Executive Officer
Australian Plantation Products and Paper Industry Council (A3P)
29 Torrens Street
Barton ACT 2612
Australia
Fax: +61 2 62738011
Tel: +61 2 62738111
Email: neil.fisher@a3p.asn.au

Mr Jean-Paul Franiatte
Director General
Confédération française de l'industrie des papiers, cartons et celluloses (COPACEL)
154, boulevard Haussmann
Paris 75008
France
Fax: +33 (1) 5389 2401
Tel: +33 (1) 5389 2400
Email: jean-paul.franiatte@copacel.fr

Ms Olga Gorbunkova
Deputy Executive Director for International Cooperation
Confederation of Associations and Unions of Forestry, Pulp and Paper, Woodworking and Furniture Industry
1, Leningradskaya St
Moscow 141400
Russian Federation
Fax: 7 495 230 69 25
Tel: 7 495 230 69 20/21
Email: expo@wood-way.ru

Mr James V. Griffiths
Director, Sustainable Forest Products Industry & Biodiversity
World Business Council for Sustainable Development
4, chemin de Conches
Geneva CH-1231
Switzerland
Fax: +41 (22) 839 3131
Tel: +41 (22) 839 3114/00
Email: griffiths@wbcsd.org

Mr Jacob Handelsman
Senior Director of International Trade
American Forest and Paper Association
1111, 19th Street, NW - Suite 800
Washington, D.C. 20036
United States of America
Fax: +1 (202) 463 2772
Tel: +1 (202) 463 2446
Email: Jake_Handelsman@afandpa.org

Ms Donna Harman
President and CEO
American Forest & Paper Association
1111 19th Street, N.W., Suite 800
Washington, DC 20036
United States of America
Fax: 202 463 2424
Tel: 202 463 2476
Email: donna_harman@afandpa.org

Mr Masataka Hayama
President
Japan Paper Association
Kami-Parupu Kaikan 9-11, Ginza, 3-Chome
Chuo-Ku, Tokyo 104-8139
Japan
Fax: +81 3 3248 4826
Tel: +81 3 3248 4802
Email: m-hayama@jpa.gr.jp

Mr Mitsuru Kaihori
International Division
Japan Paper Association
Kami-Parupu Kaikan, 9-11, Ginza, 3-Chome,
Chuo-Ku, Tokyo 104-8139
Japan
Fax: +81 3 3248 4826
Tel: +81 3 3248 4802
Email: mitsuru-kaihori@jpa.gr.jp

Mr Gerrit Jan Koopman
Director
Royal Netherland's Paper and Board Association
Kruiswg 761
Hoofddorp 2132NE
Netherlands
Fax: + 31(0) 20 6543064
Tel: +31 20 6543055
Email: g.koopman@vnp-online.nl

Mr Avrim D. Lazar
President and CEO
Forest Products Association of Canada (FPAC)
99 Bank Street, Suite 410
Ottawa, Ontario K1P 6B9
Canada
Fax: +1 (613) 563 4720
Tel: +1 (613) 563 1441
Email: alazar@fpac.ca

Mr Mario H. Leonel
Counselor, SBS-Sociedade Brasileira de Silvicultura (Brazilian Silviculture Association)
MHELONEL Consulting
Av. Brigadeiro Faria Lima, 2601 - 3 Andar - Cj 34
Jardim Paulistano, São Paulo, SP 01452-924
Brazil
Fax: +55 11 3811 2990
Tel: +55 11 3811 2990
Email: mario@mhleonel.com.br

Mr Renny Madula
Department of Water Affairs and Forestry (DWAF)
Waterbron Building
191 Schoeman Str
Pretoria 0001
South Africa
Fax: +27 (12) 336 6656
Tel: +27 (12) 336 7383
Email: madular@dwaf.gov.za

Mr Ramesh Chandra Mall
Managing Director
Emami Paper Mills LTD
687, Anandapur, E.M. ByPass
Kolkata 700107
India
Fax: + 91 33 6613 6400
Tel: +91 33 6613 6264
Email: rcmall@emamipaper.in

Ms Danielle Melo
Assistant
BRACELPA
Rua Afonso de Freitas, 499, Paraiso
Sao Paolo
Brazil
Fax: 55 11 3885 3689
Tel: 55 11 3885 1845
Email: danielle@bracelpa.org.br

Mr Marco Mensink
Energy & Environment Director
Confederation of European Paper Industries (CEPI)
Avenue Louise 250, Box 80
Brussels B-1050
Belgium
Fax: + 32 2 646 81 37
Tel: +322 627 4928
Email: m.mensink@cepi.org

Ms Jane Molony
Executive Director
Paper Manufacturers Association of South Africa (PAMSA)
Cnr Austin & Morris Streets
Woodmead, Sandton, PO Box 1553, Rivonia 2128
South Africa
Fax: +27 (0) 11 803 6708
Tel: +27 (0) 11 803 5063
Email: jane.molony@pamsa.co.za

Ms Chantime Neeyaphan
Corporate Relations Office Manager
SCG Paper Public Company Limited
Bangkok
Thailand
Fax: +662 586 4512
Tel: +662 586 4511
Email: chantimn@scg.co.th

Mr Alfonso Ocampo
President & CEO
Productora de Papeles (Propal) S.A.
Km. 6 Antigua Carretera Cali-Yumbo
Yumbo
Colombia
Fax: +57 (2) 651 2205
Tel: +57 (2) 651 2201/2
Email: alfonso.ocampo@propal.com.co

Mr Michael Peter
Executive Director - Incoming
Forestry South Africa
PO Box 1553
Rivonia, Sandton 2128
South Africa
Fax: 011 803 6708
Tel: 011 803 3403
Email: trees@global.co.za

Ms Teresa Presas
Managing Director
Confederation of European Paper Industries (CEPI)
250 Avenue Louise, Box 80
Brussels B-1050
Belgium
Fax: (322) 627 49 32
Tel: (322) 627 49 14
Email: t.presas@cepi.org

Dr M.P. Rampedi
Deputy Director General: Forestry
Department of Water Affairs and Forestry (DWAF)
Waterbron Building
191 Schoeman Str
Pretoria 0001
South Africa
Fax:
Tel: +27 12 336 7212
Email: rampedi@dwaf.gov.za

Mr David Rhodes
Chief Executive
New Zealand Forest Owners Association
Level 4, 85 The Terrace
Wellington
New Zealand
Fax: 0064-4-4998893
Tel: 0064-4 4734769
Email: david@nzfoa.org.nz

Mr Valeriy Saykovskiy
President
Confederation of Associations and Unions of Forestry, Pulp and Paper, Woodworking and Furniture Industry of Russia
1, Leningradskaya St
Moskow 141400
Russian Federation
Fax: 7 495 230 69 25
Tel: 7 495 230 69 25
Email: sva@wood-way.ru
expo@forestconfederation.ru

Mr Eladio Susaeta
Ingeniero
Ingenieros y Economistas Consultores Ltda (INECON)
Villavicencio No. 361, Of. 105
Santiago
Chile
Fax: +56 (2) 369 1930
Tel: +56 (2) 369 1900
Email: lcastro@inecon.cl - inecon@inecon.cl

Food and Agriculture Organization of the United Nations

Mr Wulf Killmann
Director
Forest Products and Industries Division
Forestry Department
FAO
Rome, Italy
Tel: +39 06 570 53221
Fax: +39 06 570 55137
Email: Wulf.Killmann@fao.org

Mr Joachim Lorbach
Forestry Officer
Forest Products and Industries Division
Forestry Department
FAO
Rome, Italy
Tel: +39 06 570 52596
Fax: +39 06 570 55137
Email: Joachim.Lorbach@fao.org

Ms. Emma Foti
ACPWP Secretariat
Forest Products and Industries Division
Forestry Department
FAO
Rome, Italy
Tel: +39 06 570 52839
Fax: +39 06 570 55137
Email: emma.foti@fao.org

ANNEX 2 - COUNTRY REPORTS

AUSTRALIA

by
Neil Fisher
Chief Executive Officer
A3P – Australian Plantation Products and Paper Industry Council

What are the emerging issues facing the industry in your country?

National Political Situation

In November 2007 the Australian Labor party won the national election and assumed office for the first time for 12 years.

The new Government won the election (according to observers) because of the previous Governments Industrial Relations Policy (Australian Work Place Agreements) Lack of investment in Infrastructure (particularly roads, railways and ports) and a Lack of investment in Education and Health.

The incoming government also positioned itself as being more aware of the significance of Climate Change and outlined a plan to tackle Climate Change including the introduction of a National Emissions Trading Scheme by 2010.

Since being elected the Government has:

- Ratified the Kyoto Protocol
- Abolished Australian Work Place Agreements, and
- Apologised to the Stolen Generation.

In relation to the Plantation Products and Paper Industry the Government has announced the following specific policy initiatives.

Addressing Forestry Skills Shortages

Australia's forest industries are plagued by skills shortages. Skills Councils underpin industry-based education and training in Australia. Industry Skills Councils:

- Advise government and the Vocational Education and Training (VET) sector on current and future skills and training needs, and
- Support the development and implementation of nationally recognised training products and services.

Current training programs for the forest industries have been developed by ForestWorks, an industry-operated training company.

The Government has declared Forest Works as the new Forest and Forest Products Industry Skills Council and provide $1 million for its implementation. This initiative will hopefully:

- Build the skill-base and capacity of the current and future forest industries workforce;

- Provide the forest industries with direct input into the National Skills Reporting system which informs government and the VET sector of future skills needs; and
- Enhance monitoring of the effectiveness of forest and forest product industry training packages.

In addition to the Government initiative the Industry through A3P and NAFI jointly produced a DVD entitled "Reach for the SKIES". Funding was provided by the Australian Government.

The DVD is a valuable resource for careers advisers, employers, potential employees, as well as organizations assisting school leavers to access training and employment. The DVD offers a 5 minute preview and a 15 minute feature using modern filming techniques and fantastic case studies on the many long – term and meaningful career opportunities.

Every secondary school in Australia will receive a copy of the DVD as well as companies and organizations to use at careers fairs or school visits. (Some copies are available at the meeting).

In addition to the Reach for the SKIES DVD A3P and NAFI are developing an information brochure that provides industry employers with the information about the National Training System and ways in which they can address their labour and skills need using the system.

Boosting the Export of Forest Products

The Government will help boost the export of forest products through the establishment of a $9 million Forest Industries Development Fund.

Australia continues to record a significant trade deficit in forest and forest products, with imports totalling $4.2 billion in 2005/06 and exports totalling only $2.1 billion.

The Forest Industries Development Fund will encourage ongoing investment in value adding initiatives. Funding of up to $9 million will be provided on the basis of a matching commitment from relevant State Governments and applicants.

Building a Forestry Industry Database

The Government has promised to address the forest community's need for a comprehensive industry wide data base.

The Wood and Paper Products Industry Skills Shortage Audit, undertaken by A3P and NAFI in 2006, found that a lack of industry specific data was a significant factor influencing the sector's ability to identify areas of skills shortages and inform workforce planning and skills development.

The Government has committed $1 million to:

- Update the data contained in Forest and Wood Products Industry Workforce and Industry Data Collection research project
- Expand this data base to meet the future information needs of both government and industry, and
- Develop world's best practice benchmarks for the forest and forest products sectors.

Climate Change

The Government has invited A3P to commence the development of the Climate Change and Forestry Adaptation Action Plan identified in the National Climate Change Adaptation Framework, addressing:

- Key impacts, vulnerabilities and research priorities
- Potential adaptation tools and strategies in collaboration with industry, and
- The integration of climate change strategies.

The Government will also invest $8 million in addressing major knowledge gaps about the impacts of climate change on forestry and the vulnerability of forest systems.

The Action Plan, which is funded by the Department of Agriculture, Fisheries and Forestry, will provide a national strategic framework for industry decision making and business planning in the area of climate change management.

The Plan will help the industry to respond to climate change through mitigation and adaptation, underpinned by research and development, and communication. Sectors covered by the Plan include tree planting for commercial purposes (other than exclusively for carbon), native forests managed for wood production, and processing facilities (sawmills, board plants and pulp and paper mills).

The Plan will consist of five major streams:

- Information and communication – including an assessment of the industry's existing greenhouse footprint; industry's estimates of what it may contribute under various carbon cost scenarios and an audit of existing projects and initiatives in the area of the forest industry and greenhouse.
- Adaptation – including prioritised information requirements; an audit of existing information; current initiatives that will deliver further information; and further work required.
- Mitigation – including opportunities for greenhouse gas mitigation in emissions trading.
- Bio-energy and bio-refineries – an assessment of current research and development initiatives (Australian & overseas); barrier analysis of thresholds and hurdles to implementation; identification of next steps for research and implementation.

Preparing industry to address threats and opportunities – a focused and practical distillation of the actions needed to manage the risks and capitalise on the opportunities for the industry and for greenhouse mitigation.

Following finalisation, endorsement of the Plan will be sought from COAG under the Natural Resource Management Ministerial Council and Primary Industries Ministerial Council framework. The Plan will then have status as the Forestry & Climate Change Action Plan.

National Emissions Trading Scheme

A3P supports the development and implementation of an Australian emissions trading scheme provided the international competitiveness of emissions-intensive, trade-exposed industries such as pulp & paper manufacturing can be maintained. There are a number of basic principles that should be cornerstones of a domestic scheme design:

- A minimum of rules that limit the choice or level of abatement options.
- Timeframes that are appropriate for both the required investments (40+ years) and the duration of the environmental challenge.
- The scope should be as broad as possible.
- The accounting methodology should reflect the true fate of carbon.
- It must be national in scope, institutions, administration, implementation and management.
- Other Government energy efficiency, energy reporting and greenhouse reporting programs be removed.

- The right to emit should exist as a secure property right.
- A viable quantity of permits, that cover investment timeframes, should be issued to allow transparency of price and ability to hedge risk.
- The scheme must be based on simple, rigorous, efficient accounting rules that minimise the cost of measurement, compliance and transactions.

There are certain design elements of an emissions trading scheme upon which the support of the plantation products and paper industry is conditional.

- Forest carbon storage should be included in the scheme design.
- There should not be any artificial limitations on the amount of abatement that can be achieved through any particular means such as forestry.
- Carbon accounting that acknowledges that carbon remains stored in timber while it is in use and for many decades after disposal.
- All competing building materials (such as steel and concrete) in the domestic market must equally face the full carbon cost for emissions during their manufacture.
- Baselines should be set in manner that does not disadvantage early movers in the production and use of renewable energy.
- Other Government impediments or restrictions on the use of waste for energy production must be removed.
- Measures must be included to maintain the international competitiveness of emissions-intensive, trade-exposed industries, such as pulp and paper production, for as long as a viable global regime is not in place.
- These measures should include:

    - simple, streamlined processes
    - stable treatment of companies, facilities and products
    - durable rules and procedures
    - detailed, unambiguous criteria and rules that prescribe how decisions will be made
    - decision-making that is rigorous and fact-based.

Decision-making and regulation through a body that has authority to make determinations but is clearly separated from Government and political influence.

Water

Much of Australia continues to be gripped by the worst drought on record which has provided increased impetus to moves to reform the system of water management and allocation in Australia. The Australian Government has reconfirmed a commitment to A$10 billion over ten years to speed up the implementation of the National Water Initiative (NWI) with a particular focus on the Murray Darling Basin. The NWI outlines a range of commitments to reform (reduce) water allocation for agriculture and return water for environmental flows. Most of the changes will be introduced via a regionally based planning and management approach.
The NWI identifies change of land use to industrial scale plantations as an example of a potential 'significant water interception' activity which may be subject to regulation depending on further consideration of significance and the level of commitment of water in the catchment concerned.

The State governments are now grappling with the implementation of the many complex aspects of the NWI. With the notable exception of one region, South East South Australia, the technical complications associated with quantifying plantation water interception appear to have delayed any precipitate action to regulate plantation expansion in most areas. The situation in South East SA is a major concern to the plantation industry as it is a major plantation growing region and it appears that

the proposed water policy will have implications (water costs) for existing plantations areas not just new plantations, as had been previously anticipated.

If implemented as per the draft proposal it will also be inconsistent with the NWI. A3P represents the forestry sector on the NWC Stakeholder Reference Group.

Illegal Logging

In late 2007 the previous Government released its policy on illegal logging, "*Bringing Down the Axe on Illegal Logging – A Practical Approach*". The approach being pursued by the previous Government was relatively "hands-off" and focused on education and helping importers of sawn timber from South East Asia to demonstrate the legality of their sources.

In a virtually unrelated decision the Australian Government also committed A$200 million to combat illegal logging in Indonesia as part of its response to climate change.

The current Government has also committed $1 million to work with regional governments and industry to:

- Build capacity within regional governments to prevent illegal harvesting;
- Develop and support certification schemes for timber and timber products sold in Australia;
- Require disclosure at point of sale of species, country of origin and any certification;
- Identify illegally logged timber and restrict its import into Australia, and
- Argue for incentives within the emerging global carbon markets for avoided deforestation and better management of tropical rainforests.

The Australian and Chinese Government have agreed to develop a Memorandum of Understanding to combat illegal logging by establishing a working group to identify key areas for potential cooperation. Areas of cooperation to be considered included:

- Jointly promoting legal and sustainable forest management practices in the region;
- Agreeing on definitions of deforestation and illegal logging; and
- Developing systems for verifying legality of forest products.

A3P has its own "*Member Guidelines – Stopping the Supply of Illegally Logged Forest Products to Australia*". This was a proactive initiative by A3P to provide a practical framework for our members to demonstrate the legality and sustainability of their product.

SFM Certification

The past 12 months has seen continued activity in relation to Sustainable Forest Management (SFM) certification in Australia. Some 16 major Australian forest owners are certified to either the Forest Stewardship Council (FSC) or Australian Forestry Standards (AFS). The FSC certified forests are virtually all privately owned plantations while the AFS certified areas include both public and private plantations and public native forest. Nearly two thirds of the Australian plantation resource now has SFM certification.

FSC Australia has been established and launched with its immediate priority being the development of an FSC National Initiative for Australia.

The Australian Forestry Standard was approved as an Interim Standard by Standards Australia in 2004 and formally launched as an approved full standard in September 2007.

The Australian Forestry Certification System (AFCS) is accredited under the Programme for the Endorsement of Forest Certification (PEFC) scheme. The changes made to the PEFC scheme have

raised some challenges for the AFCS as making changes to the AFCS is not a simple process because of the consultation and approval processes required

Despite the progress outlined above there has been little change in market demand for certified wood products in Australia. Japanese woodchip customers continue to have a preference for certified wood and have been under pressure from ENGO's to request FSC certification only. The most significant development in the domestic market has been the decision by Australian Paper to market their Reflex brand photocopy paper with the FSC logo. A significant proportion of the fibre supply to Australian Paper is from FSC certified plantations managed by Hancock Victorian Plantations.

Energy Market Reform

The process of reforming the Australian energy market from a publicly owned system with limited interconnection between State based systems into a fully integrated and market based system is continuing slowly. There are major concerns for energy users that the failure to invest in new infrastructure and undue influence exerted by the large electricity generators has resulted in significant cost increases.

Average electricity costs have increased by 40 percent from the 2007 base with unit prices in excess of $85 mw/hr

Industrial Relations & Human Resource Shortages

As disclosed Industrial Relations Policy was an important election issue. Since the election the government has abolished Australian Workplace Agreements and overtime, this will mean that wages and conditions will again become centralised.

The strong Australia economy and demographics (ageing population), are leading to a significant shortage of employees with appropriate skills. This situation is accentuated for the wood product and paper industry because of its rural location and perceptions that the industry is dirty and dangerous.

What are the most important business developments within your industry over the last year?

Economic Situation

As a result of the international resources boom driven by Chinese demand, the Australian economy has remained relatively strong, however this has put significant pressure on the Reserve Bank of Australia (RBA) target inflation figure of 2 to 3 percent.
As inflation is now running at 3.5 percent per Quarter the RBA has increased the cash rate to 7.25 percent in April 2008 the highest rate for 12 years. While unemployment remains low a series of interest rate rises has dampened consumer sentiment and Housing Loans have dropped. The sustained and increasingly high level of the Australian dollar, particularly against the US dollar, has presented significant challenges for exporters and import competing business including paper and wood panels.

The new housing construction market, the primary driver for the sawn timber industry, which had been strong for an unusually long period finally began to soften in late 2004 and has continued to be very weak with significant implications for sawntimber demand particularly in the major Sydney and Melbourne markets.

Investments in Wood and Paper Manufacturing

The past 5-10 years has seen continued investment in new processing capacity in the wood products (sawn timber and panels) and paper industry in Australia. Much of this expansion has been driven by the increased wood availability resulting from the maturing of the softwood plantation resources established in the 1960s and 70s. As a result of this expansion there is now relatively little uncommitted wood available in Australia unless new areas of plantation are established. The major exception is the large area of short rotation eucalypt plantations in SW Western Australia, Western Victoria and Tasmania which will be coming on-stream in the near future and are currently destined for export in chip form.

There are numerous proposals under consideration for the establishment of new pulp mills in Australia. Probably the most advanced of these is the Gunns Ltd proposal to build a A$1 billion bleached eucalypt Kraft mill in Tasmania. Gunns is currently the world's largest exporter of hardwood woodchips and the proposed mill would consume a significant proportion, but not all, of Gunns' current export volume. The proposal continues to encounter significant opposition from local environmentalists.
The Government and Opposition both support the Pulp Mill.

Australian Paper is undertaking a major upgrading of pulping capacity at Australia's largest printing and writing paper making facility at Maryvale in Victoria. Visy Industries has announced that it will double the capacity of its Tumut mill. The mill produces packaging paper from plantation grown softwood and commenced operation in 2001. The Visy Tumut mill was the first Greenfields pulpmill built in Australia since 1982.

Review of the Taxation of Plantation Forestry

In June 2007 the previous Government enacted legislation that continued to provide tax deductibility for managed investment schemes (MIS) in Plantation Forestry.

However MIS Plantation Forestry companies must establish the plantation within 18 months and also demonstrate to the Tax Office that at least 70 percent of the funds collected will be for "direct forestry expenditure" and not for expenses such as marketing and commissions.

The new legislation now enables Plantation Forestry Investors to trade out of their investment after four years. This will generate market liquidity and help much needed long-rotation Sawlog Plantations compete equally with short rotation pulpwood.

The current taxation arrangements have been a fundamental factor in the significant plantation expansion that has occurred over the last ten years or so. New plantation establishment has averaged around 80 000 ha per annum over that period.

A number of issues flowing from the new Legislation are worthy of note including:

- The Government has again shown its support for the Plantations 2020 Vision and the benefits of continued expansion of plantation forestry.
- The plantation industry has been successful in convincing the Government of the social, environmental and economic benefits of the plantation timber industry.
- A distinction the Government has drawn between forestry and non-forestry investment does potentially expose the forestry investment sector to additional or renewed criticism from anti-forestry interests.

Employment

In 2005-2006 there was 83,000 people directly employed in Australian Forestry and Logging Industry. It is estimated that 66 of the 1,353 ABS local areas are economically dependant on the Timber Industry. Most public forest is available for recreation and tourism, regardless of whether it's managed for construction, environmental protection or wood production.

Indigenous Support

A3P and other sectors of the Australian Industry have signed a Memorandum of Understanding with the Indigenous Community to identify and deliver employment opportunities for Indigenous Australians. A National Indigenous Forest Strategy has been endorsed and a Communications Strategy is being developed.

BRAZIL

by
Rua Alfonso de Freitas
BRACELPA
Associacão Brasileira
de Celulose e Papel

The economy

In Brazil, the real GDP growth rose 5.7 percent during 2007, stronger-than-expected. Economic activity is being boosted by upbeat domestic demand conditions, particularly gross fixed investment which has continued to expand at a double-digit pace in the last quarter. The surge of inflation was driven mainly by higher food costs, pushing the annual rate up to 4.46 percent, compared to 3.1 percent during the previous year.

In May 2008, Brazil is declared "Investment Grade" by Standard & Poor's Ratings Services. This announcement will stimulate new investments in Brazil for the next years.

Compromise with the future

The Brazilian industry is defining its future. The strategic map shows the position of the industry in the competitive global scenario, the strategic priorities and the necessary foundations for the development of a strong and dynamic industry, with an expressive participation in world trade. The industry has no choice. The only option is to be a world-class industry. This requires two challenges: It has to be prepared to meet the challenges of globalization and, the changes in the organization of production.

The Program for Acceleration of Growth (PAC), launched on January 28, 2007, is a program of the Brazilian Federal Government which includes a set of economic policies for the next four years, and that aims to accelerate the economic growth of Brazil, providing total investments of US$ 295 billion by 2010, one of its priorities to infrastructure such as ports and highways.

The PAC is composed of five blocks. The main block includes measures of infrastructure, including social infrastructure such as housing, sanitation and mass transport. The other blocks include measures to stimulate credit and financing, improving the regulatory framework in the environmental area, release tax and fiscal measures for the long term. These actions should be implemented, gradually, over the 2007-2010 quadrennium. The goal is to achieve a GDP growth of 5 percent per annum.

The Brazilian federal government announced on May 12th 2008, the Productive Development Policy, which reduces cost for export, facilitating financing and reduces contribution to social securities for the exports industries. The plan has four goals to be achieved by 2010. One of the goals of the plan is to expand the current fixed investment of 17.6 percent of Gross Domestic Product (GDP) to 21 percent. The second is to stimulate innovation in the industrial sector, with a set of measures that will raise private investment in Research & Development for 0.65 percent of GDP by 2010.

The program also provides an increase of the Brazilian share in the world exports, from the current 1.18 percent (in 2007) to 1.25 percent. The fourth goal proposes to expand by 10 percent in the number of micro and small exporting companies, totalled 12,971 in 2010. Seven industrial sectors will seek to consolidate the leadership in the international market: pulp and paper, oil and gas, mining, steel, bioethanol, meat, and complex aircraft.

Planted forests

An initiative of the Brazilian pulp and paper industry, forest fostering programs have been gaining space and importance in the industry endeavours. Through this initiative, the companies offer small and mid-sized farmers the opportunity to plant forests along with their other activities. The partnership with those producers is an important mechanism for developing business, by expanding planted forest areas and contributing to generate income and keep manpower in rural economic activity. In 2007, the total area of the fostered rural forest producers is estimated around 360 thousand hectares, distributed in over 10 thousand small and mid-seized properties, what means an increase of 18 percent over the 305 thousand hectares planted a year before.

Sustainability

Brazilian pulp and paper industry holds the largest area of certified forests, out of the country's forest-based industries, according to the two recognized for forest certification systems: Forest Stewardship Council (FSC) and the Programme for Endorsement of Forest Certification (PEFC), of which the Brazilian System of Forest Certification (Cerflor) is an affiliate.

By March 2008, both systems certified around 2.2 million hectares of forests, including among them, the planted forests, the legal reserve and permanent preservation areas, managed buy the pulp and paper industry. These certifications guaranteed the use of criteria for sustainability in managing forest areas, so as to provide practices that are ecologically adequate, economically sustainable and social just. The challenge of the century is to grow in a sustainable way. It is evident that every company needs a business strategy that integrates environment practices, fair labor relations and effective social actions.

Social environmental responsibility

Our companies face the social environment responsibility with determination. In additional to generating 110 thousand direct jobs and 500 thousands of indirect ones, the sector has a history of social actions for employees and communities.

In 2007, the social environmental responsibility carried out by the companies reached around US$ 585 million, demanded in health, economical development, professional qualification, education, sports and culture, community support, forest fostering programs, environment preservation and control, salaries and social taxes, among others.

FINLAND

by
Anne Brunila
Finnish Forest Industries

EMERGING ISSUES FACING THE FOREST INDUSTRY IN FINLAND

Availability of domestic raw material is the critical question

Major part of Finland's forest industry production is based on the domestic supply of wood. In 2007, Finland's forest industry used about 75 million cubic metres of wood, and of this total, about 53 million cubic metres came from privately-owned forests. At the same time, 18 million cubic metres of wood was imported, originating mainly from Russia.

A survey conducted by the Finnish Forest Research Institute (Metla) showed that the annual growth of Finnish forests amounted to almost 100 million cubic metres. Of this total, 72 million cubic metres could annually be harvested sustainably, whilst within in ten years time the potential could reach as much as 80 million cubic metres. This means that Finnish forests have a large amount of unused potential for sustainable harvesting.

Up to 80 per cent of all domestic wood originates from privately-owned forests. Both the conditions and incentives for wood mobilisation should be further strengthened to secure wood availability for industrial use. The domestic harvesting potential should be used in full as import from Russia is likely to cease in the end of this year. Russian export duties on round wood will increase substantially in the beginning of 2009.

The standard of forest conservation in Finland can be regarded as excellent. Finland's sustainable forestry practices are a model for other countries to follow. 8.2 percent of forest land, amounting to close on 2 million hectares, is subject to strict conservation.

The forest biodiversity programme for southern Finland (METSO) launched in 2007 provides forest owners with a voluntary system for protecting their forests and increasing biodiversity. Voluntary methods, such as trade in natural values, offering areas for protection, and environmental support for forest management, can limit the impacts of protection on wood availability and are also more acceptable to forest owners.

Increased competition of wood: To raw material or to bioenergy?

Forest-based industry utilises several sources of energy. The Finnish forest-based industry's energy procurement focuses on low-emission alternatives, such as bioenergy, hydro and wind power as well as emission-free energy sources.

The forest industry is the largest producer of bioenergy in Finland. In recent years the industry has invested heavily in biomass-based energy and develops new technologies for biorefinery. To mitigate the climate change the industry supports the development and utilisation of renewable energy sources but at the same time stresses the importance to avoid conflicts between different uses of biomass.

The industry has invested in modern combined heat and power production technologies. This has improved energy-efficiency, increased generation of bioenergy, cut greenhouse gas emissions as well as reduced the dependence on imported electricity. As energy-efficiency yields direct cost savings and

competitive advantages, companies are constantly looking for ways to save energy as well as to make its use as efficient as possible.

The EU Energy Package and specifically the revision of the ETS directive should secure a level playing field for the European pulp and paper industry. Less than one-third of the world pulp and paper production is subject to the EU emission trading and extra costs incurred both directly and indirectly. It is also extremely important that the national climate and energy strategy for 2020 recognises the potential of forest-based industries to be a part of the solution in achieving the national targets for renewable energy, biofuels and emission reduction.

THE MOST IMPORTANT BUSINESS DEVELOPMENTS IN FINLAND OVER THE LAST YEAR

Global changes in the forest sector have a strong impact on Finland

The forest industry has undergone an unprecedented upheaval during the 2000s. Slackening demand in growth in Western world, coupled with the strong growth experienced in the East, particularly in Asia, has moulded the markets into a new position. When the latest technology is combined with both strong demand and an increased capacity in production in Asia and Latin America, the competitive advantages will change significantly in the pulp and paper markets.

The Finnish forest industry bases its future competitiveness on efficiency, flexibility and innovations. Despite the ongoing structural change the Finnish forest industry's production has experienced continual growth.

In order to increase its competitiveness through innovations, the forest sector has launched several far-reaching R&D initiatives in Finland:

- A common vision and research agenda for the European as well as national level has been defined up to the year 2030. In 2006, the Finnish forest cluster defined its research strategy with seven priority areas to renew the industry, improve long term competitiveness and promote sustainable development.

- The Finnish state is providing public R&D funding to support the attainment of world-class competence in chosen research and business areas. One of the five established centres of excellence is forest cluster. "Forest Cluster Inc", the innovation boosting company, coordinates and defines the research programmes executed by the centre of excellence. The innovation-boosting company is a private company owned by major forest companies, machinery and chemical producers as well as universities and R&D institutes.

SOCIO-ECONOMIC CONTRIBUTION OF THE FINNISH FOREST INDUSTRIES

The forest industry is a major contributor to Finland's prosperity

One in ten Finns makes a living either from the forest industry (pulp and paper industries in addition to the wood products industries) or from the sectors that serve the industry.

In addition to this, the packaging, printing and publishing industries, maintenance companies, machinery and equipment manufacturers, timber harvesting contractors, the energy sector, the chemical industry and research establishments are all major employers serving the forest sector.

The entire forest cluster employs, directly or indirectly, almost 200 000 Finns, of whom 60 000 work in the pulp, paper and wood-products industry and 20 000 in forestry.

Finland's forest industry is also a major user of transport services. It accounts for about 60 per cent of all tonne-kilometres on Finnish railways and about 30 per cent of the road transport. The forest industry also accounts for almost half of Finland's exports by sea.

Trend and status of the benefits generated by the industry: Finnish wellbeing has been built on the forest-based industries

The entire forest cluster - forestry, pulp, paper and wood products industries, the machinery and equipment manufacturers, the timber harvesting contractors, the energy sector, the chemical industry and research establishments - together account for one third of the country's net export revenues.

In addition to the large share in direct and indirect employment, the industry is investing in the rebuilds and renewals of its mills and machinery. In 2007, the capital investments of the forest industry amounted to 1,4 billion euros.

There are 40 paper and board mills as well as 40 pulp mils in Finland. The mills are located mainly in rural areas all over the country and they are usually the largest industrial employers locally. Most of the local communities have been built around the pulp and paper industry units which have long traditions. Some mills have already celebrated their 100th anniversaries.

FRANCE

by
COPACEL

EMERGING ISSUES FACING THE PULP AND PAPER INDUSTRY IN FRANCE

Some issues are derived from EU policies. The prominent ones are:

- The on-going discussions on the different proposals unveiled by the Commission in connexion with energy and climate (RES Directive, ETS Directive);
- The implementation phase of REACH.

These issues, already widely discussed in different fora, are not specific to France. Hence, although of paramount importance, they will not be addressed here.

Issues more specifically connected to the French political agenda are:

- Extensive discussions on environment (Grenelle de l'environnement). These multi-stakeholders discussions, now over, will deliver several pieces of regulation during the year. Some provisions of these regulations, if adopted by the Parliament, might have a direct impact on the pulp and paper industry: increased targets for the use of biomass (higher competition with the fibre resource used by the industry), risk of taxation of some papers (those considered as generating too many wastes), kilometric tax on truck, etc.
- On going discussions the framework decree pertaining to the permitting of the mills.
- Regarding the organisation of the energy market, the p&p industry is still waiting for the agreement by the European Commission of the consortium (Exeltium) set up by a pool of electricity purchasers with EDF. The Commission scrutinises this consortium, as it will very likely be used as a model for comparable systems in other member states.
- Regarding fibrous raw materials procurement, the p&p industry regrets the low development of certified forests.
- Concerning the perception of paper and boards, it can be deplored that the trend of dematerialization of data transfer leads some companies or public bodies (eg: banks sending monthly documents by e-mail to their customers, etc.) to promote this change not by advocating that it is more convenient for the bank, but by stating it will "save paper and preserve the environment".

MOST IMPORTANT BUSINESS DEVELOPMENT

In 2007, French GDP annual growth, with respect to 2006, amounted to 1.9 percent, which is lower than the 2006 figure (2.2 percent). Household consumptions remained nonetheless at a relatively good level (2.1 percent increase), and the unemployment rate, as calculated by the International Labour Organization, decreased from 8.8 percent (2006) to 8.0 percent (2007). The sub-prime crisis affected some banks (but at a lower level than in other countries). The disorders caused by the financial crisis will affect the French "real economy" in 2008, but with a magnitude partly unknown. Although still at a low level on the year (1.5 percent), consumer prices started to increase at the end of 2007, as a consequence of the global phenomenon of surging prices for foodstuffs and energy.

On the political arena, Mr Sarkozy has been elected as new President of the Republic in May 2007.
Regarding the business profile of the pulp and paper industry in 2007, noticeable features are:

- Increased consumption of paper and board (+ 2 percent) up to 11.13 million tons.

- Decreased production (- 1.4 percent) as a consequence of 4 Paper Machines having shut down. The closure of these PMs represents a capacity of 135 000 t p.a.
- Better balance between supply and demand, as well as the consequence of increased cost factors, has led to an increase of the index mirroring the price of the different grades. This index (100 = average for 2000) has reached the value of 101.3 at the end of 2007.
- Increased share of imports in domestic consumption (shift from 58.7 percent in 2006 to 59 percent in 2009).
- Decreased exports with respect to the production.
- Negative consequence of the US$/Euro glide on overseas exports.

The recovery of the price (after a long period, between 2000 and mid 2005 of downward trend), as well as a better consumption of paper and board made the outlooks for 2008 relatively optimistic, although major uncertainties, linked to the US slump and the financial disorders might have more detrimental effects than expected.

SOCIO-ECONOMIC CONTRIBUTION THE PULP AND PAPER INDUSTRY

It is obvious that the pulp and paper industry, as any other industry, generates many indirect jobs. Its specificity is certainly that both these direct and indirect jobs are to a large extent in rural or remote areas. No comprehensive or pulp and paper specific study on this issue exist in France.

Corporate Social Responsibility policies are more and more frequent, especially in international companies implementing in each mill a policy decided at corporate level.

GERMANY

GENERAL ECONOMIC SITUATION IN GERMANY IN 2007

The German economy again grew strongly in 2007. Real gross domestic product was up 2.6 percent after growth of 2.9 percent in 2006. The strong dynamic push was driven by both external and internal demand.

Domestically, it was above all the strong expansion in plant and equipment spending that kept the upswing on track. The altogether buoyant world economic situation gave exports a further boost. Thanks to the sound competitiveness of German companies, German goods were in particularly high demand on world markets. Exports grew 8 percent. Consumer spending was hit by the rise in value-added tax by 3 percentage points to 19 percent, so that it was merely able to reach the previous year's level.

The dynamic expansion is also increasingly benefiting the German labour market. Total employment rose continuously and significantly in the course of the year.

All in all, 2007 went better than expected. Both the German economy and the world economy showed considerable resilience, especially in the face of a soaring oil price.

PERFORMANCE OF THE PULP AND PAPER INDUSTRIES IN 2007

Germany's paper-grade pulp production expanded by 5 percent to over 1.5 million tonnes in 2007, with 860 000 tonnes going into exports. Most of the pulp used in German paper mills came from abroad. Some 4.2 million tonnes of paper-grade pulp was imported.

The German pulp and paper industry fared well, keeping pace with the overall economy in 2007. In quantitative terms, it was a successful year. For the manufacturers of paper and board in Germany, 2007 brought another production record. Total output was up by more than 2 percent to 23.2 million tonnes, after growing by as much as 5 percent in 2006.

Since Germany's total capacities did not increase in 2007, the expansion in production led to higher utilization of the paper machines. Capacity utilization was up on average from 95 to 97 percent.

A look at the long-term trend confirms that the pulp and paper industry goes on being a growth sector. The rise in output in Germany averaged 3.5 percent annually in the last seven years – far more than was still being predicted at the end of the 1990s.

With the 2007 record result, the German pulp and paper industry remains no. 4 worldwide, after the US, China and Japan, and is no. 1 in Europe. The engine of these positive developments was once again exports. The high 5 percent increase to 13.9 million tonnes is due in the main to high growth rates in Eastern Europe. Apparent consumption rose 2 percent to 21.1 million tonnes. Since imports, up 5 percent to 11.8 million tonnes, were growing even more strongly than consumption in Germany, the import rate climbed to 56 percent.

Despite good sales developments, the earnings situation in the German pulp and paper industry is still unsatisfactory. True, the erosion of paper prices has come to a halt and, in the case of some paper grades, prices are up again, but the difficult competitive situation and, in places, the much higher costs for raw materials, transport and above all energy, again brought the German pulp and paper industry a low cash flow of 6.5 percent and a pre-tax profit of 0.5 percent in 2007. In 2001, cash flow had still been 18 percent, and profit had stood at 11 percent. For the capital-intensive pulp and paper industry, the 2007 income figures were far from adequate.

SPECIAL ISSUES

Emission Trade

The German and European pulp and paper industry is concerned about plans of the EU commission to introduce large scale emission credits auctioning by 2013. If introduced without exemptions for energy intensive branches, it would cost the German pulp- and paper industry more than its annual earnings. In fact this would be the first direct EU tax by which the climate policy will collect funds that will be used partly to finance competitors to EU industries in developing economies and again present an un-level playing field in Europe which will ultimately harm the competitiveness of Europe.

The EU ETS will generate up to 75 billion Euros (estimated) per year in 2020. This will see the largest amount of money being taken out of the EU economy ever, unprecedented in scale and impact. Full auctioning is not needed to ensure a properly functioning carbon market or carbon price and will not help industry to meet the required targets but it will unnecessarily damage European industry. ETS sectors need to reduce by 21 percent compared to 2005, not by 100 percent.

Bio energy

The German and European pulp and paper industry is concerned about plans of the EU Commission to increase the use of solid biomass for power generation substantially until 2020. To the industry "solid biomass2 means wood. Due to reliable surveys, the realisation of the EU plans would create a gap in the supply of wood of at least 260 Mio. solid cubic meters per year and endanger the forest based industries. The pulp and paper industry therefore proposes to increase the mobilisation of wood resources and the plantation of energy wood. It also proposes to increase the research in bio fuels of the 2nd generation. A primacy of the use of wood for the production of materials should be codified.

Code of Conduct

After the European pulp and paper industry Federation had adopted its code of conduct against illegal logging, national paper industry associations have started to monitor the pulp and wood supply of its national industry. The recent VDP-survey gave evidence to the fact, that for 100 percent of wood supply and 75 percent of pulp supply there are proofs of origin, which document the provenance of the material from sustainable managed forests.

Germany
Fibres for the Production of Paper and Board (tons)

	2007	2007:2006(e)	in %
Chemical Pulp for Paper Production	1.470	1.545	5,1
- Exports	860	863	0,3
+ Imports	4.058	4.159	2,5
.....= App. Consumption	4.668	4.841	3,7
Mechanical Pulp for Paper Production	1.468	1.456	-0,8
.....- Exports	101	129	27,7
+ Imports	260	261	0,4
= App. Consumption	1.627	1.588	-2,4
Recovered Paper Collection	15.479	15.362	-0,8
- Exports	3.339	3.004	-10,0
+ Imports	3.114	3.464	11,2
.....= App. Consumption	15.254	15.822	3,7
Fibres in total App. Consumption	21.549	22.251	3,3

(e) = estimated

Germany
Paper and Board
(1.0 tons)

	2006	2007 (e)	2007:2006 in %
Production	22.656	23.172	2,3
Exports	13.263	13.908	4,9
Imports	11.220	11.816	5,3
App. Consumption	20.613	21.080	2,3
Export Quota	58,5	60,0	
Import Quota	54,4	56,1	

(e) = estimated

HUNGARY

Though the favourable international conditions, the Hungarian economy expanded in 2007 only by 1,3 percent and the dynamism of the growth showed a slowing-down tendency during the year. This slowing-down was primeraly due to the domestic consumption damping effect of the rectifying measures of the government. Significant decrease began in the field of the investments, agriculture and also of services. The unemployment rate increased to a level of 7,4 percent and also the yearly average inflation reached the highest level of the last years (8 percent). Taking an over-all view, almost all economic index-numbers of the country show weakening tendency.

PULP

The only pulp mill in Hungary is owned by Delfort Group, its capacity amounts to approx. 30 000 tons. The factory was rebuilt from straw pulp to flax production at the end of 2005 and in 2007 it has not reached its full capacity yet.

The pulp production and consumption in 2007 are shown below:

thousand metric tons

	Production	Export	Import	Consumption
Chemical pulp	-	-	182	182
Other pulp	20	20	-	0
Total pulp	20	20	182	182

PAPER

Paper consumption and production developed in the last 5 years as follows:

thousand metric tons

	2003	2004	2005	2006	2007
Production	546	579	571	553	552
Export	296	307	389	366	356
Import	634	659	697	758	775
Consumption	884	931	879	945	971

In line with the relatively weak performance of the Hungarian economy, the paper consumption increased by approx. 2,7 percent.

Paper production in 2007 remained practically at the same level as in 2006. Unfortunately, one smaller paper mill (Fűzfő) closed down its production. This falling quantity was counterbalanced by the production of Delfort Group in Dunaujvaros. The company rebuilt the paper machine purchased in 2005 from Mondi and started to manufacture release paper.

The Hamburger Group decided to enlarge its production capacity and started to build a new paper machine at its Hungarian subsidiary, Dunapack Ltd. The paper machine, with a finished reelwidth of 7800 mm, will produce approx 350.000 tons of brown testliner and medium from 100 percent waste paper in the range of 70-150 g/m^2. The PM is designed for a construction speed of 1500 m/min and starts its production in July 2009.

The breakdown of the Hungarian paper production by main grades is shown in the next chart:

	2006 thousand tons	2007 thousand tons	2007/2006 %
Total paper and board	553	552	99,8
Newsprint	0	0	0
Printing-writing paper	187	117	62,6
Uncoated p-w paper	187	117	62,6
Coated p-w paper	0	0	0
Sanitary and household paper	30	39	130,0
Linerboard	92	98	106,5
Fluting medium	208	207	99,5
Kraft wrapping and packaging	12	14	116,7
Other paper and board	24	77	320,8

For this production the country used 437 thousand tons of recycled paper reaching a utilisation rate of 79 percent.

The industry has to face in Hungary the following emerging issues:
- high energy costs
- modest growth of economy

INDIA

India today presents a unique scenario with increasing human population and rapid economic growth putting immense pressure on natural resources including forests. Considering and going by available Forest Maps, it is inferred that about 41 percent of the forest cover in the country has already been degraded and dense forests are losing their crown density as well as productivity. Moreover, at present 70 percent of forests have no regeneration and more than 55 percent are prone to fire.

Severe scarcity of wood is also apprehended. The annual fuel wood requirement in India is estimated to be about 200 million tones. Considering growing capacity expansions of the wood based industries in the country, requirement of woody raw material in years to come would be exponential. Currently, even as per the Government's own estimates, it is 82 million CUM. Therefore, undoubtedly there is an emerging imbalance between demand and supply of wood in the country. It is estimated that by the year 2010, while demand will go up to 95 million CUM., supply will not go beyond 70 million CUM. It is feared that the gap between demand and supply of wood raw material is bound to rise from 24.5 million CUM in 2010 to 52.3 million CUM in 2020.

The pulp & paper industry is particularly plagued by inadequate availability of quality raw material and escalating cost of wood. At present supply is supplemented from other sources such as agro-forestry. In absence of the Government's enabling policy for promoting Industrial Plantation, IPMA Member Mills have taken initiative on hand and approx. 0.25 million ha. of degraded land of marginal farmers has been scientifically utilized to grow pulpable varieties of trees. Also, courtesy India's liberalized industrial and trade policy, industry is able to import wood pulp, waste paper etc. to meet its raw material needs to an extent.

Environmental Governance

The Government of India's new instrument of governance is called National Environment Policy (NEP) 2006 which seeks to:

- Encourage adoption of science-based and traditional sustainable land use practices.
- Promote reclamation of wasteland and degraded forestland.
- Encourage watershed management strategies, for arresting and reversing desertification, and expanding green cover
- Promote sustainable alternatives to shifting cultivation where it is no longer ecologically viable.
- Encourage agro-forestry, organic farming, environmentally sustainable cropping patterns, and adoption of efficient irrigation techniques.

Government is also considering registration of nurseries and forest reproductive material.

Handicaps for the Indian Paper Industry

The most striking handicap is the conspicuous absences of a dedicated industrial plantation policy which can help build up a robust raw material base for the wood based industries. Though the industry is meeting substantial part of its current requirement of wood based raw material from the farm/agro-forestry, these sources can not be said to be dependent models from economic sustainability point of view, as the wood production / procurement rates are quite high compared to international benchmarks. Government's afforestation policy - GOI(Government Of India) has set a target of achieving a 33 percent green cover by 2012 as against 23 percent forest cover at present. This would require afforestation of nearly 34 million ha in the next 4 years which is quite a gigantic task, more so when the pulpwood plantations of less than 2 mn ha asked by the IPMA (the Paper Mill Association) since so many decades for developing captive plantations has not materialized so far.

- Government's Biodiversity Act - Under this act, the paper companies cannot claim land for plantations. Instead Joint Forest Management (JFM) of existing forests are advised. Joint Forest Management (JFM) mechanism does not permit participation of private industries in afforestation.
- Government's Tribal Rights Act - Forest lands / Forest produced by the inhabitants (tribal) are now regularized. This act creates further pressure on natural forests.

New Mechanism for Resource Mobilization – MSP

Despite the handicaps, the Industry is pursuing the Multi Stakeholder Partnership (MSP) model as briefed below:

- The MSP model has been developed for augmentation of existing land resources by involving the Government Departments as the owner of the resources, inhabitants/users/local community dependent on these resources for their daily livelihood and the Industry proposing to organize effective use of these resources for meeting the raw material requirement.
- The MSP framework is proposed in a fashion that it is:
    - Not a lease document, but
    - Legally enforceable MoU partnership between
        - Company/user group, public or private
        - Local community
        - Forest department/land owning agencies

This model is awaiting Government's consideration at the Cabinet level for approval.

Industry's Recent Hallmarks

Notwithstanding the above, the Industry continues to make its serious efforts in plantations to report the following important hallmarks:

- 250 000 ha of farm forestry plantations
- Multiple species worked upon Eucalyptus, Casuarina, Leucaena, Acacia
- successes in bio-technology based on research on Clonal multiplication
- 3 to 5 time increase in wood yield through Clonal technology

A few significant projects by IPMA Members are worth mentioning which have been recognized or merit recognition by the Government authorities and/or other International Schemes for improvement of planting stock through Tree Improvement Programme. These are as below:

- ITC Ltd Paperboards and Specialty Papers Division
    - 7 projects already registered with UNFCCC to generate cumulative CERs to the extent of about 1.4 million.
    - 80 000 ha. of plantation with a potential to sequester 12 million tons of carbon, reducing 43 million tons of CO_2 having a carbon credit value of US $ 172 million in the first commitment period ending in 2012. The Project is under development but presently utilized to reduce CO_2 foot print and ITC is a carbon positive company.
- TNPL – its bio-methanation project is first CDM project implemented in the paper industry to generate 37 000 CERs a year. TNPL has about 82 955 CERs to its credit.

- JK Paper - The World Bank's Bio Carbon fund has signed an Emission Reduction Purchase Agreement (ERPA) that will enable small and marginal farmers to earn additional revenue through carbon credits. JK Paper Ltd. project covering 3500 hectares of severely degraded lands of marginal farmers for afforestation stands approved as a first ever project of its kind by World Bank.
- A P Paper Mills – Over the last 10 years, it has promoted farm and social forestry on more than 55 000 ha of degraded lands of small and marginal farmers and is developing a PIN to enable these farmers earn additional revenue through carbon credits.

Overseas Acquisition

- Ballarpur Industries Ltd. has recently acquired 97.8 per cent equity in Sabah Forest Industries (SFI), Malaysia.
    - SFI is the largest integrated paper & pulp facility in Malaysia with a 144 000 MT Paper plant and a 120 000 MT Pulping unit.
    - SFI has forest concessions of 289 000 hectares valid upto 2094. The enterprise value is US$ 261 million.

New Vistas

Forest Stewardship Council (FSC) certification is becoming a non trade barrier for Indian paper companies. As bulk of the raw material is obtained from farm and agro- forestry, the farmers (huge numbers, running into hundreds of thousands with small holdings) find it practically impossible to form groups and obtain the FSC certificate. Though the farm forestry is a sustainable model promoted by the paper industry, the FSC principles and criterions are difficult to be satisfied for issuing of certificate. In this connection, GOI is thinking to establish Indian Forest Stewardship Council to help the process of certification.

ITALY

by
ASSOCARTA

GENERAL ECONOMIC SITUATION IN ITALY IN 2007

GDP rose in 2007 by 1.5 percent, showing a slowdown respect to 2006 (+1,8 percent). The trend in output was closely ***related to domestic components of demand***, both investment and especially ***consumption*** which was boosted by the rise in disposable income and policies to encourage spending on durable goods. ***No relevant contribution to growth*** came instead ***from external demand***, which was ***affected by the appreciation of the euro*** and the slowdown in Italy's main export markets.

During the year economic activity gradually weakened and it appears to have stagnated in the final quarter. The acceleration in prices of energy and food products and the tightening of credit conditions associated with the turmoil in financial markets were among the factors curbing ***household spending*** in second half of the year.

The going on of the upward phase during first 3 quarters of the year generated an expansion in employment in all areas of the country in 2007 and the ***unemployment rate*** declined to the historically low level of 5,6 percent on 3rd Q., but showed a new growth in 4th Q (6,6 percent).

On annual average basis, ***consumer price inflation*** declined slightly in 2007, to 1,8 percent (2,1 percent in 2006). This result, however, was affected by the acceleration registered after the summer (+2,6 percent in 4th Q), due to rising pressures in the energy and food markets.

Italy started 2008 year suffering the euro appreciation, the weakness of United States economy, the all-time peaks of crude oil prices, rising food raw materials prices, troubles on financial markets and a national political situation to restart after last week elections.

THE PERFORMANCE OF THE PULP AND PAPER INDUSTRY IN 2007

1,000 Tons	2006	2007	2007/2006 %
Pulp production (woodpulp)	502	498	-0,8
Paper and board production	10.008	10.112	1,0
- Graphic papers	3.381	3.458	2,3
- Packaging grades	4.661	4.681	0,4
- Household and sanitary papers	1.411	1.451	2,9
- Others	556	522	-6,1
Paper and board Exports	3.502	3.514	0,3
Paper and board Imports	5.262	5.297	0,7
Paper and board Consumption	11.768	11.894	1,1

With reference to P&B production, 2007 ***P&B production*** was over ***10,1 million tons, +1 percent respect to 2006.*** As far as 2008 is concerned, 1st Q production (official figures for January and February an estimates for March) show -2 percent respect to same period 2007, due to low March production because of Easter holidays.

Turnover was over 7.66 million of € [12] ***in 2007***, for the first time over the top registered on 2000 year, ***+5.7 percent respect to the 2006 value*** (7.25 million €). This result was also due to the *positive trend observed in prices, generally moderate but not uniform for different products*: difficulties are still caracterizing graphic sector while packaging and tissue showed a fairly good dynamism mainly during 1st 9 months of the year. During 4th Q 2007 and 1st Q 2008 market situation appeared changing also for these sectors showing reducing or stable prices.

It is necessary to remember that among 2000 and 2007 while production grew by 11 percent, turnover rose by 0,8 percent only, in presence of production costs in continuous and sustained growth.

This way, the situation of the P&B sector as a whole remains not easy and characterized by heavy concerns regarding:

- levels reached by gas and energy prices due to continuing rises of brent quotations, even if accompanied by the weakness of US dollar,
- fibrous raw materials quotations trend. In addition to virgin raw materials rises, we cannot forget remarkable increases for different types of recovered paper: between +11 and +78 percent depending on qualities on last December respect to the end of 2006 and other new increases during this first part of the year respect to very high levels of same period 2007.

Market penetration politics acted by emerging Far East countries, mainly China, going on being further elements of strong uncertainty to be kept under control. The reorganization process of Italian paper sector is going on with mergers, rationalizations in production which require some shuts down, but also some restarts or potentiations of activity.

[12] Turnover historical series were revised to take in account the correction of a previous overestimate of household and sanitary papers.

JAPAN

by

Japan Paper Association

EMERGING ISSUES FACING THE JAPANESE PULP AND PAPER INDUSTRY

1. Not only saturated growth on domestic shipments volume but also increase in production cost, especially raw materials and energy cost, are significantly affecting companies' profits.

Domestic shipments for 2007 inched up by 0.1 percent from 2006. The volume didn't hit the highest record in the past and the growth rate has continued to be less than the growth of GDP. Although companies have been making every effort to reduce production costs, their efforts are not adequate to cover faster cost increase of raw material, especially recovered paper, and energy such as oil and coal. As a result, 10 listed paper and paperboard companies' sales for fiscal 2007 ending March 31, 2008 increased by 4.5 percent, while recurring profits dropped by 33.0 percent.

2. Global Warming is one of the most important issues for the industry in Japan.

Under the Committed Action Plan for the Environment, JPA promotes the use of energy saving equipment and the conversion from fossil fuels to biomass, as well as the expansion of forest plantation areas for absorbing and fixing carbon dioxide. JPA is committed to reducing the unit consumption of fossil fuel energy by 13 percent from fiscal 1990 level by fiscal 2010, to reducing the unit consumption of carbon dioxide emission by 10 percent, and to expanding forest plantation are to 600 000 hectares by fiscal 2010. As a result of significant efforts by member companies, by fiscal 2006, both the fossil fuel unit consumption target and forest plantation target had been achieved. In September 2007, JPA set the following new targets:

- On a five-year average basis from fiscal 2008 to fiscal 2010, reduce fossil energy consumption per unit and fossil energy derived CO_2 emission per unit by 20 percent and 16 percent from the level of fiscal 1990, respectively;
- By fiscal 2012, expand the industry's forest plantation at home and abroad to 700 thousand hectares through promoting forest plantation activities.

Japanese pulp and paper industry's economic/business performance for 2007

- Japanese economy in 2007.
  - Real GDP grew by 2.1 percent from the previous year.

- Performance of the Japanese pulp and paper industry in 2007 over the previous year.
  - Paper and paperboard production inched up by 0.5 percent to 31 266 thousand tons.
  - Domestic shipments of paper and paperboard edged up by 0.1 percent to 30 227 thousand tons.
  - Imports of paper and paperboard dropped by 16.7 percent to 1375 thousand tons.
  - Exports of paper and paperboard rose by 13.7 percent to 1385 thousand tons.
  - Recovered paper consumption increased by 1.3 percent with a utilization rate of 61.2 percent.
  - Recovered paper exports decreased by 1.1 percent to 3844 thousand tons, of which 3170 thousand tons were shipped to China accounting for 82.5 percent.
  - 12 listed paper and paperboard companies' sales for fiscal 2007 ending March 31 2008, inched up by 0.5 percent, while recurring profits dropped by 14.7 percent.

NEW ZEALAND

by
David S. Rhodes
Chief Executive
NZ Forest Owners Association

EMERGING ISSUES

Climate Change policy

As was noted in the previous report, the domestic climate change policy for forestry remains fluid.

Two significant decisions have been made since the last ICFPA meetings. Firstly, the government has introduced an Emissions Trading Scheme (ETS) as the foundation for meeting its Kyoto obligations. Secondly, it has reversed its previously reported stance and given, under pressure from the sector, owners of forests established post-1990 the option of receiving carbon credits and liabilities.

Although billed as all sectors, all gases, the ETS is not yet that. The only sector at this stage that is in, with rules that apply from 1 January 2008, is the forest sector. Other sectors are proposed to be brought in with varying requirements at later dates. Agriculture will be the last sector with a proposed starting date of 2012.

While the rules now apply to forestry, the legislation has not yet been passed. Understandably this has created investment uncertainty in the sector.

The proposed approach has created numerous schisms amongst forest growers. Post-1990 forest owners are treated very differently to pre-1989 owners. Post-1990 owners of large forests are subject to a heavy deforestation tax while owners of small blocks are exempt. Owners of pre-1990 forests, who also purchased their forests after 2002, may receive less compensation than those who purchased pre-2002.

Adding to the uncertainty and confusion, the rules by which carbon will be measured and can be traded have yet to be developed although they are expected within the next 6 months.

Aside from domestic policy the industry has identified a number of issues within the Land Use, Land Use Change and Forestry Rules of Kyoto that need addressing before New Zealand signs up to the next commitment period. These include recognition of the role of harvested wood products and the inadequacy of the instant oxidation assumption, the length of the next commitment period and the need for flexible land use arrangements for planted forests. At present if a pre-1990 forest is harvested and replanted it gains neither credits nor debits. If the same forest, however, is relocated it still receives no credits but is liable for all the carbon absorbed in the forest. From an atmospheric point of view and the objectives of Kyoto, this is a nonsense that NZ will seek to have addressed.

A significant research programme is also being funded as part of a Plan of Action for Sustainable Land Management and Climate Change (SLMCC). Many of these are detailed further at http://www.maf.govt.nz/climatechange/poa-investment-sheets and include:

- Life cycle analysis of sustainable biofuel options;
- Carbon stocks and change in NZ's soils and forests;
- Developing a method for valuing forests and forest land in New Zealand in the presence of carbon pricing;
- Life Cycle Assessment (LCA) for building materials in New Zealand;

- Carbon trading and forestry decision-making; and
- Land-use mapping and LULUCF accounting

Throughout this turbulent time the industry has found significant common ground with the environmental groups, including the political Green Party. This led, last year, to the signing of a Climate Change Accord between the groups. Further detail is available at:

http://www.nzfoa.org.nz/index.php?/News/Forestry_Bulletin/Summer_2007-08/Forestry_green_groups_sign_climate_accord

Water

Consistent with its identification as a global issue at the Forest Industry CEO's Roundtable meeting in Shanghai in 2007, quantity and water quality debate is increasing in New Zealand. While in general New Zealand is endowed with plentiful rain, its geographic distribution, and unfettered use, is now presenting significant ownership and allocation issues. For forestry this is manifesting itself in the form of catchment "no-go" zones for forestry on the basis that it reduces the amount of water for downstream users such as dairying and viticulture. This, notwithstanding that many of the catchments were originally covered in native vegetation.

Concurrently water quality issues are also emerging, largely attributable to an intensification of agriculture. The key issue is nitrogen runoff and nitrogen trading is being investigated as a solution. The initial allocation under such a system is a point of contention given forestry's low level of N output which is penalized if grand-parenting of emissions is the allocation mechanism chosen. An alternative of providing only a catchment level average across all land users based on hectares would be an abrupt shock to a number of intensive dairying farming operations that produce nitrogen discharge levels many times this level. The issue is destined to be resolved in the Environment Court.

The government is again attempting to facilitate some change in land use practice through a nationally facilitated Water Programme of Action. All primary sector groups have been encouraged to offer up voluntary targets and clean water targets have been agreed to. Forestry is not one of the land uses of most concern to government and can generally point to considerable action already taken. Nonetheless, the NZFOA has made a further commitment on behalf of its members including compliance with its Code of Practice (see below).

Environmental Code of Practice

Several years work has culminated in the production of a significantly enhanced NZ Environmental Code of Practice for Plantation Forestry. The new Code was completed last year and "delivered" to the industry through a series of workshops throughout the country.

A feature of the new Code, which was developed at the same time as the FAO Code of Practice for Planted Forests, features a new section on industry best environmental practices (BEPs). The BEP section is intended as a tool-kit; describing a range of management options that could be applied to a particular situation.

The Code aims to be a key reference tool to a wide range of parties involved in managing forests including environmental regulators. It is also being used as a framework for training purposes.

The document is available in .pdf format on the NZFOA website at:

http://www.nzfoa.org.nz/index.php?/File_libraries_resources/Standards_guidelines/Environmental_Code_of_Practice

Biosecurity Funding and Decision-Making

As part of the development of a new Biosecurity Surveillance Strategy the Ministry of Agriculture and Forestry is reviewing who should decide whether an exotic organism is contained or eradicated, and who should pay. A public discussion paper has been released seeking feedback on these fundamental questions.

The eradication programme for an incursion of painted apple moth in 2003/04 was more than $51 million although this is a fraction of the annual economic cost of controlling the moth in forest plantations if it had become established.

The forest industry has welcomed all proposals to more formally involve the primary sectors in preparing for and dealing with incursions. The NZFOA also accepts the principle that there can be circumstances where it would be appropriate for an industry to contribute to an incursion response but significant concerns still exist over how any new costing model might operate.

In particular the industry does not accept that exacerbators of such threats should be ignored because of the challenges of identifying their level of contribution to the problems. It is also expected that the efforts of the industry to prevent or minimise the impact of an incursion through surveillance, research etc, would be taken into account. The forest growing industry is the only primary industry in New Zealand to have a formal surveillance programme for plant pests and diseases, funded by growers themselves. This has recently been subject to an independent review and achieved a glowing report. To date, however, there has been no confirmation that this nationwide contribution to preventing pest and disease establishment will be taken into account.

Certification

Independent third-party certification has continued to grow - over half the plantation forest area in New Zealand is now certified. In New Zealand the only internationally recognised third party certification that has been pursued to date is FSC. The industry is thus highly supportive of FSC.

Fifteen managers of significant plantation holdings in New Zealand already hold Forest Stewardship Council certification and two other major players are in the process of obtaining it. In total this represents around 1 million hectares.

In addition, information supplied from NZFOA FSC certificate holders in New Zealand shows that around 50 percent of the volume produced by forest growing companies is currently captured by an FSC Chain of Custody.

The group of "certified" plantation managers has formed an FSC cluster to co-operate on FSC issues of common interest. It has already funded, and will continue to fund, industry good activities related to certification. The cluster is supported by NZFOA.

This group, in conjunction with NZFOA, has collaborated closely with Australian FSC forest interests, and more recently established links with Canadian and United States certificate holders (the CANZUS group represents over 20 million hectares).

FSC International has recently initiated reviews of two key areas of policy for plantation forest owners. Firstly a review of the policy applying to Plantation Forests and secondly a review of pesticides used in such forests. Both reviews are very important to planted forest growers.

The pesticide review was undertaken by the Pesticide Action Network UK, which is an environmental organisation focused on eliminating pesticide use. Several pesticides commonly used in New Zealand

have been designated highly hazardous and require "derogation" (consent) from FSC to use. Derogation is not guaranteed and a successful derogation lasts for five years with a presumption of non-renewal. Also derogation applications must have the support of environmental and social groups, which is clearly not guaranteed.

Several NZ pesticides are essential for biosecurity, pest control and economically sustainable primary land use. In particular NZ forestry cannot successfully operate completely without the use of some pesticides and is therefore at considerable risk of losing the ability to hold FSC certification. The FSC Pesticide Policy also threatens the ability of NZ to manage and/or respond to existing and new biosecurity threats (i.e. possums, buddleija, painted apple moth, Asian gypsy moth).

New Zealand has just received the response to its application for derogations and will now be working through this. There is already a level of concern, however, that the decisions by FSC reflect a lack of understanding about local conditions, e.g. suggestions for trials that have already been undertaken. Nonetheless the industry is committed to, and has discussed with FSC, a continual improvement process that would quantify progress towards the objectives of the derogations and the goal of minimizing use.

NZ Wood

Towards the end of last year an NZ Wood programme was officially launched by the Minister of Forestry. This marked the first promotional phase of presenting the environmental credentials of forests and wood to the building and design sector.

The programme is a joint initiative between the wood processing and forest industries under the pan-industry WoodCo banner and in partnership with government. The common goals increased wood consumption and greater awareness of the environmental credentials of wood and forests, particularly in the fight against climate change.

Much activity has taken place since the launch with significant positive feedback both from within, and from outside, the industry. The website http://www.nzwood.co.nz is under continual development.

The programme involves promotion and advertising, research, website and information channels, a NZ Wood brand, design resources and training initiatives.

The programme has been supported by other government initiatives such as the recent government announcement that government buildings will be required to submit a wood design option.

INDUSTRY SITUATION

Forest estate

The unprecedented levels of deforestation and net forest loss reported in the last country report came to an abrupt halt at the end of 2007. This was in response to the threat of a significant deforestation tax on pre-1990 forests that were not replanted (referred above). Initially government dismissed claims by the industry that this tax would be as much as $13 000/ha, but the latest estimates indicate that it is more likely to be around $20 000/ha. At that level a change to any other land use becomes prohibitive.

The level of deforestation tax without the threat of punitive measures is difficult to know. Certainly it would have been higher than historical levels, but against that much of the intended deforestation for the next five years had been brought forward to beat the deadline and significant areas of immature trees were felled.

Dairy farming returns have continued to soar, partly on the back of the biofuel policies being implemented overseas. This coupled with tight market conditions and investment uncertainty generated by the emerging climate change policies means that forest planting remains subdued.

Allowing owners of post-1989 established forests the option of selling Kyoto compliant carbon credits introduces a market opportunity but one that comes with some risks and forest management implications. For some it will provide a viable alternate revenue stream especially those whose forests were planted shortly after post-1989 and who are managing multiple age classes rather than a single, even aged, stand. Prices in the carbon market relative to the wood market could be an important future determinant of whether, and when, harvesting is undertaken. This is likely to have a positive impact on forest planting but, as noted, this will be tempered by the cost of acquiring land (price have doubled in the last 5 years) and the fact that agriculture does not currently face any emissions restrictions. Many will also chose to exercise the option because of the harvesting liability risk and the compliance costs.

Government has set a target of an additional 250 000 ha of forest by 2020 from 2007, or just under 20 000 ha/annum. In addition to the boost anticipated from carbon credits the government has also introduced an Afforestation Grant Scheme (AGS) as an option for those who do not want to enter the world of carbon monitoring and trading. This will involve a 10 year contract arrangement with government providing a grant but retaining the credits and liabilities. The AGS is also likely to encourage some planting despite the constraints above. In the absence of carbon related measures to encourage planting there would be little new afforestation.

Economic situation

The New Zealand economy is set to slow markedly this year, as firms face a squeeze on profitability from rising cost pressures caused by a high New Zealand dollar, extremely high shipping rates, a tight employment market and high interest rates. In the short term employment rates in the industry are dropping, reflecting the challenges currently facing the forestry sector such as unfavourable exporting conditions but also the impact of the industry having to compete for portable skills in an economy with a very low unemployment rate. The fact that a number of other economies are in the same situation only intensifies this challenge.

On a happier note, while small in scale initially, trade benefits are expected from New Zealand's free-trade agreement with China. Initial benefits are expected to show up first in the tourism sector as most favoured nation status impacts perception and service flows far quicker than reductions in tariffs. However, impact on the forest sector is expected to be minimal as tariffs on logs and lumber are not affected, and some processed forest products are exempted.

Market conditions are very challenging across all markets. NZD$FAWG (free at wharf gate) returns have been severely impacted by a weakening US$ and shipping rates reaching historic highs. In the medium term, it appears interest rates will remain on a firming bias as the NZ Reserve Bank continues to set policy to address persistent inflation problems.

Freight rates are expected to continue to strengthen with the recent 65 percent increase achieved in the iron ore trade indicating that demand for bulk goods in the developing economies is expected to grow for a few years yet – keeping shipping rates high.

Demand in the first quarter of the year in the key Korean and Chinese markets has been affected by very low consumption levels due to a very cold snap in Eastern Asia – in China the coldest winter in 50 years.

In NZ, Australia and the US, softwood supply has remained stable against a slowing consumption level as the housing markets undergo a substantial correction affecting new starts and additions and alterations. This has lead to an oversupply situation in these markets, creating challenging market conditions.

Although there are regional differences, in general, logging activity in New Zealand is falling away sharply.

Socio-economic contribution of the New Zealand Forest Industry

Forestry and sawmilling employ approximately 20 000 people in New Zealand. There is potential for the current harvest of approximately 18 million cubic metres to increase by at least a third and this would result in expansion in all sectors of the forest industry.

The sector also has an indirect multiplier effect on supplier-industries via its purchases, and consumption-industries via forestry wages/profits being spent.

Forest sector employment has a number of beneficial characteristics associated with it including being spread among settlements small and large, and providing mostly year-round fulltime rather than seasonal and part-time. The sector also attracts and employs a higher proportion of young people (aged 15-39 years). This younger, permanent workforce assists communities retain schools, active sports clubs, etc.

Forest companies generally have a strong community involvement through, for example, provision of firewood, involvement in local community fire-fighting units and enabling access to recreational opportunities in forestry blocks such hiking, orienteering, biking, four-wheel and rally driving, horse riding, hunting and fishing.

Forest management in New Zealand provides an undisturbed environment for maintaining archaeological remains, historical monuments, sacred cultural sites and burial grounds which are identified and protected. It is also utilized for improving the social landscape through visual screening, e.g. of industrial or mining sites, and as a noise barrier.

Plantation forestry in New Zealand has provided particular benefits for Maori who are significant, and increasing, owners of forests.

From the 1960's Maori found themselves owners of large areas of relatively unproductive land that was not suitable for farming. Financial reserves for development of the land were limited and Maori land was not able to be used for security to raise capital for investment. There was also a significant and on-going drain of young Maori from the rural lands to the urban centres.

Leasing arrangements with government who subsequently developed forestry have provided a means of transitioning many Maori groups. Over time, as the forests managed by the Crown are harvested the bare land will be handed back to Maori who are then able to utilize their share of the stumpage income to replant and manage the second rotation crop.

With the cash-flow hurdles overcome, and the lands secured, Maori are able to take on the forest management business. It is a business that is managed with a view to the long-term and according to Maori cultural relationships with the land. It is also a business that provides for their economic well being. The ability to create stable, inter-generational, employment has been one of the strong appeals of forestry which has provided career management paths for many. The numbers employed do at times involve a trade-off with machinery which is dictated by economic efficiency and safety. Funds have been used for establishing educational scholarships, Marae development, and cultural and health initiatives.

As well as improving confidence and optimism, the forests have provided important paid hunting and other recreational opportunities as well as fuelwood supply.

PORTUGAL

by
Luis Deslandes
Member of the Board, Portucel Soporcel Group

Overall economic situation

The performance of the Portuguese economy in 2007 was conditioned by the well know events that affected the world economy during the year, and also by the Government's priority concern of consolidating the public accounts in order to contain the external deficit below 3 percent. For this it was quite evident the continuing rise of taxation and the decline of public investment.

Data from the national statistics authority point to GDP growth of 1.9 percent in 2007, an increase of 0.6 of a percentage point over 2006 but still significantly below the average in the Euro Area, where GDP growth reached 2.6 percent. For 2008 the Government expects GDP to growth by 2.4 percent, thus surpassing a recent forecast for the Euro Area.

In 2007 the combined current and capital account deficit was EUR 13 869.4 million, with exports and imports rising year-on-year by respectively 8.4 percent and 6.9 percent.

The budget dropped well below 3 percent in 2007 (2.6 percent), which means that its reduction was pursued (from 3.9 percent in 2006) and confirms Portugal's realignment to the criteria of the Euro Area's Stability and Growth Pact. For 2008 the government target for the budget deficit is 2.2 percent.

At 2.7 percent, the inflation rate in 2007 rose significantly above the average of 2.1 percent in the Euro Area, which the Government had set as a target at the beginning of the year. For 2008, inflation is expected to remain at 2.7 percent, which falls within the projected interval for the Euro Area.

The average unemployment rate in Portugal was 8 percent in 2007 (7.7 percent in 2006), which is still higher than the average in the 27 countries of the European Union (6.8 percent) and in the 15 countries of the Euro Area (7.1 percent) at the beginning of 2008.

Emerging issues

- Legislation
- Revision of the Emission Trading Directive (ETS)

The revision proposed by the European Commission foresees a fundamental change in the attribution model of emission allowances, from a system of free (though scarce) allowances

to a system of attribution by auction. This new model will have deep consequences on the structure of costs of the affected companies, which will have to pay for all the carbon emitted instead of, as happened until now, for the surplus over the allowances attributed.

This form of attribution will therefore have important direct consequences, but also indirect consequences of the same or even greater magnitude, namely, an increase in the price of electricity (which will also reflect the cost of CO_2), and an increase in the price of wood (through a foreseeable significant increase in demand for alternative fuels, and in particular for biomass).

This proposal was submitted to the co-decision process and is currently under analysis by the European Council and the European Parliament, the various parties in the decision process having declared their intent of reaching a decision before the end of 2008.

- Industrial Emissions Directive

This new directive proposal of the European Commission actually entails a process that will result in the revision, consolidation and merger of six environmental directives, of which the most relevant for the sector are the Directive on Integrated Pollution Prevention and Control (IPPC directive) and the Large Combustion Plants Directive (LCP directive). If this proposal goes ahead, the environmental limits imposed to the industry will be particularly tightened, and BREFs will gain a much more determining nature. While before BREFs allowed greater scope for adaptation to the specific conditions of the location and company to be licensed, under the present proposal they essentially determine the emission limits to be applied.

- *Directive on Environmental Liability*

Directive 2004/35/EC on environmental liability has come into force, holding economic agents accountable for damage to the environment, regardless of whether or not they were responsible for wrongdoing.

- *National tax on the use of water resources*

A tax has been established on the volume of water collected and main pollutants emitted to the aquatic environment.

Forest certification

The FSC-Portugal has been officially set up and a Portuguese FSC standard is currently being drawn up.

Approximately 180 thousand hectares of land in Portugal have their management certified by the FSC (of which 98 percent are managed by pulp and paper companies), and 24 chain of custody (CoC) certificates have been issued.

The PEFC-Portugal, which in the past had already certified roughly 50 thousand hectares, has issued 8 CoC certificates, and various public and private forest certification initiatives are currently under way.

Towards the end of the year, the PEFC-Portugal initiated the revision process of the Portuguese forest certification system, which has been in force since December 2004.

Wood availability

Pulpwood market

After an apparent and abnormal abundance of wood (maritime pine and eucalyptus) following the great forest fires of 2003 and 2005, 2007 saw the first signs of a scarcity of wood supply to the market.

Adding to this, growing demand in Portugal for eucalyptus wood intended for the Spanish industry led to a clear increase in average prices (roughly 25 percent) between 2006 and 2007.

FOREIGN TRADE IN EUCALYPTUS

	(tonnes)	Imports	Exports
SPAIN	2005	10 906	1 327 313
	2006	1 737	1 255 900
	2007	86 607	1 400 066
TOTAL	2005	10 935	1 356 027
	2006	1 737	1 415 361
	2007	121 232	1 571 602

Exports of eucalyptus wood to Spain increased by roughly 600 thousand tonnes between 2002 and 2007, corresponding to an increase of nearly 10 percent per year.

Forest biomass for energy

Against this backdrop of scarcity, it is important to anticipate the behaviour of the market of forest biomass for energy:

Demand for forest biomass for energy purposes appears to be rising sharply in Portugal: to feed the recently tendered biomass power plants (150 MW) alone, an additional 2.5 million tonnes will be required; moreover, the existing coal based thermal power plants plan to replace 10 percent of the coal currently consumed, generating new demand of another 1.5 million tonnes; and on top of all this the new pellet plants and the co-firing process of the ceramics and cement industries are estimated to absorb another 1.5 million tonnes.

This situation is all the more concerning as supply of pine and eucalyptus currently faces a fragile balance against industrial consumptions, while available forest waste surpluses are estimated at 2.2 million tonnes only.

In other words, demand is very soon expected to double the theoretical available supply.

Performance of the forest products cluster

Forest fires

A very damp and rainy summer decisively contributed to reduce the seriousness of forest fires in 2007.

The chart below gives an idea of the phenomenon in the last few years, the worrying years of 2003 and 2005 clearly standing out, with nearly 500 thousand hectares of forest plantations burnt in the two years.

	No. of fires	Burnt plantations (ha)	Total burnt (ha)
Average 2001/2005	27 357	133 231	225 955
2006	19 921	36 320	75 509
2007	18 722	9 636	31 449

Paper and wood industry

The chart below shows the production, imports and exports of sawn softwood and particle and fibre board in 2006 and 2007 (estimate):

		Production thousand m^3	Imports thousand m^3	Exports thousand m^3
Sawn softwood	2006	909	110	344
	2007 (*)	917	100	350
Particle board	2006	850	60	502
	2007 (*)	858	62	511
Fibre board	2006	405 (1)	141	364 (2)
	2007 (*)	406 (1)	139	366 (2)

(1) 80% is MDF (2) 75% is MDF (*) preliminary information

The paper and pulp industries have undergone changes at ownership level, there existing today only two groups that produce woodpulp, both controlled by Portuguese capital, and one of them also producing paper (uncoated woodfree). (There is also one mill producing kraft paper).

The largest national group (Portucel Soporcel) has started the construction of a new uncoated woodfree paper mill, with the capacity to produce 500 thousand tonnes, corresponding to an investment of EUR 550 million. This project should be concluded in August 2009.

The second largest national group (Altri) is currently increasing the capacity (+250 thousand tonnes) of one of its sulphate bleached eucalyptus pulp mills.

In 2007 the capacity utilisation rate was around 97.6 percent in the pulp industry, (slightly lower than in 2006) and 94.8 percent in the paper industry (lower than in 2006).

The chart below shows the production, imports and exports of woodpulp, paper and linerboard from 2005 to 2007.

Thousand tonnes	Year	Production	Imports	Exports
	2005	1 990	47	735
Woodpulp	2006	2 064	53	1 019
	2007 (*)	2 075	66	1 010
	2005	1 577	830	1 234
Paper and board	2006	1 643	970	1 299
	2007 (*)	1 611	1 040	1 400

(*) Preliminary information

Business developments

Employment in the paper and wood products industries

No surveys have been published lately on the cluster of forest products in Portugal, but the most recent credible publication on this issue (1998) referred the following values:

Employment in mainland Portugal's forestry industry - 1993/95 Subsectors Employment

Subsectors	Employment
Wood logging and commercialisation	10 000
Cork extraction	4 000
Resin tapping	2 000
Rentals and contractors	3 750
Transport of forest products (from the forest to the mill)	2 300
Forest nurseries (private and Forest Institute)	1 000
Game reserves and keepers	8 000
Wood and furniture industries	111 492
Wood imports and exports	770
Manufacturing of wood-cutting and processing machinery	2 349
Furniture wholesale and retail	35 526
Resin products industry	2 000
Cork industry	18 400
Manufacturing of machinery for the cork industry	158
Paper industries	15 561
Printing and publishing	35 523
Construction and repairs of wooden vessels	300
Match manufacturing	513
Support services (public services, education, research, technology centres, associations of producers and forestry industries, forest fire-fighters)	5 288
TOTAL FORESTRY SECTOR EMPLOYMENT	**258 930**
TOTAL EMPLOYED POPULATION	**4 255 000**

Corporate Social Responsibility

The Business Council for Sustainable Development (BCSD – Portugal) was set up in 2001, at the initiative of the three companies that at the time were members of the WBCSD - World Business Council for Sustainable Development (of which two were linked to the forestry industry). The aim of BCSD – Portugal is to turn business leadership into a catalyst of change towards Sustainable Development and to promote ecoefficiency, innovation and social responsibilities within companies.

Today, with more than 100 members from among the largest national companies, BCSD – Portugal brings together some of the most important companies in the woodpulp, paper, cork and woodboard industries. For the rest, and with a few exceptions, forest based companies, mostly small and medium enterprises, do not seem very concerned yet about corporate responsibility issues. The traditional activity of importing tropical woods represents a very specific exception, and in this area there have been growing concerns about combating illegal logging.

One of the visible outcomes of corporate social responsibility policies is the adhesion of some of the largest Portuguese forest based industries to the Business & Biodiversity initiative promoted by the European Union and the International Union for the Conservation of Nature (IUCN), with a Group in the paper industry having even subscribed to the Countdown 2010 initiative to halt biodiversity loss until 2010.

RUSSIAN FEDERATION

by
Prof. Eduard L. AKIM
Member of the FAO UN Advisory Committee on Paper and Wood Products
Head of Department - Saint Petersburg State Technological University of Plant Polymers
All-Russian Research Institute of Pulp and Paper Industry

Russian pulp and paper industry in 2007-2008

In 2007 and the first part of 2008, Russia continued to experience robust economic growth, reflected by continued growth in Russian pulp and paper output (Tables 1, 2, fig.1). The growth in Russia's paper and paperboard output was 2.3 percent in 2007(2.8 percent in 2006, 1.7 percent in 2005, 6.8 percent in 2004). In this period of time Russia is characterized by both political and economic stability. Election to the State Duma has been held in December 2007 and the President of the Russian Federation has been elected in spring 2008. In May 2008, Dmitry Medvedev has become the President and Vladimir Putin has occupied the position of Premier Minister. This has provided continuity of the state course.

The important forest sector policy developments of 2004-2008 in Russia were as follows:

- Establishment of the Forestry Complex Council headed by the Premier Minister V. Zubkov who has become the First Vice Premier in May 2008.
- the Kyoto Protocol ratification by Russia (and its coming into effect in spring of 2005 with new efforts to monitor carbon emissions).
- a new alliance formation between "International Paper" and "Ilim Pulp Enterprise"- «Ilim Group», and commencement of its activities in October 2007.
- new Forest Code to be adopted.
- the use of space satellite monitoring for preventing illegal timber cuttings.
- new level of export tax on round wood in 2007-2009-2011 (Fig.4), implementation of the Government decree No.75 of February 2007 concerning stage-by-stage increase in export tax on round wood. Dissimilar reaction to this action was demonstrated in the world and a negative one - in Nordic countries.
- Investment programmes started to be implemented.
- The Federal Agency of Forestry, the key structure of forest management, being a constituent of the Ministry of Natural Resources has been incorporated into the Ministry of Agriculture in May 2008.
- Russia's entry into UN FAO.
- Establishment of the Russian Forestry Technological Platform and its interaction with the European Platform.
- Giprobum-Engineering's (the Russian major designing and engineering company) share purchase (70 percent) by the Pöyry company, Finland.

Both demand and output of pulp and paper products increased in Russia through 2004-2007 and into the first half of 2008. Owing to relative economic and political stability established in the country since the major currency revaluation of 1998 and more expansionary macroeconomic policy under President Putin since 1999, there has been a continuous increase in output of pulp, paper and paperboard in Russia, more than doubling since 1996, although output has yet to reach previous record levels of 1988-1989 pre-transition periods (in the late Soviet era).

In 2007-2008, the Russian pulp and paper sector continued to expand production of pulp, paper and paperboard, particularly the output of paperboard for packaging. During 2007, Russia's total output of pulp (both pulp for paper and paperboard and market pulp) decreased by 0.9 percent, the output of

market pulp increased by 1.6 percent, and the output of paper and paperboard increased by 2.3 percent, including a 4.2 percent increase in output of paperboard.

Exports of pulp and paper products hold a dominant position in the total Russian exports of forest-based products, and the overall structure of forest product exports still has a pronounced raw material character. In terms of round wood equivalents, round wood timber exports and sawn wood exports accounted for 83.8 percent of Russia's exports in 2006, while pulp and paper accounted for only 16.2 percent of exports (Table 2).

In 2006, exports of pulp and paper products continued to increase (Fig.2,3). Exports of pulp, paper and paperboard were progressively increasing since 1990 and reached a peak level in 2006. However, Russian exports as a percentage of production have remained largely unchanged since 1996, with exports comprising about 80 percent of output for market pulp, and around 40 percent for paper and paperboard. (Table 3). Major export destinations for these Russian products are China (market pulp, kraft linerboard), Ireland (market pulp, kraft linerboard), India (newsprint), and Turkey (newsprint).

Although the tonnage of Russian paper and paperboard exports greatly exceeds the tonnage of imports, the trade balance in value has continued to deteriorate, as Russia has expanded imports of higher value paper products. The annual trade deficit in paper and paperboard has been negative since 2001, and in 2005 it was more than a 0.87 billion US$). The higher value of imports of paper and paperboard as compared to their exports is mainly due to the fact that Russia is importing rather expensive products such as high quality materials for container and packaging, coated paper, and tissue, whereas less expensive commodity products such as newsprint and kraft linerboard are being exported.

Table 1
Output of pulp, paper and paperboard in the Russian Federation in 1995 – 2006 (thousand metric tons)

Products	1988 (89)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2007/ 2006 %
Chemical pulp total:	8331	3028	3170	3205	4225	4960	5272	5568	5764	5922	5933	6005	5954	99.1
Market pulp	3076	1144	1169	1320	1722	2018	2136	2233	2311	2409	2419	2380	2418	101.6
Paper and paperboard	8632	3236	3269	3426	4535	5300	5595	5921	6227	6619	6800	7145	7312	102.3
Total Market pulp, Paper and Paperboard	11708	4380	4438	4746	6257	7318	7731	8154	8538	9028	9219	9525	9730	102.1
Paper total including:	5465	2274	2179	2325	2966	3320	3415	3524	3682	3903	3969	4004	4063	100.6
Newsprint	1693	1243	1201	1386	1622	1694	1732	1713	1814	1978	2007	1993	1982	99.4
Offset paper	396	349	337	399	485	461	465	491	449	469	452	466	455	97.5
Paperboard total:	3167	962	1090	1102	1569	1980	2180	2397	2545	2716	2830	3141	3249	104.2
Corrugated board	1639	610	775	760	1080	1356	1530	1711	1882	2090	2102	2332	2427	102.4

Sources: Goscomstat of the Russian Federation; PPB-express, author's data handling

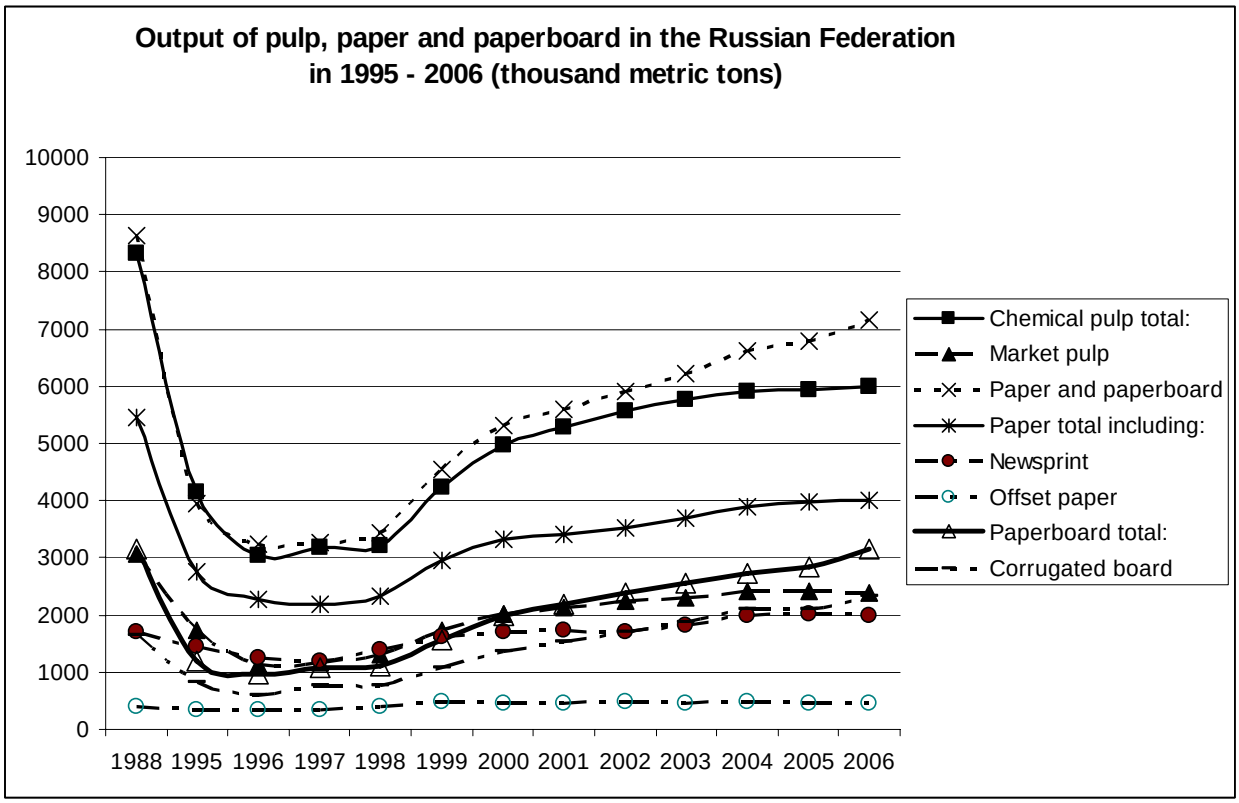

Output of pulp, paper and paperboard in the Russian Federation
in 1995 - 2006 (thousand metric tons)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1988 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006
Chemical pulp total:
Market pulp
Paper and paperboard
Paper total including:
Newsprint
Offset paper
Paperboard total:
Corrugated board

Table 2
Structure of Russian exports of forest-based products in 1990 – 2006

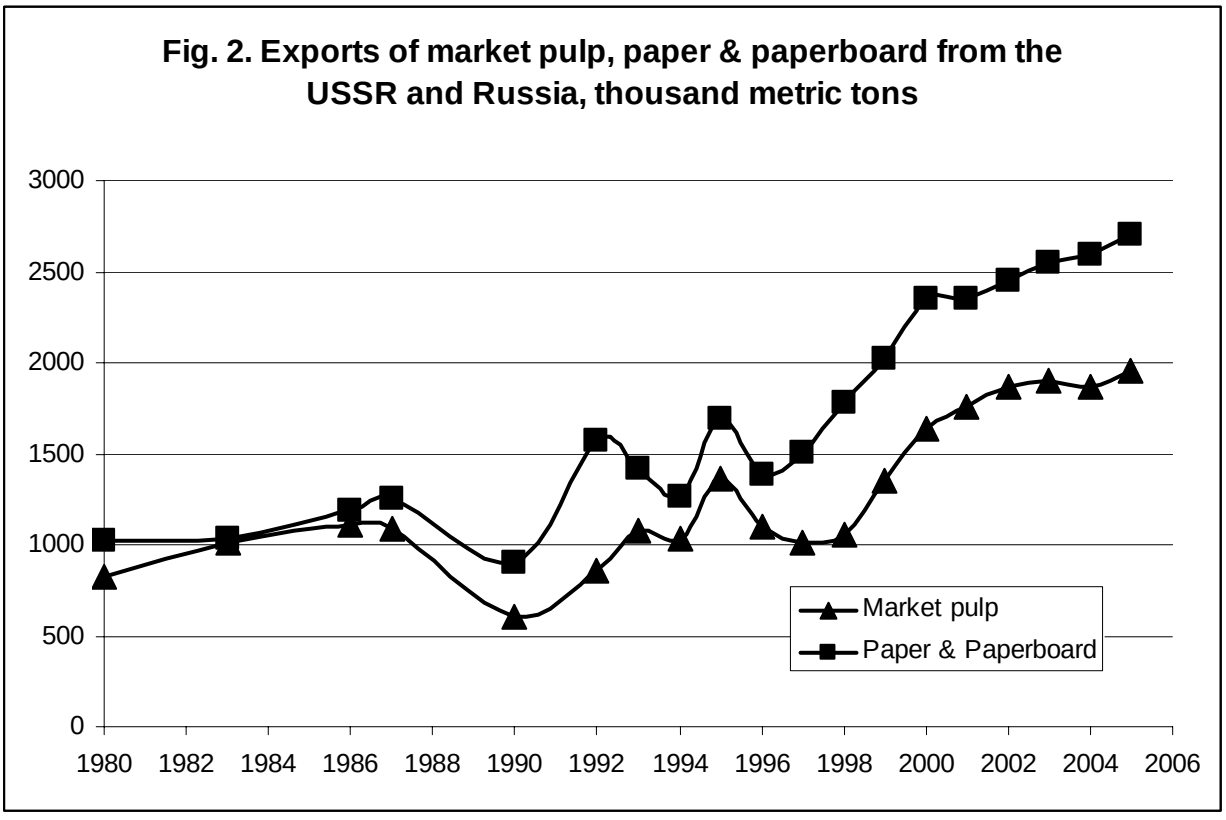
	1990	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Round wood, million m^3	31,4	20,0	27,6	31,3	31,7	36,5	37,6	41.5	48.0	51.0
Sawn wood, million m^3	15,7	4,6	6,4	7,9	7,7	8,9	11,0	13.1	14.8	16.8
In terms of round wood[a], million m^3	*25,1*	*7,36*	*10,2*	*12,6*	*12,3*	*14,2*	*17,6*	*20.96*	*24.64*	*26.88*
Market pulp, million metric tons	0,993	1,056	1,373	1,600	1,758	1,885	1,905	1.866	1.952	1896
Paper and paperboard, million metric tons	2,761	1,767	2,048	2,309	2,353	2,500	2,550	2.590	2.700	2552
Pulp, paper and paperboard, million metric tons	3,74	2,823	3,421	3,909	4,111	4,385	4,455	4.456	4.652	4448
In terms of round wood [b], million m^3	*12,7*	*9,57*	*11,6*	*13,3*	*13,94*	*14,87*	*15,10*	*15.11*	*15.77*	*15.08*
Total exports of forest and paper products in terms of round wood, million m^3	69,2	36,9	49,4	57,2	58,0	65,6	70,30	77.57	88.41	92.96
Percentage of Pulp, paper and paperboard in terms of round wood	18.4	25.9	23.5	23.3	24.0	22.7	21.5	19.5	17.8	16.2
Percentage of round wood exports	**45%**	**54%**	**56%**	**55%**	**55%**	**56%**	**53%**	**53.5%**	**54.3%**	54.8%

[a] The factor 1,6 is used - source: UN FAO
[b] The factor 3,39 is used - source: UN FAO

Table 3. Exports of market pulp, paper and paperboard from the USSR (1980 – 1990) and from Russia (1993 – 2004), thousand metric tons

Year	Market pulp			Paper and paperboard		
	Output	Exports	Percentage of exports	Output	Exports	Percentage of exports
1980	2457	821	33.5	8688	1018	11.7
1983	2840	1012	35.6	9556	1034	10.8
1986	3233	1105	34.1	10395	1188	11.4
1987	3371	1088	32.3	10566	1252	11.9
1990	3255	600	18.4	8325	900	10.8
1992	2109	856	40.6	5750	1568	27.3
1993	1682	1077	64.0	4462	1418	31.8
1994	1328	1028	77.4	3410	1264	37.1
1995	1736	1362	78.5	4070	1690	41.5
1996	1267	1095	85.7	3220	1380	42.9
1997	1193	1008	82.8	3331	1507	45.2
1998	1311	1056	75.8	3540	1783	50.4
1999	1725	1350	78.3	4467	2019	45.2
2000	2000	1635	81.8	5239	2355	45.0
2001	2136	1753	82.1	5595	2350	42.0
2002	2233	1866	83.6	5921	2453	41.4
2003	2301	1905	82.8	6174	2550	41.3
2004	2404	1866	77.6	6653	2590	38.9
2005	2429	1952	80.4	6948	2700	38.9
2006	2379	1896	79.7	7145	2552	35.7

Sources: Goscomstat of the USSR, Goscomstat of the Russian Federation, PPB-express, Moscow, author's data handling



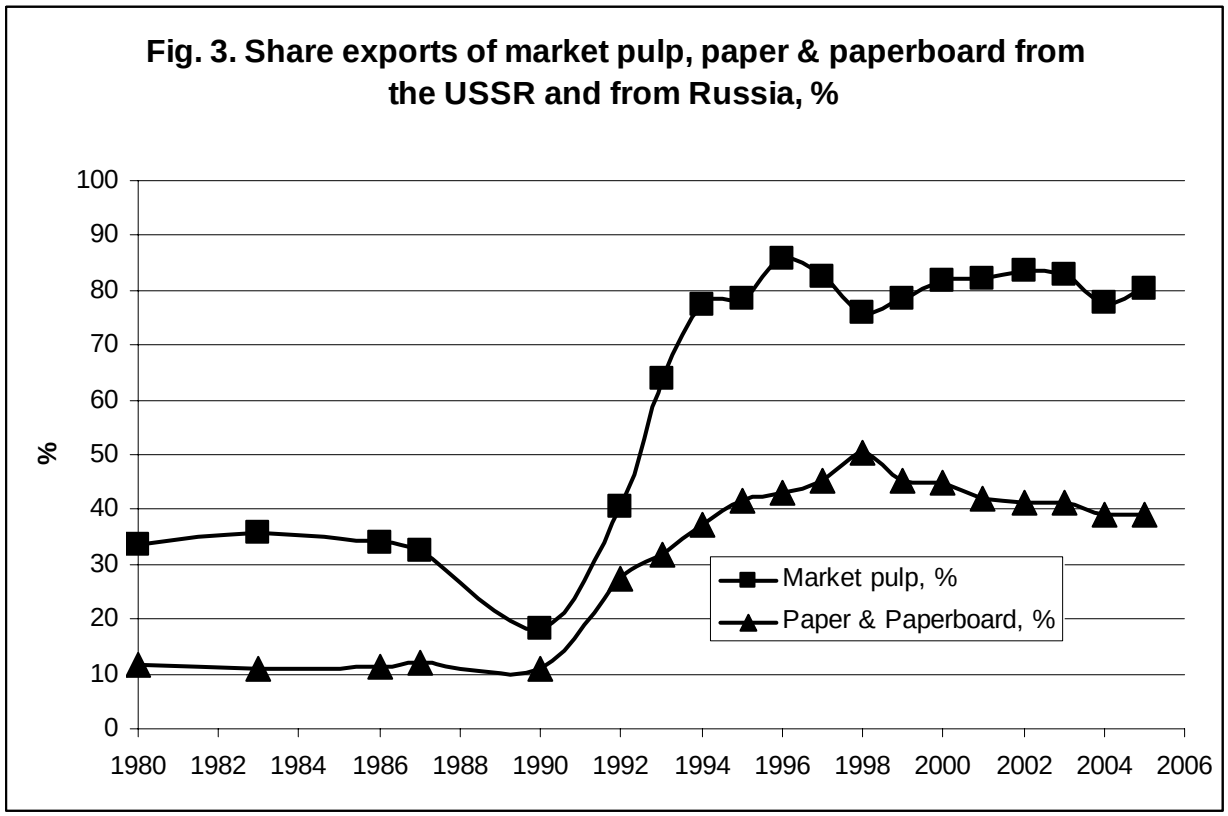


Table 4
Russian exports and imports of paper and paperboard in 2000–2005 (million US$)

	Exports	Imports	Trade balance
2000	920	731	+189
2001	927	1012	–85
2002	887	1200	–313
2003	967	1465	-498
2004	1184	1774	-590
2005	1331	2107	-876

Sources: State Customs Committee, Pulp. Paper. Board Magazine, PPB-express, PPB Exports, PPB Imports, author's data handling

In present time the biggest Russian Enterprise produced 75 percent market pulp, 80 percent paper and 50 percent paperboard. 25.10. 2006 was announced new alliance formation between "International Paper" and "Ilim Pulp Enterprise". In October 2007 the Ilim Group started its activities and implementation of major investment programme.

Reconstruction and restructuring of the Russian pulp and paper industry is continuing, with some progress being made towards higher value products with better processing of wood raw material. As an example, International Paper Company announced recently plans to speed up an uncoated free-sheet machine and add 50 000 tons per year of production capacity at the paper mill in Svetogorsk (about 140 km from St Petersburg). The mill is also reportedly installing a coater on a liquid packaging machine to add 15 000 tons/year of capacity. More than 200 million US$ have been put into reconstruction of the mill in recent years. Office paper produced by the mill supplies presently more than 60 percent of the Russian market demand. In addition, a new 200 000 tons per year aspen-based

BCTMP pulp line beginning work in 2007, according to International Paper, which will supply pulp to paper mills in Europe and elsewhere.

It can be noted that future development of Russia's pulp and paper sector is linked to expanded production of more technologically advanced products (such as coated printing and writing paper rather than newsprint for example), and also more integrated utilization of forest resources.

Implementation of important environmental projects provides examples of steps being taken towards applying the new Russian environmental laws adopted in late 2002 (based on comparison of environmental indices of individual mills and those of "best available technology", or BAT). For instance, new systems of wastewater local treatment with the use of KWI floatators were constructed at the Syassky pulp and paper mill, SCA Huygens Product, etc. Furthermore, in connection with ratification of the Kyoto Protocol, a number of mills (the Arkhangelsky pulp and paper mill, for example) initiated work on inventorying of greenhouse gas emissions. Such accounting for carbon and greenhouse gas emissions is being done at the Arkhangelsky mill and elsewhere to prepare for limits on emissions and perhaps trading in carbon emissions.

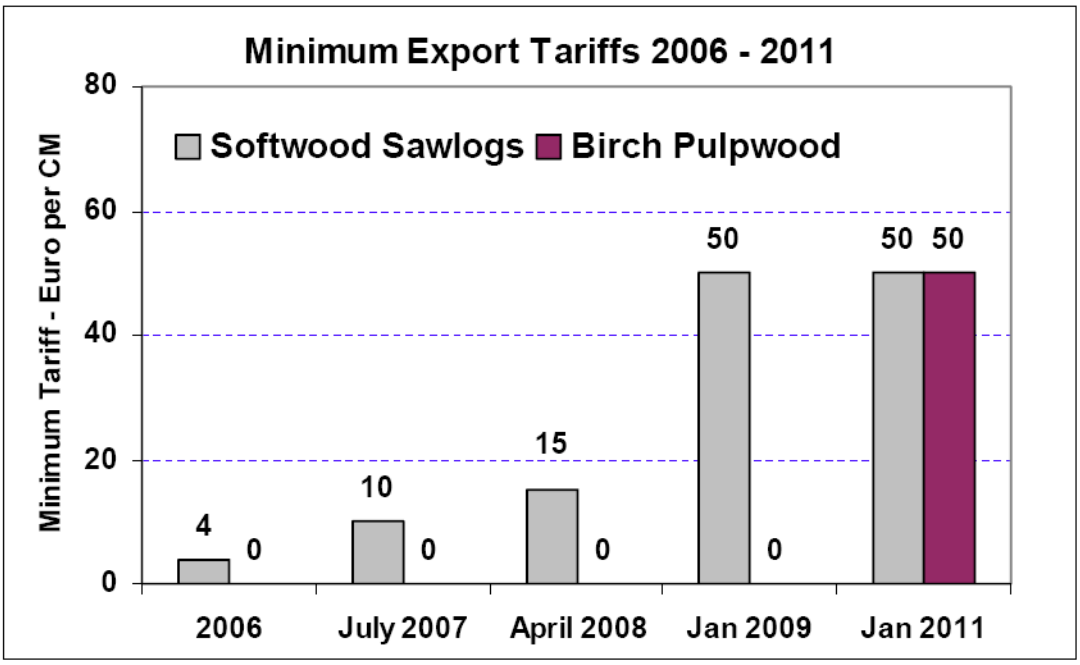
The forest sector of the Russian Federation has a staggering potential for further development. Russian forest sector has excellent opportunities for rapidly increasing exports of forest products. The growing stock amounts to 81.9 billion m³ with an annual increment exceeding 900 million m^3. (Table 6, Fig.6). These resources represent over 20 percent of the global total and the single largest national forest resource. The potential for increasing felling in the framework of sustainable forest management is clear. Further, Russia disposes of rather well educated, low-cost, labor resources. Both factors could attract investments into the Russian forest sector.

Table 5
Major Russian Pulp, Paper & Board Producers (2006)

	Total Output, x 000 t	Market Pulp, x 000 t	Paper, x 000 t	Board, x 000 t
Ilim Pulp	2582	1516	262	804
Kotlas	945	350	262	333
Bratsk	737	506		231
Ust-Ilimsk	660	660		
St.Petersburg	240			240
Arkhangelsk	804	236	82	486
Syktyvkar	813	12	595	206
Kondopoga	741		741	
Volga	551		551	
Solikamskbumprom	456		456	
Svetogorsk	406		324	82
Segezha	220		220	

Sources: State Customs Committee, Pulp. Paper. Board Magazine, PPB-express

Fig.4. New Russian Wood Tax (Resolution # 75, February 2007).



SOUTH AFRICA

by
PAMSA
Paper Manufacturers Association
of South Africa
M.B.P. Edwards
J. Molony

The South African economy 2007/08

Stable political and economic conditions have prevailed with growth in G.D.P. over the period coming in at almost 5.0 percent. Major growth sectors have been manufacturing, retail, construction and tourism, with mining having remained static and agriculture declining. Due to inter alia significant increase in oil prices and prices of agricultural commodities, inflation has escalated to just over 8.0 percent. During the year lending rates have increased by 2.0 percent to stand at 14,5 percent p.a., and the exchange rate (R to US$) has remained stable at R7.06 to US$1.00. Of major concern however is the widening trade deficit which is now in negative territory due to a surge in imports (currently 8.0 percent of G.D.P.) which is of concern.

Through the Governments expanded public works programme focussing on infrastructure development and its Accelerated and Shared Growth Initiative (ASGISA) as well as capital expenditure programmes associated with the 2010 Soccer World Cup which is to be held in South Africa, it is anticipated that over the next 3 years, G.D.P. growth could well exceed 6.0 percent. Unfortunately due to a slow down in global economic growth, the outlook for the S.A. Economy in terms of GDP growth has had to be reassessed, and it is doubted that 6 percent can or will be achieved. A target of 4 to 5 percent is considered realistic. Despite this the outlook still remains buoyant but it is anticipated that inflation and interest rates will remain high with a continuing trade deficit likely.

Generally, as a developing nation and being part of the emerging markets segment, South Africa's economic fundamentals are sound, and the economy is being well managed.

The forestry and forest products sector in relation to the economy

Given the growth dynamics inherent in the overall South African economy the Forest Sector has likewise experienced growth, although the strength of the Rand has impacted on exports so that growth in export volumes has not been matched by growth in value terms. To meet the demands of the growing domestic economy and to maintain its exports position some R7 billion is being invested to expand manufacturing capacity in the forest products sector. Unfortunately however investment and expansion in the Forestry sector has not kept pace, which is placing huge constraints on sector growth. Currently the demand for roundwood amounts to 23 million m'/p.a. whereas the forests can only supply 20 million m on a sustainable basis. The average net increase in planted area over the last 5 years has amounted to no more than 500 hectares p.a. leading to an ever widening supply deficit. To meet current and anticipated growth over the next 25 to 30 years we should be increasing our planted area by a minimum of 25,000 hectares p.a. South Africa therefore faces a serious timber availability outlook which is going to necessitate a dramatic escalation in imports in coming years. This unfavourable timber supply position is unfortunately being exacerbated by a noticeable increase in plantation losses being caused by fires and pest and diseases amongst others.

Whilst timber growers are therefore benefiting from considerably improved roundwood prices (up to 60 percent in instances) buyers or timber processors are being negatively impacted and the cost of wood is becoming a major threat to their competitiveness.

Emerging issues facing the industry

Paragraph (2) above alludes to the emerging issues of importance facing the Industry, namely timber supplies, fires, pest and disease and competitiveness.

Timber Supplies

Shortage of roundwood supplies into all market segments is a reality with Sawlogs being the major concern. Increased imports, improved yields, better utilisation of logs, l6wer plantation losses, and more, will all be necessary, but the critical ingredient regardless, has to be an increase in the rate of new afforestation. Although the target should be 25 000 hectares p.a. in reality given water, environmental, climatic and agricultural constraints, a target of 10 000 hectares p.a. is more realistic. The chances of achieving this are however not that good as South Africa's Water stress situation makes it extremely difficult to obtain authority to plant trees through the acquisition of mandatory afforestation water use licences. Forestry is the only dry-land cropping activity subject to such licensing requirements and the Industry is making huge efforts to change Governments perspectives on this. Broad misconceptions on Forestry's water use exist, despite scientific evidence and global experience dictating otherwise.

Through statutory Black Economic empowerment initiatives and a strong land reform and redistribution drive at least 40 percent of the current forestry estate is likely to be transferred to new ownership over the next 10 years. Whilst fully supported, the Industry is concerned that this could result in transferred land being converted out of Forestry to other uses and innovative mechanisms will have to be found to avoid such a situation arising.

Forest Fires

During 2007 the Industry experienced the worst fire season in its history, with close to 100 000 hectares of plantations being destroyed (8 percent of total), resulting in huge losses in output and placing additional strains on an already scare timber supply situation. Particularly seriously affected were Pine Sawlog plantations, due to which imports of sawn timber amounting to 500 000/p.a. are likely to occur.

Pest and Diseases

Amongst Pine plantations serious problems continue to exist due to infestations by the Sirex Woodwasp, which in certain Forestry areas has reached epidemic proportions (60 percent infestation levels). Biological control strategies, modelled on global best practices, have been implemented but to date success levels have been significantly lower than achieved in other countries. Fusarium or Pitch Canker is again becoming a big problem, with mortality arising there from for the first time being seen in older age class compartments of Pine.

Serious problems are also being encountered in stands of Eucalyptus throughout the country as a result of infestation by *Thaumastocoris peregrinus*. Cold tolerant *Euc. Nitens* is also being attacked by the Cossid Moth. During 2007 a new pest by the name of Leptocybe invasa arrived in S.A. which is considered a major threat to plantations of Eucalyptus. In all, 15 — 20 percent of the entire Forestry state is being impacted upon by various pests and diseases resulting in unaffordable timber losses. The Industry is negotiating with the Government for increase levels of support to help counteract these problems.

Competitiveness

For a long time the advantages of plantation forestry have enabled the Industry to remain globally competitive. With increasing timber shortages however, rapidly escalating timber prices are beginning to have an impact on competitiveness, leading to the Industry paying much greater attention to productivity both in terms of tree and human capital. It has also resulted in greater emphasis being placed on mechanisation of operations. This latter mentioned issue is being supported by the HIV/Aids epidemic currently being experienced in sub-Saharan Africa.

Other emerging issues

HIV/AIDS

- The HIV/Aids prevalence rate amongst the population ranges between 11 percent and 20 percent depending on age category, with infections having increased by almost 50 percent since the year 2000. 362,000 people are predicated to die from HEY during 2007, almost 1000 people per day. The epidemic is already having a catastrophic effect on the population. In the Forestry Industry the effect is particularly severe, given the rural nature of the business, with up to 40 percent of its labour force in areas being infected. The cost in lives, in human misery, in productivity and on competitiveness is huge. Major efforts by the Government and business are being made to combat the scourge although it is going to take super-human efforts by all to be successful. The cost to business of managing this situation is becoming massive.

Climate Change

- Only now is business beginning to take the issue of global warming seriously. Already some of the effects of this are being felt by the Forestry Industry with plantation yields dropping in specific areas and mortality as a result of fires and pests and diseases increasing. Extensive research on its impacts is now being undertaken by the Industry with attention being focussed on greater site: specie matching and the variation in genus and specie being planted, amongst others. Opportunities for tree planting activities under the C.D.M. are also being investigated.

Sustainable Forest Management-Forest Certification

- Even through 85 percent of South African Timber plantations are already certified under the FSC, much attention is now being put on making certification much more accessible to small plantation owners. Currently 20 000 plus small black emerging growers are being assisted in this regard through the development of a small grower FSC certification programme commonly referred to as the SLIMF programme (small and low intensity Managed Forests). As part of this, South Africa is currently developing its own National Certification Standard which it hopes to have in place in 2009.

Profile of Plantation Forestry

- South Africa is no exception when it comes to the profile of plantations and a lot needs to be done to improve this. Misunderstanding and misrepresentation of the facts about tree plantations is more often the norm than the exception. The industry is working hard to remedy this, and the Code for Planted Forests developed by the FAO in this regard is being of great assistance.

Business developments during the previous year

Forest Sector Transformation Charter

The most significant development during the last year has been the drafting of a Broad Based Black Economic Empowerment Transformation Charter by the Forest Sector. This is required in terms of the Broad Based Black Economic Empowerment Act and the Forest Sector Charter once published in the Government Gazette (probably July 2007) will become binding on all participants in the Industry, both growers and processors. The objectives of this Charter are to:

- promote meaningful participation of black people in the entire forestry value chain;
- achieve sustainable change in the racial and gender composition of ownership, management and control structures and in the skilled positions of existing and new forest enterprises;
- increase the extent to which black men and women, workers and cooperatives own and manage existing and new forest enterprises;

- use the forest industry as a catalyst for empowering rural and local black communities to access economic activities, land and infrastructure.

To achieve these objectives Industry participants will have to comply with a transformation scorecard which comprises 7 elements. Briefly these are:

Ownership

- 25 +1 percent of Industry to be owned by black people within a period of 10 years.

Management Control

- 50 percent of management (Board level, Executive and Senior) to be in control of black people within 10 years;

Employment Equity

- 75 percent to 80 percent of all employees, by grading, to be black people within 10 years;

Skills Development

- 4 percent of total annual payroll to be spent on skills development for black people within 10 years.

Preferential Procurement

- 70 percent of total procurement to be spent on black owned or black empowered business within 10 years.

Enterprise Development

- 3 percent of entities net profit after tax to be spent on enterprise development for black people and communities within 10 years;

Socio-Economic Development

- 1 percent of entities net profit after tax to be spent on socio-economic development activities for black people and communicates within 10 years.

Whilst the abovementioned will place enormous responsibility on the Industry to achieve, and will come at a high cost, all Industry participants have accepted the challenge and have committed themselves to implementation. Of major concern, as already mentioned, is how to ensure that ownership transfer will not result in existing timber plantations being converted to other land uses. Even a small change could have significant implications for the future sustainability of the Industry, given the current and future timber supply situation.

Privatisation of State Forests

The Privatisation or restructuring of state forests has been ongoing for almost 9 years, and in the process has created considerable investment uncertainty. During 2006 the last, but biggest portion of State Forests was successfully bid for, but then stopped by the Competition Authorities. Resulting from this the Government then announced that it would retain ownership and control. More recently however the Government has changed its mind and is now proceeding with the sale. This has created confusion and uncertainty, particularly in the Sawlog markets, and could result in legal proceedings. As this remaining unsold portion contains the countries largest and most productive pine Sawlog plantation it is hoped that a successful outcome will be achieved.

Growth and Development Strategy for the Forest Sector

Flowing from a report prepared by the consulting firm Genesis Analytics in 2005, entitled "The Contribution, Cost and Development Opportunities of the Forestry, Timber and Pulp and Paper Industries in South Africa", the South African Department of Trade and Industry in collaboration with the Sector itself has recently completed a sector growth and development strategy which has been approved by the Cabinet. Resulting from this the Forest Sector has been classified as a major sector earmarked for growth through the country's recently released National Industrial Policy Action Plan.

SYNOPSIS OF INDUSTRY PROFILE - 2000 vs 2007

FORESTRY SECTOR

Criteria	Unit	2000	2007	Change
Planted area	Ha	1,330,944	1,281,519	(3.7%)
Roundwood Production	m^3/p.a.	16,7 million	22,8 million	36.5%
Value of Roudwood Sales	Rand	2,6 billion	5.1 billion	96.2%
Contribution to Afric. G.D.P.	%	8,7%	7.4%	(15.0%)
Plantation losses (fires, Pests & Dis)	ha	23,000	82,000	256.5%

FOREST PRODUCTS SECTORS (all sectors excluding Paper)

Criteria	Unit	2000	2007	Change
No. of Plants	-	167	182	9.0%
Roundwood Intake	m^3	17,1 million	23,0 million	34.5%
Value of Sales	Rand	12,9 billion	15,7 billion	21.7%
Contribution to Mnfg. G.D.P.	%	3.6%	4.3%	19.4%
Foreign trade balance	Rand	4,6 billion	7,0 billion	52.2%

PULP, PAPER AND BOARD SECTOR

Criteria	Unit	2000	2007	Change
No. of Plants	-	23	22	(4,3%)
Pulp Capacity	tons	2,6 million	2,7 million	3,8%
Paper and Board Capacity	tons	2,6 million	3,0 million	15,3%
Per Capita consumption	kg	42,0	65,6	56,2%
Production				
- Pulp	tons	2,2 million	2,4 million	14,3%
- Paper and Board	tons	2,1 million	2,7 million	28,6%
Value of Exports	Rand	5,0 million	7,4 million	48,0%

SWEDEN

by
Skogsindustrierna
Swedish Forest Industries Federation

Emerging issues facing the industry: Climate change, wood raw material and energy

There is an increased demand of wood from the bio energy sector, which puts pressure on the supply of wood to the forest industries. The Swedish Forest Industries Federation has investigated the possibilities to increase energy production from the forests without hampering the industry raw material. Today 8 TWh of branches and tops are taken from the forests to be used for energy production. This could be increased to 15 TWh. There is a future potential to take out new selections for energy production: stumps, longer tops etc., which could amount to 12 TWh. In total, the possible energy selections in the forest today, at retained production and harvest, could be 19 TWh. If the forest production could be increased (see below), another 4-9 TWh can be added. Note that figures here refer to TWh wood fuel– not electricity or heat.

The EU energy policy risks increase the industry's electricity costs by 350 – 550 million euro at an allowance price of 30 – 50 euro/ton, when also indirect effects on electricity prices are considered. As the emission trading system also favours the use of renewable sources, the competition for biomass has increased, leading to higher wood costs.

The Green certificate system has given incentives to increase the production of industrial back-pressure power. Today this production amounts to 5,5 TWh and the future plans include an increase by 1,5 TWh by 2015.

Production processes will continue to be developed to further reduce CO_2-emissions. More and more biofuels are used in the lime kilns. The research has focused on gasification of bark and most recently on producing lignin from the black liquor.

Russian export taxes on wood will alter wood trade flows in the Baltic, risk close down of mills and increase wood costs for remaining mills.

SFIF has recently issued its second sustainability report with some clear goals. A climate campaign has been launched.

Most important business developments: economic situation, legal developments, investments

In 2007, GDP growth amounted to 2,7 percent, with especially strong growth in investments (8 percent) and exports (5,6 percent). Employment continues to increase. The inflation rate has increased and was 3,4 percent April 2008 over April 2007, where increased interest rates on housing, and increased food prices contribute most. GDP growth is projected to slow down from 2,7 percent in 2007 to 2,2 percent in 2008.

In 2007, paper production fell by close to 2 percent to 11,9 million tonnes. One percentage point was due to mills being closed down. Exports fell marginally and amounted to 11,4 million tonnes. Market pulp production remained unchanged at 4,1 million tonnes.

Paper production increased 1st quarter 2008 by 1,3 percent. If mill closures during 2007 are accounted for, production would have increased by 2,5 percent. Exports increased by 1,2 percent, with particularly strong export growth to Europe outside the EU. Pulp production increased by 3 percent the 1st quarter.

Companies continue efficiency and cost reduction programs. During 2008, several announcements of personnel reductions have been made, affecting over 800 jobs (of 25 000 in the pulp and paper industry). Stora Enso will close its Norrsundet pulp mill (300 000 tonnes bleached sulphate) by the end of the year; Holmen will shut down one paper machine at the Hallsta mill (110 000 tonnes mechanical printing paper) in November. Increased raw material and energy costs are major reasons.

Investments in the pulp and paper industry are projected to 725 million euro in 2008, slightly above the level in 2007. Investment plans mainly concern energy efficiency programs or energy generation.

A government bill on forestry has been presented, to be implemented by Jan 1, 2009. Forest policy has two equally important objectives: production and environment. Different measures to increase forest growth are proposed. Forest production can increase by 25 – 50 percent in 10 – 60 years.

A review of the Swedish climate policy proposes climate policy targets in the short, medium and long term, an action plan for achieving 2020 emission targets and Swedish actions in international climate negotiations. The review will result in a government bill during autumn.

The CO_2-tax will be reduced in two steps for those participating in ETS to reach the EU minimum tax level in 2010.

Implementation of the water framework directive might imply stricter measures than we interpret is needed by the directive.

"Green public procurement" for paper products: also social aspects will be developed in connection with forestry criteria.

Socio-economic contribution of the forest industry

Please refer to the presentation at the ACPWP session in June 2006: Contribution of the paper and forest products industry to employment and income generation – the Swedish perspective.

Corporate Social – Environmental Responsibility (CS-ER) policies

ER policies are common, and CS policies are growing.

UNITED STATES

by
American Forest & Paper Association

General economic situation

Macroeconomic conditions are having a major influence on the performance of the U.S. forest products industry. The housing boom that took place from 2003 through early 2006 has given way to a bust that may reduce new housing starts to about one million units this year, which would represent a 55 percent decline relative to their 2005 annual peak level of 2.2 million units. Only a modest recovery in housing starts of 10 percent-15 percent is expected in 2009.

Moreover, the housing sector weakness and attendant credit crunch caused U.S. GDP growth to slow to just 0.6 percent (annual rate) in the final quarter of 2007 and to expand by a sluggish 0.9 percent in the first quarter of 2008. The slowdown in economic growth and declines in employment and manufacturing output are likely to temper domestic paper and paperboard consumption this year. However, export growth has been brisk during the past year or so, owing in part to the weaker dollar and to continued paper and paperboard demand gains abroad.

Paper Sector Performance

U.S. apparent consumption of paper and paperboard (domestic production plus imports less exports) has been trending downwards, declining 7.7 percent since 1999 to a 2007 level of 86.5 million metric tons. During the same eight-year period, U.S. production of paper and paperboard contracted 5.8 percent to 82.9 million metric tons.

U.S. apparent consumption of paper and paperboard trailed its year-earlier level by 0.2 percent in the first quarter of 2008, while U.S. production strengthened 1.4 percent. The comparatively strong performance on the part of production reflected an improvement in the U.S. paper and paperboard trade balance since early 2007.

Recent declines in consumption have been most notable with respect to newsprint and uncoated wood free paper, both of which have been affected by electronic substitution, and also with respect to packaging materials, which has lost domestic market due to increased U.S. imports of consumer goods from China and elsewhere. On the other hand, mills producing uncoated and coated mechanical papers have enjoyed strong demand for their products during 2007 and the first quarter of this year. Linerboard demand for domestic use has been flat-to-slightly down over the past year, but production levels have benefited from strong export growth and from some inventory accumulation.

After edging down by 0.6 percent in 2006, U.S. exports of paper and paperboard rose 9.2 percent in 2007 to 13.2 million metric tons. Solid gains were reported almost across the board and were particularly strong with respect to exports of paper and paperboard to Europe, South and Central America, and the Far East including China. Viewed by broad product sector, 2007 exports were up 28.0 percent for printing-writing papers, 14.3 percent for kraft linerboard, 40.5 percent for unbleached kraft paperboard, and 3.8 percent for bleached board. Wood pulp exports advanced 3.4 percent in 2007. Building on last year's strong performance, U.S. exports of paper, paperboard and converted products exceeded their year-ago level by 9.3 percent during the first three months of 2008.

U.S. imports of paper, paperboard, and converted products declined 8.2 percent in 2007 to 16.9 million metric tons. Notably, imports from Western Europe fell 13.2 percent and imports from Canada declined 9.0 percent. By contrast, imports from China rose 15.3 percent, with much of the gain accounted for by coated mechanical papers, which rose 18-fold. U.S. imports of printing-writing

papers declined 6.4 percent last year, with particularly large declines recorded by the coated and uncoated free sheet grades. U.S. imports of newsprint, almost all of which comes from Canada, declined 15.9 percent, reflecting falling U.S. demand for newsprint as well as the considerable strengthening of the Canadian dollar relative to the U.S. dollar. U.S. imports of paper, paperboard and converted products were lower than their year-ago level by 3.9 percent during the first three months of 2008.

Early indications are that U.S. paper and paperboard consumption will be flat-to-down in 2008 but that strong export growth and reduced imports will lead to 1 percent-2 percent gain in domestic production of paper and paperboard.

Lumber and Wood Products Sector Performance

The wood side of the U.S. forest products industry has been severely hurt by the slowdown in housing. Approximately 40 percent of U.S. softwood lumber consumption goes to residential construction and another 25 percent of lumber is used for repairs and remodeling. The use of structural panels -- plywood and oriented strand board (OSB) -- is also heavily weighted towards residential construction.

U.S. softwood lumber consumption declined 20 percent during the past two years from a recent high of 151.3 million cubic meters (64.1 billion board feet) in 2005 to 121.8 million cubic meters (51.6 billion board feet) in 2007. Further sharp declines are anticipated this year, followed by a levelling off, or perhaps even a small increase, in softwood lumber consumption next year as housing stabilizes. Current indications are that a significant firming in housing and lumber demand may not take place until 2010.

Exports of wood products have been expanding, while import levels have been moderating as the result of lower domestic consumption and the strong U.S. dollar. U.S. imports of softwood lumber declined 19.6 percent in 2007 to 43 million cubic meters, while imports from Canada fell 17 percent to 39 million cubic meters. Concurrently, U.S. OSB imports fell 33 percent to 6 million cubic meters in 2007.

The import share of U.S. softwood lumber consumption edged down from 38.4 percent in 2004 to 36.1 percent in 2007, with the Canadian share declining from 33.3 percent to 32.9 percent. Imports as a share of U.S. OSB consumption declined from 25.6 percent in 2005 to 20.3 percent in 2007.

The dollar value of U.S. wood product exports increased by over 4 percent in 2007, benefiting from a weaker currency and pockets of strong demand for wood products in other consuming countries.

U.S. Forest Products Industry Initiatives

Paper Recovery Goal: Since 1990, the U.S. paper industry has voluntarily set and exceeded increasingly aggressive goals for paper recovery, including a goal set in 2003 to recover 55 percent of the paper used in America by 2012. The 55 percent recovery goal has been achieved a full five years ahead of the target.

In early April 2008, the U.S. industry raised the stakes by establishing a new goal of 60 percent recovery by 2012. The objective of the new goal is to keep even more paper out of landfills, while at the same time increasing supplies of recovered paper at a time of strong demand, part of which is attributable to increasing export demand, particularly from China.

Environmental Responsibility: Members of AF&PA are committed to the goals of sustainability and have undertaken a number of programs designed to meet that objective, including working cooperatively with the U.S. Department of Energy through the Agenda 2020 program to develop technologies that improve energy efficiency and environmental performance; protecting forests with exceptional conservation value and joining the movement to end illegal logging; promoting

sustainable forest management and protecting wildlife biodiversity while ensuring long term forest productivity.

The SFI® program alone, of which all AF&PA members are participants, plants about 1.7 million trees per day – more than 620 million trees every year. Over six billion trees have been planted since the inception of the SFI program in 1995. The United States Forest Service estimates an average of 1.74 billion trees are planted in America every year. In the U.S., more wood fiber is being grown (i.e., trees) than is being harvested in large part because growing trees is economically attractive.

Illegal Logging: In May 2008, the U.S. Congress passed The Food, Conservation and Energy Act, also known as the Farm Bill. One provision of particular interest to the global forest products industry is language developed to address the world-wide issue of illegal logging. Over the past year, the U.S. forest products industry has worked with a coalition of industry and conservation allies to draft legislation that avoids onerous restrictions on legal trade but provides the U.S. government with the tools necessary to block trade in illegal forest products. The illegal logging provisions in the Farm Bill make it a federal crime to import into the U.S. any plant or plant product where the plant was harvested in violation of specified laws of a foreign country or a state.

As specified by the new law, all plant or plant product imports, which include wood and paper products, must be accompanied by a declaration specifying the plant species and the country of origin from where the plant was taken. If a plant species or country of origin cannot be determined, the plant declaration is to include a list of possible plant species that could be found in the product or a list of possible countries from which the plant originated. An exclusion is provided for plants used exclusively as packaging materials that support other items. In the case of recycled products, the declaration is to specify the average percent of the recycled content of the product, without regard to the species or country of origin of the plant.

THAILAND

Thai Pulp and Paper Industry in 2006

In 2006, total short fiber pulp production equalled 1.1 million tons with a total utilization rate of 99 percent. Total pulp consumption was 1.3 million tons, an increase of 6 percent from the previous year. It was estimated that total pulp consumption will grow to 1.7 million tons by the year 2011. As Thailand is a net importer of long fiber pulp, total pulp imports equalled 409 000 tons, whereas total pulp exports equalled 211 000 tons.

The total capacity of the paper and board industry in 2006 was 5.2 million tons. The production of kraft paper held the major portion of the industry with a total capacity of 62 percent, followed by printing & writing paper, paperboard, tissue paper and newsprint.

Total industry production increased by 14 percent with total production equalling 4.3 million tons. The industry utilization rate in 2006 was 84 percent the same as in 2005.

In 2006, the consumption of paper and board was 3.5 million tons, an improvement of 12 percent. In large part, the increase came from higher consumption volume of paperboard, printing & writing paper and tissue paper. Paper consumption per capita in 2006 was 56 kg. and the paper and board consumption rate is expected to reach 77 kg. by 2011.

The total import volume of paper and board in 2006 was 639 000 tons, a 3 percent drop from the previous year, which occurred mainly from a 25 percent drop in newsprint paper imports and a 13 percent drop in printing & writing paper imports. The amount of imported paperboard, however, increased by 255 percent in 2006.

The export of paper and board grew by 14 percent from the previous year. The total export volume was 1 071 000 tons. Kraft paper made up 50 percent of the industry exports; it was followed by printing & writing paper and tissue paper, respectively. The industry's main export destinations were South Korea, Taiwan, China, and Southeast Asian countries.

The Thai economy in 2007 is expected to grow by 4.0›4.5 percent. This expected growth has been mainly driven by the countries export of goods and services. In addition, the global trend of environmental awareness has been forecasted to improve the consumption rate of the industry, which has been almost 100 percent recyclable. Therefore, it is estimated that the demand for Thai paper and board will grow by 5 percent from an estimated 3.7 million tons in 2007 to 4.8 million tons by the year 2011.

The industry recovery rate for recovered paper in 2006 was 49 percent, up 2 percent from 2005. Total consumption was 2.8 million tons; it was provided for by a domestic collection of 1.7 million tons and importations. Recovered paper consumption is estimated to grow by 5 percent in 2007, parallel with the growth of kraft paper consumption.

Thai Economy and the Industry

The Thai economy in 2006 grew by 5.0 percent, which was higher than the 4.5 percent growth it experienced the previous year. This was supported by remarkable growth in the net export of goods and services, which helped to offset a slow down in private investments and consumption. The export of goods and services grew by 17 percent, with major contributors being electronics, electrical appliances, vehicles and parts, construction materials, and rubber products. Imports grew by 7 percent, mainly from the import of capital goods and raw materials, which improved the nation's balance of trade and balance of payments.

Thailand Key Economic Indicators	**2007 Forecast**	**2006**	**2005**	**2004**	**2003**
GDP Growth (1988 Price %)	4.0- 4.5	5.0	4.5	6.3	7.1
GDP Current Prices (Billion Baht)	8,399	7,813	7,088	6,490	5,917
Investment (1988 Price %)	2.1	4	11.1	13.2	12.1
o Private	1.5	3.9	10.9	16.2	17.7
o Public	4	4.5	11.3	5	-0.6
Consumption (1998 Price %)	2.8	3.2	5.5	6.1	5.9
o Private	2.2	3.1	4.3	6.2	6.5
o Public	6.3	3.4	13.7	5.6	2.5
Export Value (Billion US$)	144.1	128.2	109.2	94.9	78.1
• Growth Rate (%)	12.4	17.4	15	21.6	18.2
Import Value (Billion US$)	136.4	126	117.7	93.5	74.3
• Growth Rate (%)	8.3	7	25.9	25.7	17.4
Balance of Trade (Billion US$)	7.7	2.2	-8.5	1.5	3.8
Balance of Payment (Billion US$)	8.5	3.2	-7.9	2.8	4.8
Inflation (%)	2.0-2.5	4.7	4.5	2.7	1.8
Population (Million)	62.83	62.83	62.42	61.97	63.08

Sources: National Economic and Social Development Board (NESDB) and Bank of Thailand (BOT)

The Thai economy's trade balance in 2006 enjoyed a surplus of 2.2 billion US$, compared to a deficit of 8.5 billion US$ in 2005. This lead to a current account registered surplus of 3.2 billion US$ in 2006, a marked improvement over the 7.9 billion US$ deficit posted in 2005.

The economy's trade surplus was partially created by a remarkable increase in the export of electronic products such as computers, integrated circuits, and air conditioners. This upwards trade balance helped to boost the usage of paper containers--especially the use of kraft paper for outer containers and paperboard for inner boxes and the industry's annual consumption rate.

2006 Country Statement and Trend of Thai Pulp and Paper Industry

Pulp Industry

- **Capacity**

In 2006 total pulp capacity was 1.1 million tons, the same as in 2005. Detail information of the total capacities of Thailand's six pulp manufacturers are presented in the table below.

Manufacturer	**Capacity (Thousand Tons)**	**Grade**
1. Advance Agro	515	*Eucalyptus*
2. Phoenix Pulp &Paper	235	*Eucalyptus, Bamboo, Leucaena*
3. Panjapol Pulp Industry	110	*Eucalyptus*
4. SCG Paper*	100	*Eucalyptus*, CTMP
5. Siam Cellulose	86	*Eucalyptus*
6. Environment Pulp and Paper**	100	*Bagasse*
Total	**1,146**	

**Former The Siam Pulp and Paper*

***Started up in October 2004*

- **Production**

In 2006, total pulp production was 1.1 million tons, a 6 percent growth from the previous year. Meanwhile, the utilization rate rose to 99 percent, up 6 percent from the previous year, because the industry enjoyed unusually high prices for short fiber pulp. These higher prices were as a result of a growing preference for short fiber pulp (over the long fiber grade) in order to reduce costs. Thus, there was an increased demand for short fiber grades.

- **Consumption**

Domestic pulp consumption rose by 6 percent from the previous year to 1.3 million tons. Since local manufacturers only produced short fiber grades of pulp, 1 129 000 tons of short fiber grade pulp were produced within the country, and only long fiber grades of pulp were imported. The slow growth of pulp demand, however, was the result of the trend to substitute virgin pulp with recycled pulp that enabled manufacturers to be more cost efficient and environmentally friendly.

- **Pulp Import – Export**

Total imported pulp rose by 8 percent in 2006 to 409 000 tons, of which 372 000 tons were long fiber pulp and 37 000 tons were short fiber pulp. In 2006 imported long fiber pulp increased by 9 percent from the prior year due to unusually lower prices that resulted from the capacity expansion of pulp producers in Europe. The United States, Canada, Sweden, Australia, and South Africa were the major pulp exporters to Thailand.

In 2006, Thailand exported 211 000 tons of short fiber pulp, an amount which grew by 13 percent from the previous year. Thailand's major pulp export markets were China, Indonesia, the Philippines and Singapore.

- **Pulp Demand and Capacity Trends**

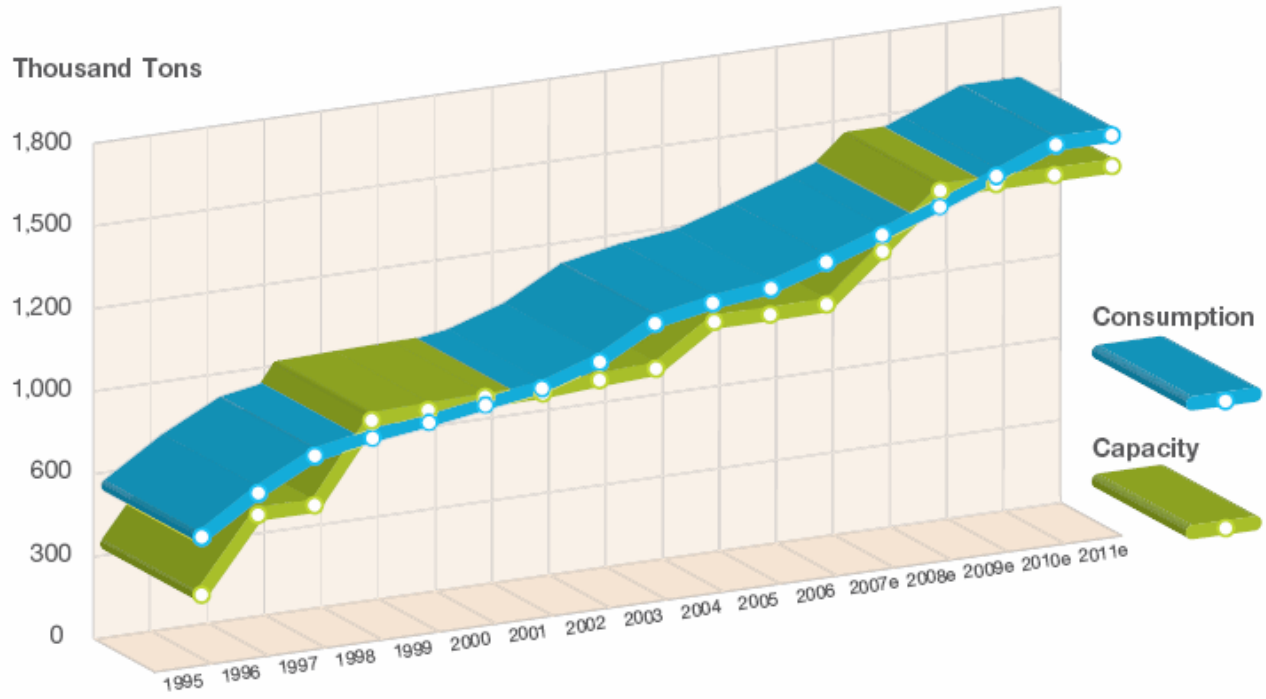
Domestic pulp consumption is estimated to grow by 6 percent per year in line with the growth of the paper industry. This growth is estimated to result in the demand for pulp reaching a level of 1.4 million tons in 2007.

Year	2004	2005	2006	Estimated				
				2007	2008	2009	2010	2011
Consumption								
• Short Fiber	862	914	895	949	1,006	1,066	1,130	1,198
• Long Fiber	363	338	431	456	483	512	542	474
Total	**1,225**	**1,252**	**1,326**	**1,405**	**1,489**	**1,578**	**1,672**	**1,672**
Capacity								
• Short Fiber		1,143	1,146	1,346	1,546	1,546	1,546	1,546
• Long Fiber	1,143	-	-	-	-	-	-	-
Total	**1,143**	**1,143**	**1,146**	**1,346**	**1,546**	**1,546**	**1,546**	**1,546**
Production	-							
• Short Fiber	1,143	1,061	1,129	1,269	1,489	1,546	1,546	1,546
• Long Fiber		-	-	-	-	-	-	-
Total	**1,000**	**1,061**	**1,129**	**1,269**	**1,489**	**1,546**	**1,546**	**1,546**
Surplus (Shortage)	-							
• Short Fiber	138	148	234	320	483	480	416	348
• Long Fiber	(363)	(338)	(431)	(456)	(483)	(512)	(542)	(474)

Unit: Thousand Tons

Source: The Thai Pulp and Paper Industries Association (TPPIA)

Pulp Industry



Year	Consumption	Import	Export	Production	Capacity
1995	566	350	98	316	331
1996	716	345	131	502	626
1997	834	333	103	604	626
1998	875	251	216	843	943
1999	905	364	230	900	950
2000	942	359	254	958	956
2001	977	323	347	951	958
2002	1,053	392	191	953	974
2003	1,180	397	270	1,000	987
2004	1,225	245	167	1,000	1,143
2005	1,252	378	187	1,061	1,143
2006	**1,326**	**409**	**211**	**1,129**	**1,146**
2007 (Est.)	1,405			1,269	1,346
2008 (Est.)	1,489			1,489	1,546
2009 (Est.)	1,578			1,546	1,546
2010 (Est.)	1,672			1,546	1,546
2011 (Est.)	1,772			1,546	1,546

Source: The Thai Pulp and Paper Industries Association (TPPIA)

Remarks: Recovery Rate = Recovery Paper Collected / Paper and Board Consumption

Recovered Paper

- **Local recovered paper collection**

In 2006, the total volume of recovered paper in Thailand was 1.7 million tons. This rise of 18 percent from the previous year was due to better waste management and environmental awareness. The industry recovery rate was 49 percent, up 2 percent from the year before.

- **Consumption**

Recovered paper consumption was 2.8 million tons, which was an increase of 8 percent from the year 2005. According to the industry, awareness of the environment, in accordance with the rising cost of energy and the capacity expansion of local paper manufacturers, motivated the use of recycled pulp and led to the trend toward higher recovered paper consumption.

- **Recovered Paper Import - Export**

The importation of recovered paper in 2006 was 1 050 000 tons, an 11 percent rise from the previous year. Old Corrugated Carton (OCC) accounted for the largest portion of imported grade at 69 percent of total imports, while mixed waste and old newspapers accounted for 20 percent and 10 percent, respectively. Main export countries of recovered paper to Thailand were the United States, Japan and Singapore.

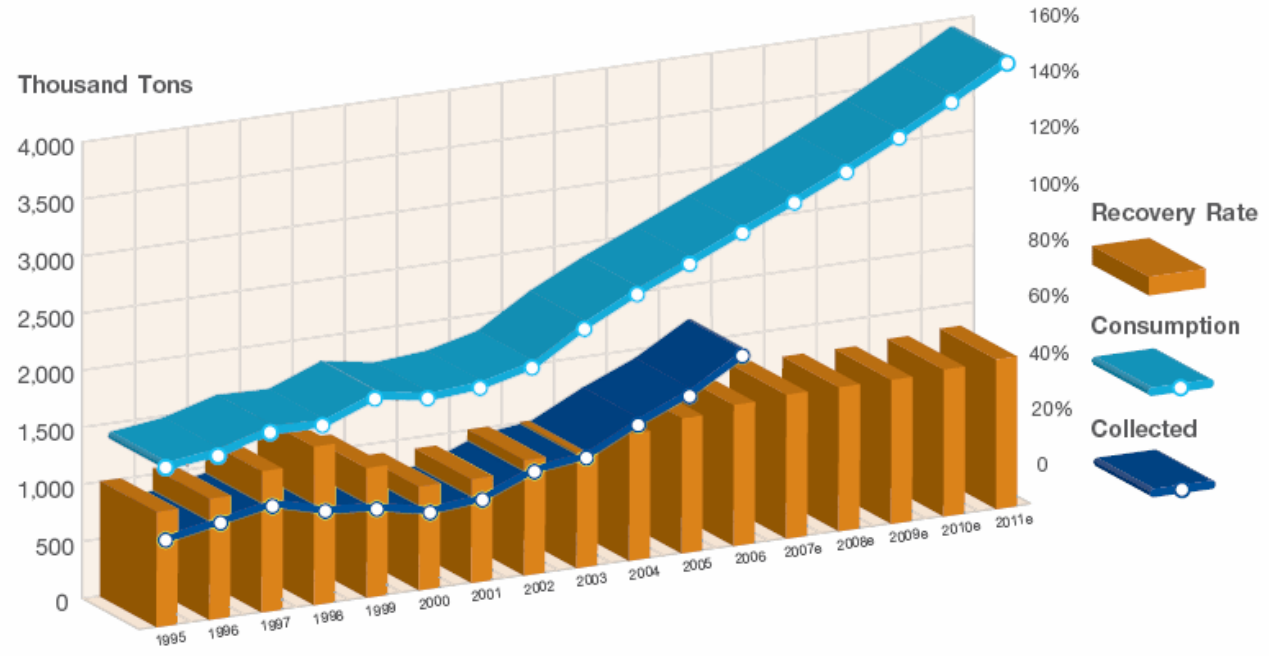
- **Recovered Paper Demand and Collection Trends**

Recovered paper consumption is anticipated to increase by 6 percent per year along with the projected growth of the paper industry. It is estimated that the country's recovery rate will improve significantly in the near future. The global trend of environmental awareness is motivating the industry to utilize more recycled materials. This will inevitably affect Thai manufacturers, especially with regard to international trade as oversea customers will increasingly demand environmentally-friendly products and certifications. This increasing trend will definitely enhance the industry's usage of recycled materials.

In addition, the Thailand Institute of Packaging Management for Sustainable Environment (TIPMSE), which received its initial funding from packaging material manufacturers in Thailand, was established to reduce used packaging materials from municipal garbage. The TIPMSE's main purpose is to trim down used packaging materials in municipal waste from 4.3 million tons per year to 2.7 million tons. This would produce a 30 percent decrease in the amount of used packaging materials in public waste to a level of 19 percent by the year 2010. Several pilot projects at local universities and communities have been implemented to turn waste into money. They have been shown to be successful and are in the process of being implemented broadly in support of the TIPMSE's mission.

These types of initiatives coupled with the growing global concern for the environment will boost up local collection rates for recycling materials such as paper, plastics, glass and metals and thereby enable a continual rise in the industry's recovery rate.

Recovered Paper Industry



Year	Consumption	Import	Export	Collection	Recovery Rate
1995	1,458	607	0	851	40%
1996	1,515	582	0	933	42%
1997	1,642	622	0	1,021	49%
1998	1,630	725	0	905	55%
1999	1,802	935	2	868	45%
2000	1,728	952	0	776	36%
2001	1,765	947	1	819	36%
2002	1,875	879	3	998	40%
2003	2,149	1,099	3	1,053	40%
2004	2,370	941	6	1,275	44%
2005	2,562	946	15	1,461	47%
2006	**2,758**	**1,050**	**14**	**1,721**	**49%**
2007 (Est.)	2,950				50%
2008 (Est.)	3,156				50%
2009 (Est.)	3,376				50%
2010 (Est.)	3,612				51%
2011 (Est.)	3,864				52%

Source: The Thai Pulp and Paper Industries Association (TPPIA)

Remarks: Recovery Rate = Recovery Paper Collected / Paper and Board Consumption

Paper and Board Industry

- **Capacity**

The total capacity of the paper and board industry was approximately 5.2 million tons, improve 15 percent from the year 2005. Additional capacity mainly came from a kraft paper and tissue paper expansion project and a de-bottlenecking program aimed at easing the production of printing & writing paper.

Kraft paper continued to hold the largest portion of the industry with total capacity of 62 percent, followed by printing & writing paper at 25 percent, paperboard at 7 percent and both newsprint paper and tissue paper at 3 percent respectively.

- **Production**

Paper production in 2006 soared to 4.3 million tons, a 20 percent increase from the 2005 total of 3.8 million tons. This mainly resulted from the high national growth of exports.

Kraft paper production volume totalled 2.6 million tons, a rise of 16 percent from the year before. Its utilization rate of 80 percent was 5 percent lower than that of the previous year. Printing & writing paper production equalled 1.2 million tons with a utilization rate of 96 percent, up 12 percent from 2005. The utilization rate of newsprint paper was 96 percent, and the rate for tissue paper was 87 percent. At 96 percent, the utilization rate for newsprint dropped 1 percent from the previous year. In 2006, the utilization rate of the paper and board industry was 84 percent, the same as posted in 2005.

GRADE	Utilization Rate
Kraft Paper	80%
Printing & Writing Paper	96%
Paperboard	69%
Newsprint Paper	96%
Tissue Paper	87%
Total Paper and Board	**84%**

- **Consumption**

In 2006, total paper and board consumption was 3.5 million tons, an increase of 12 percent from 2005. In large part the increase resulted from the higher consumption of paperboard, printing & writing paper and tissue paper. Paper and board consumption per capita was 56 kg., compared to 50 kg. in 2005. Growth is projected to continue and per capita consumption has been estimated to reach 77 kg. in 2011.

Unit : kg	2003	2004	2005	2006
Per capita Consumption	42	47	50	56

The kraft paper consumption of 2.0 million tons grew by 12 percent from the previous year; the marked growth was primarily driven by export markets in electronic products (namely, computers, integrated circuits as well as motor vehicles and parts).

Printing & writing paper consumption was 0.9 million tons, up 20 percent from the prior year. The demand growth of paperboard, mainly used for inner packaging for consumer and food related products, grew by 21 percent and 18 percent increase recorded for tissue paper. Newsprint paper demand dropped by 17 percent to 0.23 million tons compared to 0.28 million tons in 2005.

Grade	Paper and Board Consumption (Thousand Tons)				
	2004	2005	2006	%	Per capita* (kg.)
Kraft Paper	1,706	1,784	1,993	57	32
Printing & Writing Paper	658	744	893	25	14
Paperboard	220	261	315	9	5
Newsprint Paper	266	276	229	7	4
Tissue Paper	54	70	83	2	1
Total	**2,904**	**3,135**	**3,513**	**100**	**56**

Remarks: * Population in 2006: 62.8 million

- **Import - Export of Paper & Board**

Import

Paper and board imports in 2006 dropped by 3 percent from the previous year mainly due to a slowing trend in newsprint paper imports. The importation of newsprint paper dropped by 25 percent to 0.1 million tons from the prior year. Printing & writing paper imports dropped by 13 percent, mainly because commodity grade and kraft paper imports dropped by 8 percent from the previous year. On the other hand, paperboard imports soared by 255 percent, while tissue paper imports increased by 15 percent.

Export

In 2006, total paper and board exports increased by 14 percent from 2005. The major portion of the total came from kraft paper exports, which rose by 37 percent. Meanwhile, the other exported grades produced the following increases: newsprint exports went up by 28 percent, tissue paper by 25 percent and paperboard by 17 percent. Printing & writing paper exports dropped by 7 percent to 0.4 million tons. The main countries that receive Thai paper and board exports are Hong Kong, Singapore, China, and Southeast Asian countries.

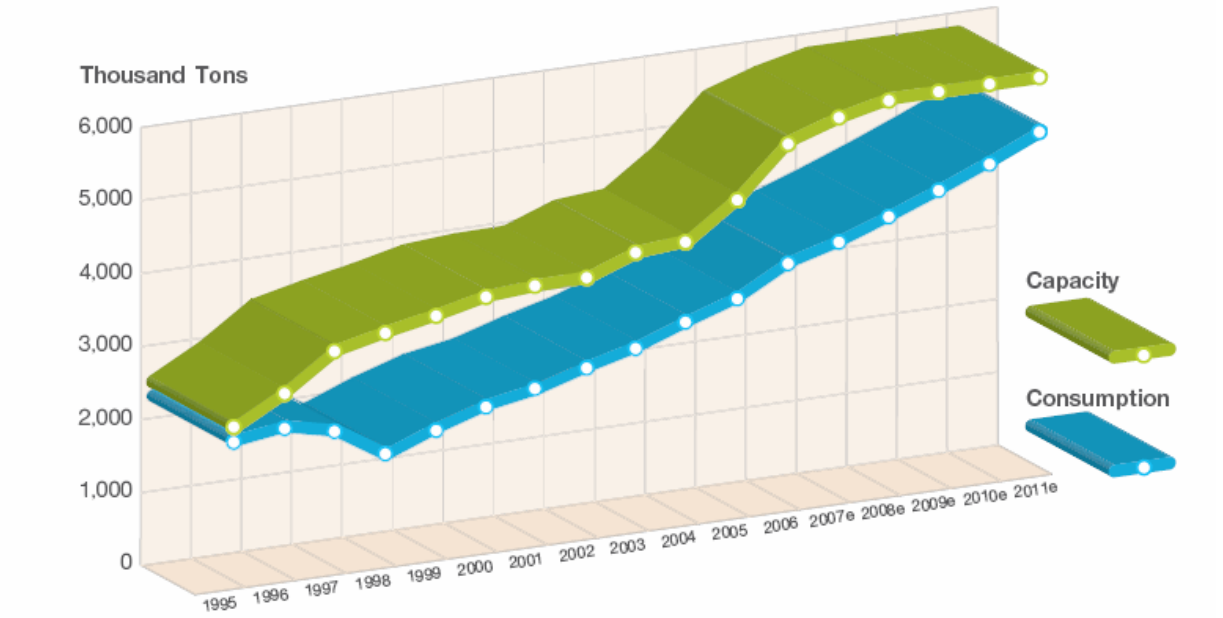
- **Paper and Board Demand and Capacity Trends:**

The Thai economy in 2007 is expected to grow by 4.0-4.5 percent especially surges in electronics and auto exports. The demand for paper and board is expected to grow by 5 percent and estimated to reach 3.7 million tons in 2007.

Grade		2004	2005	2006	Estimated 2007	2008	2009	2010	2011
Kraft Paper	Consumption	1,706	1,784	1,993	2,092	2,244	2,407	2,582	2,770
	Capacity	2,400	2,673	3,283	3,411	3,411	3,411	3,411	3,411
Surplus (Shortage)		**694**	**889**	**1,290**	**1,319**	**1,167**	**1,004**	**829**	**641**
Printing & Writing Paper	Consumption	657	744	893	964	1,041	1,124	1,213	1,310
	Capacity	1,083	1,264	1,271	1,271	1,431	1,431	1,431	1,431
Surplus (Shortage)		**425**	**520**	**378**	**307**	**390**	**307**	**218**	**121**
Paperboard	Consumption	220	261	315	324	333	342	352	362
	Capacity	300	300	348	448	448	448	448	448
Surplus (Shortage)		**80**	**39**	**33**	**124**	**115**	**106**	**96**	**86**
Newsprint Paper	Consumption	266	276	229	240	252	264	277	290
	Capacity	135	135	135	135	135	135	135	135
Surplus (Shortage)		**131**	**141**	**94**	**105**	**117**	**129**	**142**	**155**
Tissue Paper	Consumption	54	70	83	84	85	86	87	88
	Capacity	91	129	136	136	136	136	136	136
Surplus (Shortage)		**37**	**59**	**53**	**52**	**51**	**50**	**49**	**48**
Total Paper and Board	Consumption	2,904	3,134	3,513	3,704	3,955	4,223	4,511	4,820
	Capacity	4,009	4,501	5,173	5,401	5,561	5,561	5,561	5,561
Surplus (Shortage)		**1,105**	**1,367**	**1,660**	**1,697**	**1,606**	**1,338**	**1,050**	**741**
Population	(Million)	61.9	62.4	62.8	62.8	62.8	62.8	62.8	62.8
Per capita Consumption	(kg./head)	**47**	**50**	**56**	**59**	**63**	**67**	**72**	**77**

Source: The Thai Pulp and Paper Industries Association (TPPIA)
Unit: Thousand Tons

Total Paper and Board Industry



Year	Consumption	Import	Export	Production	Capacity
1995	2,131	519	240	1,930	2,325
1996	2,230	469	204	1,994	2,700
1997	2,077	379	513	2,274	3,177
1998	1,651	209	908	2,340	3,336
1999	1,919	346	960	2,581	3,472
2000	2,139	420	772	2,605	3,633
2001	2,261	393	767	2,692	3,684
2002	2,471	462	683	2,814	3,695
2003	2,651	514	748	3,261	3,951
2004	2,904	557	796	3,607	4,009
2005	3,134	657	942	3,795	4,501
2006	**3,513**	**639**	**1,071**	**4,325**	**5,173**
2007 (Est.)	3,704				5,401
2008 (Est.)	3,955				5,561
2009 (Est.)	4,223				5,561
2010 (Est.)	4,511				5,561
2011 (Est.)	4,820				5,561

Source: The Thai Pulp and Paper Industries Association (TPPIA)

ANNEX 3 - REGIONAL REPORT

CEPI[13]

Markets
In 2007, the paper production in CEPI-17 reached 102.4 million tonnes (+0.2 percent compared to 2006). Pulp production reached 42.4 percent in 2007 (-1.7 percent compared to 2006). Overall the paper consumption is estimated to have increased by 1 percent. Mills closures recorded over the last year are mainly due to the increasing costs of raw materials and energy.

With respect to raw materials, the price of both wood and recovered paper has increased over 2007. Chinese demand for recovered paper has been increasing and Germany became last year a net exporter of recovered paper. At the same time collection and utilisation have gone up, even if in some countries collection is reaching its limits.

At the same time, the Russian taxes on wood exports have started impacting on the amount of wood imported in Europe. This tax is supposed to further increase in January 2009.
CEPI estimates the direct employment in the paper industry to be 259 100 jobs and indirectly 1.8 million jobs. 63 percent of the jobs are located in rural areas.

Policy
2007 has been in Europe the year of climate and energy. In January 2007, the European Commission released a proposal setting several ambitious and binding targets in the field of climate and energy:

- 20 percent minimum reduction of GHG emissions by 2020
- 20 percent energy efficiency gains by 2020
- 20 percent share of renewable energies by 2020, including a 10 percent biofuels target

These targets have been confirmed by Council of Ministers of 8-9 March 2007.

This has led CEPI to look for the support of well-established consultants (McKinsey-Pöyry) to evaluate the possible impacts of such targets on the industry with special emphasis on:

- the competition for raw materials (both virgin and recycled fibre)
- the possible contribution of the industry to achieving the targets
- the needed conditions to successfully achieve the targets whilst preserving the forest sector competitiveness.

In its position, CEPI has put the emphasis on some basic principles that should be respected when implementing the policy targets. These principles are:

- Resource efficiency and hierarchy
- Sustainability
- Proportionality (in particular in support mechanisms)
- Feedstocks mobilisation and activation

The proposal for a Directive implementing the renewable energy targets has been released early in 2008 and further activities from CEPI will be carried out before its approval and entry into force in 2010.

[13] (ON BEHALF OF AUSTRIA, BELGIUM, CZECH REPUBLIC, FRANCE, FINLAND, GERMANY, HUNGARY, ITALY, THE NETHERLANDS, NORWAY, POLAND, PORTUGAL, SLOVAK REPUBLIC, SPAIN, SWEDEN, SWITZERLAND, UNITED KINGDOM)

In that context the Commission has initiated a reflection on wood mobilisation under the auspices of the Standing Forest Committee.

The Ministerial Conference on Protection of Forests in Europe went to a successful end in Warsaw in November. One of the Resolutions on Forests, wood and energy reflects the concerns of the industry with respect to the availability of raw materials.

In parallel, the EU has been revising its Emissions' Trading Scheme. In the next phase of the ETS it provides for the auctioning of the allowances up to 100 percent in 2020. In the absence of a global agreement in 2009, some sectors and/or subsectors that are energy intensive and exposed to global competition could receive free allowances. CEPI has deployed intense advocacy to qualify for that special treatment. For the moment the political line is that no decision will be taken before Copenhagen.

At the same time, customers are increasingly asking for information related to the carbon footprint of the products they buy. Wal-Mart, Tesco, Champion and several other retailers have committed to label their products with carbon footprint related information. CEPI has therefore developed a "ten toes" framework approach for the European paper industry. Under this framework, different product groups, and down to companies, will develop their own carbon footprint using the same methodology.

The Thematic Strategy on waste prevention and recycling is defining the policies, which could be used to promote paper recycling and contribute to the target of making the EU a Recycling Society. In its latest version, the waste Directive offers the possibility for a future classification of recovered paper as secondary raw material, and not as waste.

EU is finalising it new Product Policy under the Action Plan its Sustainable Consumption and Production Package, due for May this year It has also been working actively on public procurement and eco labels. The ecolabel for office paper has been developed by ICLEI (Local Communities for Sustainability). The Commission is also working on a tool-kit for carbon footprint.

CEPI activities

Of course, CEPI, and its National Associations, have been actively advocating with the Institutions, and the national authorities about the challenges to the industry created by the climate and energy package of the Commission, in particular the revision of the Emissions Trading System and the Renewable Energy Directive. In that context, CEPI co-operated closely with UNECE to further develop knowledge and facts about the availability of wood biomass in Europe. A joint Seminar organised by CEPI, FAO, UNECE and MCPFE was dedicated to wood mobilisation in January 2007 in Geneva. CEPI also developed a set of joint position papers on RES, with WWF, with AEBIOM (the European Biomass Association) and with EMCEF (trade unions).

On the Emissions Trading System, CEPI works with other industrial sectors, in particular the energy intensive industries.

CEPI has released its third Sustainability Report, which was certified by GRI standards. It includes some new indicators and reflect overall positive progress with respect to the existing ones. The European industry is notably well on track to achieve its commitment to increase the recycling rate up to 66 percent by 2010. It also increased the share of biomass-based energy in its overall primary energy consumption up to 54.4 percent in 2007, well on track also to achieve its commitment to reach 56 percent by 2010. The report also shows a real decoupling in its specific emissions and increase in the use of CHP, and further reductions in CO_2 emissions versus tons of product.

Further work has been done on the quality of recovered paper through quality standards and quality management of recovered paper. Related to that, the traceability of recovered paper has been improved, through the launching of the recovered paper identification system.

The dialogue with the network of ENGOs that have promoted the "Visions to transform the European Paper Industry" was followed-up with a meeting with its steering group, on the occasion of a major NGO conference, with a view to exchange factual information about the industry, and achieving better understanding.

CEPI has also provided guidance to its members with respect to the implementation of the newly adopted REACH Regulation, through guidance documents and information seminars.

ANNEX 4

JOINT PROPOSAL FROM

AUSTRALIAN PLANTATION PRODUCTS AND PAPER INDUSTRY COUNCIL
29 Torrens Street, Braddon, ACT Australia
TELEPHONE: +61 2 6273 8111 FACSIMILE +61 2 6273 8011

NEW ZEALAND FOREST OWNERS' ASSOCIATION INC.
85 THE TERRACE, WELLINGTON 1, NEW ZEALAND
PO BOX 1208, WELLINGTON
TELEPHONE 0-4-473 4769 FACSIMILE 0-4-499 8893

TO

ICFPA

INTERNATIONAL COUNCIL OF FOREST & PAPER ASSOCIATIONS

INTERNATION COUNCIL OF FOREST & PAPER ASSOCIATION

INVITED MEMBER ORGANISATIONS

FOR

COMMITMENT PERIOD 2

CP2

Background

A3P – the Australian Plantation Products and Paper Industry Council – is the national industry association representing the interests of all segments of the plantation-based wood products and paper manufacturing industry.

A3P members' employ more than 13 500 people in plantations, sawmills and paper manufacturing plants, mainly in rural and regional areas. A3P Members create and sell more than $4 billion of products, produce more than 12 million cubic metres of logs, 3 million cubic metres of sawn timber and more than 2 million tonnes of paper.

A3P members also own and/or manage some 900 000 net hectares of commercial hardwood and softwood plantations.

The New Zealand Forest Growers Association (NAFOA) represents the owners of New Zealand's commercial plantation forests. It was set up in 1926 and is now one of the country's most influential primary sector organizations.

Its members own and or manage more than 80 per cent of the country's 1.88M hectares of plantation forests.

With annual export earnings of $3.3B in 2005/2006, plantation forestry is New Zealand's largest export earner.

It is a major regional employee with 8 260 individual's employed in forests and logging and 23 402 employed in first stage processing.

The New Zealand Government introduced a National Emissions Trading Scheme on the 1st of January 2008 with reforestation as the only covered sector.

The Australian Government is committed to introducing a National Emissions Trading Scheme in 2010.

A3P members have been involved in current Australian and International Emissions Trading Schemes. This includes a number of A3P members being benchmark participating in the NSW GGAS Scheme, and members with operations in countries working under the European Trading Scheme.

A3P and NZFOA have exchanged information and met regularly to discuss areas of common interest to hopefully ensure that the interests of the forest and forest products industries are protected and that the Australian and New Zealand National Emissions Trading Schemes could be complementary.

At the ICFPA Annual Meeting to be held in Bakubung, South Africa, in the week commencing 9th of June there is a specific agenda item (4) on climate change.

Issues to be discussed include:

- Data collection on climate change.
- ICFPA core messages.
- Consequences of climate change on the industry.
- National climate policy fact sheets.
- Climate change and forestry.
- Future ICFPA activities.

As a consequence, the Chairman of NZFOA, Mr Peter Berg, the CEO, Mr David Rhodes and the CEO of A3P, Mr Neil Fisher, would like to present for discussion the attached paper to invited individual members of ICFPA as a pre cursor to the development of a formal ICFPA position.

We commend this paper to you for your consideration.

Introduction

The Kyoto Protocol first commitment period (KP CP1) treatment of LULUCF has resulted in serious complexities and challenges for domestic policy implementation and the perverse outcomes of reduced investment in new forests and increased land conversion to non-forest use.

This issue is relevant to any country where land use is dynamic and sustainable management policies seek to ensure highest value, best use of land consistent with good environmental and social practice.

This will include many developing countries as well as other developed countries.

Climate change policies should not result in the long-term lock-in of land that can be more productively used when less productive land is available for afforestation on which to maintain the overall stock of stored carbon. In short, production forests should be able to be 'shifted'.

A post-2012 LULUCF framework should set the stage for maximising the contribution of the forest growing and wood products sector to addressing climate change – as a carbon sink, a source of renewable bio-energy and providing substitutes for materials with high embodied emissions.

In addition to these product-use outcomes, growing and harvesting forests is at worst a carbon-neutral activity and this can be done in relatively short time periods in temperate and tropical countries.

The KP CP1 framework can impose significant economic liabilities on this carbon neutral activity.

A general principle of harvesting debits follow growing credits should be applied broadly to forest harvesting that does not lead to significant changes in average carbon stocks within time periods relevant to the current challenge of climate change. In KP CP1 this rule is only applied selectively – the so called fast growing forest fix under Article 3.3.

With respect to the long-running issue of accounting for harvesting and harvested wood products, LULUCF experts have made virtually no progress in over a decade of discussion on this topic. In view of this, it is difficult to see how anything other than a very simple approach could be negotiated. The current KP CP1 approach that says 100 percent of the carbon in trees is released to the atmosphere at the time and place of harvesting is clearly wrong.

While more complex and beneficial solutions may be presented, opting in the first instance for a simple percentage less than 100 percent commends itself on the basis of simplicity. What that percentage might be, and whether this should be a country-specific factor, requires further analysis and consideration.

1. Separation, of forestry from agriculture, and of components of forestry

The accounting and treatment of components within forestry (e.g., reforestation, deforestation, forest management and harvesting & wood products) should be developed to suit those activities and not linked to the treatment of agriculture or other land uses.

Many of the complexities and difficulties inherent in the treatment of forestry in KP CP1 arose because forest activities were included in the broader category of land use, land use change and forestry. However aspects of forestry are markedly different from other components of this category, particularly in their ability to provide abatement.

Similarly there are strong arguments for separate methods and treatment of activities such as deforestation (a source of emissions), reforestation (a sink), forest management (potentially neutral in the long term) and harvesting and wood products (also a potential sink).

2. Harvesting and wood products

'Debits" for harvesting forests should be accounted as a percentage that reflects that some carbon is not released to the atmosphere.

100 percent is clearly wrong (i.e. the current instant oxidisation assumption). So some smaller fraction should be able to be defended. The development of an alternative method should aim to achieve the following:

- Economic and socio-economic outcomes should be consistent with desired objectives and be able to be accepted by the Parties.
- Accounting for harvesting and wood products should work towards meeting Article 2 of the UNFCCC - How will the approach change decisions and behaviours of producers and consumers towards more 'climate friendly' outcomes?
- Accounting for harvesting and wood products should be workable in practice, including over time for all Parties.

3. Flexible land use (reforestation/deforestation)

The post-2012 framework should allow for an area of pre-1990 planted forest to be deforested and offset through afforestation elsewhere. This mechanism would be restricted to planted forests.

To adapt to climate change, Parties need land use flexibility so that crops, forests, and animal agriculture can move to locations where they are best suited in new climatic conditions. A planted forest land-swapping regime would improve options available to Parties for climate change adaptation;

Land use is a dynamic process. The post-2012 framework should allow Parties to meet sustainable development objectives allowing highest value, best use of land consistent with sustainable land management practices.

We believe that such a mechanism must at least ensure the overall maintenance of the forest estate and the carbon content in that estate in the medium term.

Length of commitment period

Future commitment periods negotiated under an international framework on climate change should be longer than the 5 year first commitment period.

This applies to the second commitment period, as well as the duration of rules pertaining to forests within LULUCF.

A longer period of agreed forest rules within LULUCF would provide greater investment certainty and would allow greater ability for forest owners to manage the harvesting-forest growth fluctuation.

4. Credits and future liabilities

There should be a continuation and refinement of the "Fast-growing Forest Fix" (Afforestation/ Reforestation Debit Rule).

Where harvesting is of forests that have been purpose grown for production of wood products, and these forests will be regrown on the same or different area of land with equivalent carbon stocks, harvesting debits should be no greater than credits previously earned on the piece of land being harvested.

For all other forests, harvesting debits should be no greater than credits previously earned on the piece of land being harvested; except in the case where a conversion to non-forest land use or a forest of a significantly different long-term average carbon stock occurs, in which case debits equal to the difference in average carbon stocks should accrue.

This rule ensures that activities that increase carbon stocks in the long term are not counted as debits under Article 3.3. The same arguments that led to its confirmation for CP1, also apply for CP2 and beyond. This was noted during original negotiations.

5. Reducing Emissions from Deforestation and Degradation

A post-2012 LULUCF framework should include effective action to address deforestation and forest degradation in developing countries.

The issue of reducing emissions from deforestation and forest degradation will be important for the setting of targets for the second commitment period and cognisance of the outcome of discussions under the Bali Action Plan will be needed.

To be successful any measures must provide a significant and ongoing source of funds to create incentives for countries to reduce deforestation rates.

Definitions

Reforestation
Reforestation refers to the planting of forest on land that was forest but has been out of forest cover for a certain duration. For the first commitment period of the Kyoto Protocol this was defined as planting on land that did not contain forest on the 31 December 1989. In North America and in the lead up to post-2012 negotiations 'on land that has been out of forest for at least 10 year's is a likely alternative.

Afforestation
Afforestation refers to the establishment of forest on land that is considered to not have been forest previously.

Deforestation
Deforrestation is a change in land cover from forest (plantation or natural forest) to non-forest.

Forest Degradation
Is the persistent depletion of carbon stocks in a forest while still meeting the definition of a forest?

Forest Management
Is land use that met the definition of a forest on 31 December 1989 and is managed?

Harvest wood products
Is a generic term used to describe the treatment of harvesting, use and disposal of wood products? It includes the assumptions about emissions from each of the three components – harvest, use and disposal. A proposal to alter the treatment would require consideration of all three components.

Coverage
If a sector or activity is covered by an emissions trading scheme it is included in the cap on emissions with compulsory participation in the scheme within the cap and a requirement to surrender permits for emissions.

Offsets
For sectors and sub-sectors not included within the cap or coverage of the scheme they may be eligible to participate in creating offsets of emissions. There can be additional requirements to allow for leakage and to ensure activities are beyond business as usual.

Inclusion
Is a generic term for consideration of a sector's activities in an emissions trading scheme that encompasses coverage and offsets but my also include other hybrid or modified forms of participation. For example, an activity could be deemed as included in the scheme but have neutral emissions – for example the use of agricultural residues for biomass energy.

NZ-style inclusion
The NZ scheme includes reforestation through an opt-in model that is probably best thought of as offsets or described with the specific term.